

Thesis Title

**The acceptability and efficacy of a brief universal preventive
parenting intervention for child behavioural and emotional disorders**

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Abstract

This thesis investigates the acceptability and efficacy of a brief universal preventive parenting intervention for child behavioural and emotional difficulties. The methodology included a systematic review, a literature review, a pilot randomised controlled trial and focus group discussions.

The systematic review aimed to show whether behavioural and emotional difficulties are a significant problem in Greece. Greek children appeared to display high scores on, and prevalence of behavioural problems, compared to children from other countries. The results suggested that, based on parental reports, Greece seems to have a high prevalence in child behavioural and emotional difficulties.

The literature review explored the effectiveness of universally delivered Triple P preventive interventions and identified research gaps. There was also insufficient evidence on the effectiveness of brief universal Triple P programmes to draw any definitive conclusions. No randomised trial had examined the short-term and long-term effectiveness of the Triple P brief universal interventions (Seminar Series).

The pilot randomised trial explored the efficacy of the Triple P Seminar Series for the reduction of child behavioural and emotional difficulties. 124 parents were randomly allocated to receive three seminars on positive parenting, while parents in the control group received information on child development. There was a significant reduction in behavioural problems over time (primary outcome), and a reduction in parenting dysfunctional difficulties in the short-term. Parents gave positive feedback on the intervention indicating that overall it was acceptable, feasible, culturally relevant, and useful.

Preliminary moderator analyses indicated that there were no moderator variables affecting the relation between group allocation and change in child disruptive scores. Preliminary mediator analyses suggested that a reduction in dysfunctional practices partially explained improvements in children's disruptive behaviours over time.

Lastly, 46 parents of the intervention group shared their personal experiences regarding the Seminar Series during six focus groups. The facilitators of positive parenting were relevant to what they did before, during, and after their practices, while barriers included child, parent and external factors. The final conclusions after triangulation and the implications of this thesis for practice and further research were discussed.

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List of Abbreviations

ADHD	<i>Attention Deficit Hyperactivity Disorder</i>
APA	<i>American Psychiatric Association</i>
APD	<i>Antisocial Personality Disorder</i>
ASD	<i>Autism Spectrum Disorder</i>
CBCL	<i>Child Behavior Checklist</i>
CBT	<i>Cognitive Behaviour Therapy</i>
CD	<i>Conduct Disorder</i>
CDAS	<i>Centres for Diagnosis, Assessment and Support</i>
CHILDS	<i>Child Health Information Linked to Development Sheets</i>
CI	<i>Confidence Intervals</i>
CONSORT	<i>Consolidated Standards of Reporting Trials</i>
COREQ	<i>Consolidated criteria for qualitative research</i>
CPRS-R	<i>Conners Parent Rating Scale – Revised</i>
CSQ	<i>Client Satisfaction Questionnaire</i>
DSM-IV-TR	<i>Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition - Text Revision</i>
EBD	<i>Emotional and Behavioural Disorders</i>
ECBI	<i>Eyberg Child Behaviour Inventory</i>
ES	<i>Effect Size</i>
GHQ	<i>General Health Questionnaire</i>
HLM	<i>Hierarchical Linear Model</i>
ICD-10	<i>International Statistical Classification of Diseases and Related Health Problems, Tenth Revision</i>
ITT	<i>Intention-To-Treat</i>
IY	<i>Incredible Years</i>
LOCF	<i>Last Observation Carried Forward</i>
MCAR	<i>Missing Completely at Random</i>
MI	<i>Modification Index</i>
NREPP	<i>National Registry of Evidence-based Programs and Practise</i>
ODD	<i>Oppositional Defiant Disorder</i>
OECD	<i>Organisation for Economic Cooperation and Development</i>
PAFAS	<i>Parenting and Family Adjustment Scales</i>

PCIT	<i>Parent-Child Interaction Therapy</i>
PMT	<i>Parent Management Training</i>
PMTO	<i>The Oregon Model of Parent Management Training”</i>
POQ	<i>Parent Opinion Questionnaire</i>
PP	<i>Per Protocol</i>
PS	<i>Parenting Style</i>
PSF	<i>Parent Satisfaction Form</i>
PSOC	<i>Parenting Sense of Competency Scale</i>
PTC	<i>Parenting Tasks Checklist</i>
Q.T.	<i>Quiet Time</i>
RCT	<i>Randomised Controlled Trial</i>
RQI	<i>Relationship Quality Index</i>
SD	<i>Standard Deviation</i>
SDQ	<i>Strengths and Difficulties Questionnaire</i>
TIDieR	<i>Template for Intervention Description and Replication</i>
T.O.	<i>Time Out</i>
TPI	<i>Triple P International</i>
TRF	<i>Teacher’s Report Form</i>
Triple P	<i>Positive Parenting Program</i>
UK	<i>United Kingdom</i>
VIF	<i>Variance Inflation Factors</i>
WHO	<i>World Health Organisation</i>
YSR	<i>Youth Self-report</i>

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1.1 Overview

Child behavioural and emotional difficulties are a common mental health problem worldwide. Those difficulties often predict further problems in a child's quality of life, functioning, family, school and social interactions in early life, and more serious issues in adulthood, such as delinquency, substance abuse and psychiatric disorders. Treatments targeting a range of child, parent, family and social system factors have been used to prevent and reduce a child's difficulties. Research has shown that child-parent interactions as well as parenting practices are associated with the development of these difficulties. Evidence-based parenting interventions have been designed to reduce possible risk factors and enhance protective factors. Positive programmes that are based on parent management training like Triple P (Positive Parenting Program) can improve positive parenting practices, which in turn could be a mediator for the reduction in child behavioural difficulties. This chapter summarises the theoretical and research-based knowledge in the field of child behavioural problems, the different types of diagnosis, the main interventions to reduce or prevent conduct problems while focusing on parenting interventions and their effects on child development.

1.2 Behavioural and Emotional Difficulties

1.2.1 The Nature of Behavioural and Emotional Difficulties

Emotional and Behavioural Disorders (EBD) in children is a common and persistent social problem which can be defined socially, medically, and in terms of public health, education and juvenile justice systems. The underlying reason for this terminological complexity derives from the distinct conceptualisations associated with the term "behaviour problems". In education, the term EBD refers to a condition

in which behavioural and/or emotional responses of an individual in school are so different from the generally accepted, age-appropriate, ethnic or cultural norms that they adversely affect educational performance in such areas as self-care, social relationships, personal adjustment, academic progress, classroom behaviour or work adjustment.

In social contexts it can imply a behaviour that is outside the normal range, and can be legally/politically defined as antisocial behaviour, offending behaviour and/or delinquency. It might also denote a behaviour that is problematic for others, such as for parents or teachers. Considering the ways whereby communication, emotion and behaviour interact with one another to produce problems in contexts such as family or school, “behaviour problems” can be educationally defined as emotional and behavioural difficulties (Cooper, Hunter-Carsch, Yonka, & Sage, 2006). In addition, in the clinical/research field, it signifies a mental or physical “disturbance” in a child’s behavioural development.

In clinical research, according to the *Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition - Text Revision* (DSM-IV-TR; American Psychiatric Association, 1994), there are several behavioural and emotional disorders that are usually first diagnosed in infancy, childhood and adolescence. In particular, Behaviour Disorders are closely related to developmentally inappropriate behaviours, whereas Emotional Disorders are specifically related to developmentally inappropriate and excessive anxiety. The main difference between these disorders is that in behavioural disorders a disruptive behaviour may irritate others in the child’s environment, whereas in emotional disorders an unpleasant emotion may only be disturbing to the child. The most frequent behavioural disorders are classified under three categories: *Attention Deficit Hyperactivity Disorder* (ADHD), *Oppositional*

Defiant Disorder (ODD) and Conduct Disorder (CD).

During early developmental stages preschool and school-aged children are likely to display difficulties associated with emotional disorders, which may involve fears, stress, depressed behaviours, such as withdrawal, anxieties and mood swings, as well as hypersensitivity. Characteristics and behaviours related to behavioural difficulties include negativistic, defiant and antisocial behaviours such as physical or verbal aggression, stealing, excessive non-compliance, persistent stubbornness, arguing, failing to accept blame for misdeeds, inattentiveness, distractibility and impulsiveness. They also entail impaired social interactions, obsessive and repetitive behaviours, attention-seeking behaviours, such as negative interactions or a poor attitude towards work, peers or teachers, and a general inability to cope with the routine of daily tasks. Students with emotional disturbance and/or behavioural problems might develop negative self-concepts and low self-esteem. In the classroom students may be frequently off-task and in turn this may adversely affect the learning of others. They may have problems working in groups and forming relationships. Students may also show aggression towards others or refuse to co-operate. Emotional and behavioural disorders are strongly interrelated because emotional difficulties are sometimes displayed through specific behavioural patterns, and behavioural difficulties are usually accompanied by emotional expressions.

1.2.2 Prevalence

A systematic review of the prevalence of psychopathology, which included children and adolescents mainly from the United States and the United Kingdom (UK), a few from Europe, Asia, Africa and South America, revealed that 21% of preschool and school-aged children and 15% of adolescents suffer from a psychiatric

disorder (Roberts, Attkisson, & Rosenblatt, 1998). Specifically, almost half of these children and adolescents with a psychiatric disorder also displayed an emotional disorder (Angold *et al.*, 2002; Canino *et al.*, 2004; Fombonne, 1994; Meltzer, Gatward, Goodman, & Ford, 2003; Waddell & Shepherd, 2002). The prevalence of behaviour problems varies globally between 2-16% (APA, 1994). A UK general population sample showed that around 15% of children had behaviour difficulties, while around 1-5% of children had severe problems (Richman, Stevenson, & Graham, 1982). Literature reviews are quite inconsistent with the worldwide prevalence of ADHD, ranging from as low as 1% to as high as nearly 20% among school-aged children (Bird, 2002; Faraone, Sergean, Gillberg, & Biederman, 2003). However, a recent systematic review and metaregression analysis revealed that the worldwide-pooled prevalence of ADHD is around 5% (Polanczyk, De Lima, Horta, Biederman, & Rohde, 2007). Also, ODD and CD are considered to be two of the most frequently diagnosed psychological disorders in children. Hill's (2002) review proposes that 5-10% of Western 8-16 years old exhibit significant and persistent oppositional disruptive or aggressive behaviour problems.

The suggested prevalence rates should be interpreted with caution due to the nature of population samples, the different cut-offs set across different behaviour measures even within the same country, the different definitions used for emotional and behavioural difficulties in a range of distinct cultural and linguistic backgrounds, and the various methodologies followed, including variant assessment tools used and multiple informants reporting on these difficulties. A number of Greek studies suggest there are high rates of emotional and behavioural problems in Greek children; these results will be further discussed in Chapter 2.

1.2.3 Developmental Pathway

The developmental pathway of these disorders has shown that at an early age, during toddlerhood, more intense, frequent, and persistent manifestations of usual emotions and behaviours might then result in the development of internalising and externalising difficulties in middle childhood, and might generate more severe disorders later in adolescence (Gardner & Shaw, 2008; Mesman, Bongers, & Koot, 2001). Research findings have consistently demonstrated not only the stability of emotional and behavioural disorders at early stages of childhood but their interconnection as well. Externalising problems have been demonstrated to show considerable longitudinal stability, even from before the age of 4 (Campbell & Ewing, 1990; Fischer, Rolf, Hasazi, & Cummings, 1984; Lavigne *et al.*, 1998; Rose, Rose, & Feldman, 1989). An early-onset pathway that begins during preschool years with oppositional behaviour and hyperactivity, leading to conduct problems in middle childhood has been proposed (Loeber, 1991; Loeber & Stouthamer-Loeber, 1998).

A longitudinal study was conducted, based on maternal reports, mother-child interactions in the laboratory and observations at school. This study suggested that, in comparison to a control group, children who were initially identified at the age of 3 as difficult by their parent (n= 46) (Campbell & Cluss, 1982) were reported to have externalising problems at the age of 4 (n= 35) and at the age of 6 (n= 33) (Campbell, Szumowski, Ewing, & Breaux, 1986). Maternal and teacher ratings indicated that 67% of the preschoolers who had externalizing difficulties at the age of 6 were diagnosed with an externalising disorder at the age of 9 (Campbell, 1995; Campbell & Ewing, 1990). In more recent studies 43 % of the children who were assessed as having a conduct disorder at the age of 15 in 1999 were also rated as having a conduct disorder three years later, showing the significant longitudinal continuity of

behavioural difficulties (Meltzer, Gatward, Corbin, Goodman, & Ford, 2003). In the same study a quarter of children who were assessed as having an emotional disorder in 1999 were also rated as having an emotional disorder in 2002. An indication that internalising problems may be less stable than externalising problems has also been suggested in preschool and young children (Koot, 1995). Additionally, behavioural disorders in early childhood appear to be associated with later psychopathology in adolescence and adulthood (Fergusson, Horwood, & Ridder, 2005).

Recent studies investigating the burden of these difficulties demonstrated the severe impact of behaviour difficulties compared with the impact of emotional problems on parents (Meltzer, Ford, Goodman, & Vostanis, 2011). Specifically, English parents of children with externalising disorders reported significantly more elevated rates of parental strain related to their child's disorder than parents of children with emotional disorders. The finding that child behavioural difficulties have a great impact on parents' life has been supported by previous research studies (Brannan & Heflinger, 2006; McDonald, Poertner, & Pierpont, 1999; Taylor-Richardson, Heflinger, & Brown, 2006). Managing disruptive and oppositional children seems to be challenging for the caregiver and clearly adds stress to the role of the caregiver and the family (Brannan & Heflinger, 2006).

Overall, research evidence has suggested that the earlier the development of behaviour difficulties occurs, the more these difficulties persist throughout childhood, and the greater the impact behaviour problems, rather than emotional difficulties, in young children have on parents. For this reason, early detection and early prevention programmes designed to modify common behavioural and emotional problems can avoid the precipitation of these difficulties and can reduce the negative effect these problems may have on the family.

1.2.4 Aetiology: Risk and Protective Factors

Health professionals and researchers should investigate which factors bring about a problem to prevent it through interventions. Before mapping out an evidence-based intervention or a prevention programme, it is necessary to look at the risk and the protective factors. Risk factors (Kenner & Kenner, 2001) are the potential dangers, which enhance the probability of a disease development, whereas the protective factors encourage healthy behaviours. Both factors are relevant to the Bronfenbrenner's Ecological Systems theory (Bronfenbrenner, 1979). This suggests that human development is shaped by the interactions involved between an individual and his or her environment. The model describes five different levels of environmental influence that can potentially affect a child's development: the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Bronfenbrenner, 1994). It also emphasises the bi-directional relationships within and between each system, and their impact both away from the individual and towards the individual. This model refers to the individual, interpersonal or family, community or environmental, societal or political levels, nation-wide cultural forces, time and the extent to which all these levels influence child conduct problems.

The risk and protective factors of each level play a significant role in child development, especially the within-child factors such as inheritance (Fergusson, Horwood, & Lynskey, 1994; Lytton, 1990), temperament (Caspi, Henry, McGee, Moffitt, & Silva, 1995; Prior, 1992), gender (Robins, 1991; Prior, Smart, Sanson, & Oberklaid, 1993), social skills (Prior, Smart, Sanson, & Oberklaid, 1993) and cognitive skills (Dodge, 1993; Lochman & Dodge, 1994). However, this section focuses only on the microsystem, which is the layer closest to the child, and the importance of the relationships and interactions that a child forms within his

immediate environment, particularly within the family. Familial risk and protective factors were chosen because, despite the bi-directionality of the child-parent relationship noted in reviews (Maccoby & Martin, 1983), evidence from longitudinal studies demonstrates that parenting style is more likely to affect child developmental outcomes (Simons & Conger, 2007; Steinberg, Lamborn, Dornbusch, & Darling, 1992).

Especially, familial factors have been found to determine whether and to what extent conduct problems could be developed, strengthened or relieved during a child's developmental stages. Attachment theory establishes the fundamental principles of the relationship between the child and the parents (Bowlby, 2005). The way parents communicate with their children and allow them to explore away from the "secure base" they have set, can create either a secure, anxious-resistant or an anxious-avoidant attachment (Bowlby, 1988). The interactions between children and parents may determine the way children learn to behave. According to the coercive escalation model of family interactions (Patterson, 1982), children usually display aggressive behaviours as a reaction to strong parental avoidance behaviours. For instance, when a child experiences the absence of maternal emotional responsiveness during preschool years, research shows that the child is three times more likely to display conduct problems by the age of five (Fergusson, Horwood, & Lynskey, 1994). Moreover, when parents are intolerant, erratic and overdemanding and do not give their children the time needed to adjust to the environment and to new experiences, it is more likely that children with a predisposition to conduct problems will eventually exhibit such behaviour. Furthermore, cognitive biases of parents, sometimes, exert great influence on the child's behaviour. It is known that mothers of children with conduct problems are more likely to attribute defiant intentions to their children's

actions than those of non-problem children (Strassberg, 1995). However, positive parenting requires parents' attention and concentration in order to find out the possible factors that lead the child to misbehave.

There are several "disruptors" that influence the interaction between child and parent (Patterson, De Baryshe, & Ramsey, 1989). Initially, parental psychopathology is a valid risk factor on the grounds that parents of children with conduct problems are more likely to display an antisocial personality disorder, be depressed or become involved with substance abuse. All of these activities obstruct parents in the execution of their parenting duties and practices. Particularly, depressed mothers seem to deprive their children of love, affection and tenderness (Braswell, 1991), use more verbal and physical punishment and engage less effectively in supervision of their children (Hops, 1992; McMahon & Wells, 1998; Webster-Stratton, 1988). Consequently, depressed mothers are more likely to develop a negative interaction with their children than non-depressed mothers because of depression causing negative perceptions of the child's behaviour (Brody & Forehand, 1988). Also, interfamilial conflict is strongly correlated with conduct problems (Stanger, McConaughy, & Achenbach, 1992). In fact, marital conflict is strongly associated with parental withdrawal, negativity and coerciveness (Miller, Cowan, Cowan, Hetherington, & Clingempeel, 1993). This signifies that the more children experience domestic conflict between their parents or directly engage in conflict with them, the more intense conduct problems they display and the less adjustment competence they demonstrate (Forehand *et al.*, 1987; Reid & Crisafulli, 1990). Therefore, abusive and coercive parenting practices (Luntz & Widom, 1994) and child maltreatment (Finkelhor & Berliner, 1995) are two of the most influential risk factors. Also, according to Fergusson and colleagues (1994) family structure and stability have to be

taken into consideration because conduct problems are common among children born into single-parent households, or those who experience parental separation or remarriage. Finally, socioeconomic factors are likely to increase the rates of the development of child conduct problems in a family. However, this is a critical factor not only for conduct disorders but for a range of other childhood disorders as well (Offord, Boyle, & Racine, 1989).

Protective factors can be classified into the categories of individual, familial and external familial (Kazdin, 1996). Initially, individual factors are related to the sociability, average intelligence, self-confidence and school competencies of the child. Secondly, familial factors are linked with parents' education, socioeconomic status and social competences and with the way parents respond to their children's emotional and material needs. Lastly, peer and friendship relations during childhood and adolescence and the support of a role model could influence the likelihood of conduct disorders for better or worse.

A child growing up in an environment saturated with some of these risk factors might develop serious externalising problems such as oppositional and conduct disorders, as well as internalising problems such as depression, anxiety and inadequate social problem-solving skills (Goodman, Barfoot, Frye, & Bell, 1999). However, not all children growing up in adverse environments show disruptive disorders (Goldstein & Rider, 2005). The family is the corner stone, which reflects the inner familial relations and the relationships established at the societal level, which comprise a spectrum of potential risk factors. This is why researchers, policy makers and health professionals have to be aware of the familial system. There is a wide range of theoretical frameworks aimed at modifying the dysfunctional parental practices so as to provide an effective family functioning. Behavioural family

interventions are based upon certain models, such as the social cognitive theory, the developmental theory, the ecological perspectives in human development, the attribution theory and the systems theory (Sanders, Gooley, & Nicholson, 2000). All these approaches seek to strengthen parental skills by means of behavioural parent training, which includes techniques for praising and rewarding, paying attention to and supervising children, reinforcing, giving clear and calm instructions and negotiating. The target population of these interventions is parents with children at risk of developing or with already existing conduct problems.

1.2.5 Long-term Effects

The inadequacy of prevention and intervention policies for the prevention and treatment of these disorders during childhood is likely to lead to poor academic performance, school abandonment, juvenile crime, aggression and delinquency (Lacourse *et al.*, 2010; Sheldrick, 1995; Woolfenden, Williams, & Peat, 2002), the use of addictive substance abuse and social exclusion (Caspi, Elder, & Bem, 1987; Robins, & Ratcliff, 1979) and the development of other psychiatric disorders in adulthood (Fergusson, Horwood, & Ridder, 2005). Longitudinal studies indicate that approximately half of the children with CD develop a significant antisocial personality disorder (APD) in adulthood (Loeber, 1982; Steiner, 1997). Two factors that predict APD are the number of CD symptoms the child displays and early age of onset of symptoms (APA, 1994). Taking into consideration the serious consequences of emotional and behavioural disorders in one's life, it seems that these disorders might be disturbing not only to the person himself or herself, but disruptive to society.

What is more, evidence has indicated that the average cost of children with behavioural difficulties to society in terms of health services, educational and criminal

justice costs is up to 10 times more than that of children without behavioural disorders over a lifetime (Scott, Knapp, Henderson, & Maughan, 2001). The public cost of high-risk youth in the US is estimated to be between \$1.7-2.3 million (Cohen, 1998). Therefore, these disorders are common enough to be considered a major public health concern worldwide and can be serious enough to require health and social care.

1.3 Diagnoses

As a starting point, Disruptive Behaviour Disorders includes ODD and CD as the child primary disorder. Although there might be comorbidity between ODD, CD and ADHD (Biederman, Faraone, & Lapey, 1992; Waschbusch, 2002), ADHD is mostly investigated as a separate category of behavioural problems. Research suggests that ODD and CD are grouped developmentally together as the onset of ODD usually precedes the onset of CD (Bloomquist & Schnell, 2002).

There is a controversy concerning classification and diagnostic criteria for disruptive disorder under the two major international classifications. According to the *Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition (DSM-IV)*, Disruptive Behaviour Disorder can be classified under Oppositional Defiant Disorder and Conduct Disorder which have exclusive symptom lists (APA, 1994). ODD is described as an ongoing pattern of negativistic, deviant, disobedient and hostile behaviour toward authority figures, whereas CD is presented as a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated. Since ODD is not diagnosed in the presence of CD it can be assumed that it is a less severe manifestation of CD (Rowe, Maughan, Costello, & Angold, 2005; Rowe, Maughan, Pickles, Costello, & Angold 2002).

On the other hand, the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)* (World Health Organisation, 1992) implements the diagnostic criteria slightly differently. The criteria established might be the same as in the DSM-IV, as well as the diagnosis of CD, but ODD is diagnosed in the presence of symptoms from a combined symptom list of ODD and CD, and so ODD is treated as a subtype of CD under this approach. As a result, children diagnosed with CD (ODD subtype) according to the ICD-10 would not receive a diagnosis in the DSM-IV (Angold & Costello, 2001). In addition, it should be noted that there is no indication about the frequency of these symptoms for a clinical diagnosis in either of the two systems. The note provided in the DSM-IV saying, “*a criterion met only if the behaviour occurs more frequently than is typically observed in individuals of comparable age and developmental level*” does not signify a standard basis for an accurate diagnosis. This is also magnified by the fact that both systems have not formally incorporated sociocultural factors as exclusionary criteria of disorders (Canino & Alegria, 2008).

The distinction between early and late onset of CD remains the same in both classifications: childhood-onset is set prior to the age of 10 and adolescent-onset after the age of 10. However, these two types differ with respect to the symptoms, development, relative prevalence in boys and girls, and co-morbidity. Explicit diagnostic criteria are desirable for mental health professionals to make a concrete diagnosis and suggest the most appropriate treatment.

1.4 Treatment and Prevention

For disruptive behaviour disorders, different theoretical approaches suggest several different methods of treatment contingent upon their perspectives on the

aetiology of the disorder, the child's age as well as the type and severity of the child's disruptive behaviour. A comprehensive two-pronged approach to the treatment of disruptive behaviours is needed, which includes ongoing interventions to help older youths and their families cope with the many associated social, emotional, and academic problems as well as early intervention and prevention programmes for children being at risk or just starting to display behavioural difficulties (Frick, 2000). There are more than 230 documented treatments for children with behavioural difficulties, from which the majority have not been studied (Dumas, 1989; Kazdin, 1985).

The effectiveness of the treatments needs to be evaluated through well-conducted meta-analyses and systematic reviews of intervention studies aiming to reduce child disruptive behaviours, including intervention studies with a secondary goal of preventing future behavioural difficulties. According to Chambless and colleagues (1998) well-established and probably efficacious treatments are determined through robust evidence of research studies, which meet specific criteria regarding the methodology of basic research, preliminary outcome evidence and process-outcome connection (Kazdin, 1997). According to Scott and colleagues (2003) traditional restrictive approaches such as residential treatment, inpatient psychiatric hospitalisation and incarceration for severe conduct behaviours have shown not only to have fairly low effectiveness but also to be extremely expensive (Henggeler & Santos, 1997). The most common treatments suggested to treat children with these disorders are divided into three main categories: child-delivered, parent-delivered and systemic approaches.

1.4.1 Child-delivered Treatments

Children with existing difficulties.

Child-focused treatments mainly include traditional psychotherapy and cognitive behaviour therapies (CBT). Weiss and colleagues (1999) showed that traditional psychotherapy, when compared with the attention-placebo condition produced only a small treatment effect on child functioning and psychopathology. These results were confirmed on a 2-year follow-up study (Weiss, Catron, & Harris, 2000) assessing for a treatment “sleeper effect” (Kendall, 1991). Regarding cognitive behaviour approaches, evidence is controversial; some studies have confirmed that CBT decreases disruptive behaviour according to teacher reports (Bienert & Schneider, 1995; Kazdin, Bass, Siegel, & Thomas, 1989; Lochman & Lampron, 1986), while other studies have shown that CBT has only limited effects (Bloomquist, August, & Ostrander, 1991; Dubow, Huesmann, & Eron, 1987; Lochman, 1992). A recent review (Sukhodolsky, 2007) verified the outcomes of previous studies (Kazdin, Bass, Siegel, & Thomas, 1989; Kendall, Reber, McLeer, Epps, & Ronan, 1990), which show that the cognitive-behavioural model yields superior effects compared to usual clinical care. However, the involvement of parents in these interventions is minimal. Differences in the sample selection, research design, methodologies and measurement used could explain such controversy.

1.4.2 Family-delivered Treatments*Children at risk for or with existing difficulties.*

Family is one of the most important determinants in a child’s development, and, as already discussed, risk and protective factors do revolve around the family. Evidence affirms the efficacy and cost-effectiveness of family-based interventions for parents with children at risk or children who already have conduct problems (Markie-

Dadds & Hawes, 2006). For these major underlying reasons, evidence-based interventions focused on family should be the priority of practitioners treating children with conduct problems.

One of the basic approaches followed helping parents modify their children's behaviour in the home setting is Parent Management Training (PMT), which is a form of psychosocial intervention (Kazdin, 2003). PMT derived from the assumption that disruptive problems are inadvertently arisen and sustained in the home environment due to the maladaptive interactions between the parent and the child. To illustrate, aggressive, deviant and antisocial behaviour is assumed to be developed by inconsistent parenting styles, direct reinforcement of deviant behaviour, frequent and inefficient use of discipline and failure to promote prosocial skills (Patterson, Reid, & Dishion, 1992). Coercion Theory (Patterson, 1982) postulates that child deviancy is likely to remain stable across time because parents mistakenly use rewards to modify child aggressive behaviours (Cicchetti & Cohen, 1995). Therefore, family members are considered the main source of difficulty. That is the reason why parents are primarily involved in this treatment process. According to Kazdin (2003) the relationships between behaviours and the environmental events that influence behaviour, called "contingencies of reinforcement", are of great importance in altering behaviours. This includes the integration of three major components, namely antecedents, behaviours and consequences, and how they are linked with the modification, control and establishment of a healthy behaviour. So, parents learn new strategies to promote their child's development, encourage desirable behaviour, teach new skills and behaviours and manage misbehaviour. Components of these strategies trace their origins to applied behaviour analysis (Risley, Clark, & Cataldo, 1976; Sanders, 1996) and developmental psychology and psychopathology research on risk

and protective factors regarding the adverse developmental outcomes in children (Emery, 1982; Grych & Fincham, 1990; Hart & Risley, 1995; Rutter, 1985). They are also based on social information processing models, and the developmental model of social competence in particular, which underlines the importance of parental cognitions for the formation of parental self-esteem and self-efficacy, decision-making and behavioural intentions (Bandura, 1977, 1989, 1995) as well as attachment theory concentrating on the parent-child interaction (Herschell, Calzada, Eyberg, & McNeil, 2002). One of the parenting programmes that apply PMT as one of its basic therapeutic approaches is Triple P (Sanders, Markie-Dadds, & Turner, 2003).

1.4.3 Systemic Treatments

Children at risk for or with existing difficulties.

Since children interact within a network of interconnected systems that encompass individual, family, peer, school and neighbourhood, behaviour difficulties might be caused by any maladaptive interactions in these systems. Systemic treatments seek to intervene at these different levels by addressing individual, family and societal issues that might contribute to problem behaviour. As the aetiology of disruptive behaviour disorder relies on a broad range of systems, it seems rational that different treatments will be involved in the intervention model. For instance, school-based interventions aim at promoting the resilience and well-being of students by improving the child's attitude towards academic performance and school environment. So, different approaches are employed, focusing on the improvement of the teacher's classroom management skills, the general classroom management and classroom curricula, the general population of students or children at risk or those who have conduct problems. Although some of these interventions involving parents

reach large populations due to their universal character and influence not only the establishment of conduct problems but a range of outcomes, they seem to be costly, highly complex and time consuming (Sanders, Gooley, & Nicholson, 2000). In a recent RCT, Scott and colleagues (2010) implemented the SPOKES project, which included a 12-week child behavioural programme followed by a 10-week literacy programme and a 6-week revision. The findings based on interviews, questionnaires and direct observations indicated improvements in both parental behaviour and child outcomes. The programme lasted for 28-weeks and it cost £2,380 per child which is three times the cost of a referral to an outpatient child mental health clinic. Nonetheless, due to the high long-term costs of persisting severe antisocial behaviour (Cohen, 1998) only modest effects are required so that this programme is cost-effective (Foster, Jones, & the Conduct Problems Prevention Research Group, 2006). In addition, the outcomes of RCTs (Gardner, Burton, & Climes, 2006) and a review (Kazdin, 2003) suggested that group-based parenting programmes delivered by well-trained and supervised staff can be effective in a community voluntary sector setting for reducing conduct problems and enhancing parenting skills.

1.5 Parenting Interventions

1.5.1 Parent management training (PMT)

Parenting is defined as positive or negative depending on whether the parents' behaviour is associated with positive or negative outcomes in the social functioning of children (Kaiser, Burnett, Pfiffner, 2001). The term 'parent', in this thesis, refers to any primary caretaker in a child's life, regardless of biological relationship. Parenting has been empirically tested extensively for over 60 years by psychology and child development researchers. No other field has provided such an immense amount of

information regarding what works for parents (Moran, Ghate, & Van der Merwe, 2004). Yet, only a few programmes such as “The Incredible Years” (IY; Webster-Stratton & Reid, 2003) and “Triple P-Positive Parenting Program” (Sanders, 1999) have been evaluated in real-life settings (Bodenmann, Cina, Ledermann, & Sanders, 2008; Hutching *et al.*, 2007). Consequently, there is a high need for efficacious prevention and intervention programmes (Scott *et al.*, 2010). Parenting has been found to play a significant role in the development and maintenance of emotional and behavioural difficulties (Gardner, Sonuga-Barke, & Sayal, 1999; Patterson, 1997; Wood, McLeod, Sigman, Hwang, & Chu, 2003).

There are many effective parenting interventions for emotional and behavioural problems that have been tested in randomised controlled trials (RCTs) (Gardner, Burton, & Klimes, 2006; Hutchings *et al.*, 2007; Kazdin, 2005; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2007). One of the most well developed and most investigated treatments is Parent Management Training (PMT). This is a form of psychosocial intervention based on social learning theory and research in which parents are taught social learning techniques to change the behaviour of their children (Beauchaine, Webster-Stratton & Reid, 2005; Brestan, & Eyberg, 1998; Horne, & Sayger, 2000; Kazdin, 1997, 2005; Patterson, Reid, & Dishion, 1992). Indeed, improved positive parenting skills after parent training intervention has been identified as a partial mediator of reduced child behaviour problems, and consequently, a key component of successful evidence-based parent training interventions (Gardner, Burton, & Klimes, 2006; Gardner, Hutchings, Bywater, & Whitaker, 2010). Parenting style may also influence a child’s emotional development. It is suggested that positive parenting is negatively correlated to symptoms of depression in children, whereas negative parenting and child depression are strongly,

positively correlated (Dallaire *et al.*, 2006; Stack, Serbin, Enns, Ruttle, & Barrieau, 2010).

PMT has been exemplified by various parenting programmes such as “The Incredible Years”, “The Oregon Model of Parent Management Training” (PMTO; Patterson, 2005), “Parent-Child Interaction Therapy” (PCIT; Brinkmeyer & Eyberg, 2003; Herschell, Calzada, Eyberg, & McNeil, 2002), and “Triple P-Positive Parenting Program”. It is important to note that, although the theoretical basis of Triple P is similar to other variations of PMT, Triple P was chosen based on its unique structure, its methods of delivery, its population-based approach as well as its cross-cultural replicability.

1.5.2 Triple P - Positive Parenting Program

Triple P is a five-level (universal, selected, primary care, standard, enhanced) media-based intervention developed by Matthew Sanders and his colleagues that aims to enhance the skills of parents of children (from birth to age twelve) at risk of developing or already having conduct problems (Sanders, 1999). It is theoretically based on the models of social learning theory, the fundamental principle of which is that learning occurs within a social context. According to Bandura (1975) people are capable of learning from one another through processes such as observational learning, imitation and modelling. Contrary to behaviourism, in social learning theory, learning can occur without a necessary change in behaviour. Cognition is also the basic element of learning. This is why the knowledge and the upcoming reinforcements or punishments have a great impact on the different behaviours one displays. So, social learning theory focuses on the directional and the mutual nature of the interactions surrounding problem behaviours between parents and children

(Patterson, Reid, Jones, & Conger, 1975; Patterson, 2002). There is extensive research literature on behaviour modification (Bergin & Garfield, 1994; Falloon, 1988; Gambrill, 1977) that indicates a series of effective behaviour modification strategies. One of the most developed aspects of the Triple P programme was the enhancement of children's competencies in everyday situations such as mealtimes, going to bed when told and playing with other children. Through the studies conducted on developmental psychopathology risk and protective factors, researchers found that the most successful strategies were the ones that emphasised the change of dysfunctional and coercive parenting practices (Kendziora & O'Leary, 1993; Sanders, 1999; Sanders, Gooley, & Nicholson, 2000).

Triple P aims to prevent severe behavioural, emotional and developmental problems in children by enhancing the knowledge, skills and confidence of parents. Each of the five levels of the programme (universal, selected, primary care, standard, enhanced level) is defined in consideration of the severity of the child's behavioural problems as well as the possible family dysfunction. Due to this flexibility, the programme can be individually tailored dependent upon the different requirements and desires identified by the parents, as well as on the type, frequency and mode of assistance clinically required in every child's case.

The programme is based on parental education that is essential to promote the awareness of the risks, dangers and signals of both conduct problems and poor parenting. The tools applied to educate parents vary according to the level of the intervention. Consequently, a considerable advantage of the Triple P programme is the flexibility of the methods used. The programmes can be delivered on an individually tailored basis (Roberts, Mazzucchelli, Studman, & Sanders, 2006), as group-based (Hoath & Sanders, 2002), self-directed (Connell, Sanders, & Markie-

Dadds, 1997), and telephone-assisted intervention (Sanders, Markie-Dadds, Tully, & Bor, 2000) and as a result can be disseminated in a multitude of settings (Sanders, Turner, & Markie-Dadds, 2002).

Despite its benefits, there is increasing concern that the evidence of most psychological intervention research is biased (Ioannidis, 2005), and Triple P is no exemption. Triple P has been criticised for over-reliance on positive outcomes derived from substantially underpowered studies (Coyne & Kwakkenbos, 2013). A small number of independent studies have indicated that the outcomes of Triple P's overall effects should be treated with caution due to inadequate reporting and conflict of interest (Eisner 2009). An independent systematic and meta-analytic review also identified considerable methodological issues in the quality of Triple P studies (Wilson *et al.*, 2012). In response to these criticisms, a recent systematic review and meta-analysis was published by Triple P (Sanders, Kirby, Tellegen, & Day, 2013). This found that there was a high risk of performance bias for all studies because of the changes on reporting standards throughout the many years of research. However, it was also reported that there were significant intervention effects in the outcomes of 31 studies on the child's social, emotional and behavioural patterns where the developer was not involved. These also indicated that poor fidelity and inadequate supervision of practitioners or implementation of the interventions could explain the presence of null effects in independent reviews. This meta-analysis was again criticised for being biased (Croyne, 2014). To mitigate this problem, an independent body should be enlisted to evaluate the effectiveness of the programme. The members of any such body should have no affiliation to Triple P International or the University of Queensland and/or any other parenting programme.

1.5.3 Effectiveness

The effectiveness of the programme has been evaluated through high-quality research, as RCTs have been conducted with diverse populations, in various settings and cultures, and with families with different needs. Also, the development of the programme into distinct levels allows for the evaluation of the effectiveness of each diverse delivery method of the programme as applied to families with different needs.

Meta-analyses (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a; 2008b) were carried out to estimate firstly the effectiveness of the Triple P Level 4 intervention in disruptive behaviour disorders of children aged 2 to 12 compared to a control group, and secondly the degree to which post-intervention effects were stable over time in the intervention group. The results indicated that Level 4 of Triple P has a moderate homogeneous mean effect size on child disruptive difficulties that remained at post-measurement and at a 6-month and 12-month follow-up. The family type, behaviour problem type, delivery formats and the ages of children had a moderation effect on child behaviour. Regarding parental behaviour, the findings showed that enhancing parenting skills by decreasing dysfunctional parenting style and increasing parental satisfaction with their parenting role and feelings of efficacy resulted in lessening negativistic child behaviours. These results were maintained for at least 3 to 12 months. In addition, variables such as age or whether the child had been diagnosed with disruptive disorders in the clinical or non-clinical range, did not affect parenting styles and competencies. Gender was found to be a moderating factor, though as Triple P was more effective for parents of boys, likely because boys display higher level of behaviour problems than girls (Rutter, 1970; Verhulst & Van der Ende, 1991).

The results of the previous meta-analyses reported a variety of effect sizes for

Triple P ranging from small to large effects ($d= 0.04-1.14$). Due to the fact that Triple P is a programme operating on multiple levels of intervention intensity, such a range was highly expected. Consequently, reporting mean effect size does not reflect a reliable approach of statistical analysis. To overcome such a critical limitation, Nowak and Heinrichs (2008) investigated this effect variability by meta-analysing the data of 29 RCTs, 11 quasi-experimental studies and 15 uncontrolled studies. Through a hierarchical linear model (HLM; Bryk & Raudenbush, 1992) it was estimated that overall effect sizes of Triple P for parenting and child disruptive behaviour ranged between 0.35 and 0.48 for between-groups and 0.45 and 0.57 for within-groups post-intervention comparisons (Nowak & Heinrichs, 2008), confirming the results of previous meta-analyses (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a, 2008b; Thomas & Zimmer-Gembeck, 2007). The most recent meta-analysis (Sanders, Kirby, Tellegen, & Day, 2013) investigates the Triple P intervention effects on both child and parenting variables that Triple P aims to change (Sanders, 2012). More than 100 studies and data of more than 16,000 families were analysed and produced small to medium (0.20 to 0.58) effect sizes for both child and parenting measures in the short-term, and small effect sizes for all outcomes in the long term (0.25).

There were also meta-analyses reporting different results (Wilson *et al.*, 2012). Although previous findings where mothers reported improvements in child behavioural difficulties following a Triple P intervention in comparison to a waiting list control group were supported, fathers and independent observers reports yielded no significant outcomes between the intervention and control condition. It was suggested that benefits were more likely to be achieved with families of children with more severe difficulties, as previously found (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008b). A thorough review of the effectiveness of the Triple P programme

is included in the literature review presented in Chapter 3.

1.5.4 Cost of programme delivery

There is little information available in terms of Triple P cost of delivery. It is reported that universal and media interventions have costs estimated to be less than \$1 per child, and the costs of training service providers to deliver at other intervention levels were quite modest (\$11.74 on a per child basis) (Foster, Prinz, Sanders, & Shapiro, 2008; Prinz, Sanders, Shapiro, Whitaker, & Lutzker 2009). These figures were estimated using the cost of a programme roll-out across a whole population, which was then divided by the total number of children in that population, most of whom might not have been reached by Triple P. So, these estimates were based on the cost of delivering the programme to the entire population of children without knowing how many and who actually received it. Also, it referred to costs of the providers' training without taking into consideration any other costs of providers or clients during the entire programme.

By conducting a 'sensitivity analysis', it was found that Triple P has an average cost of \$34 per child aged between 2 and 12 years old (Mihalopoulos, Sanders, Turner, Murphy-Brennan, & Carter, 2007). When Triple P was implemented to a single cohort of 2-year-old Australian children, the average cost was \$51 per child. However, a quite conservative analysis was presented as it included costs of printed material, professional costs and education staff costs, but excluded significant costs such as media costs, family costs and other health-sector costs.

Lastly, media-based interventions are cheaper than individual treatment. There is no adequate financial information on the different variations of Triple P. (Mihalopoulos, Sanders, Turner, Murphy-Brennan, & Carter, 2007). Other variations

such as Group Triple P may indeed be more cost-effective. The cost of other group-based programmes such as “Incredible Years”, was estimated to be \$2,506 per child for 12 children at risk of developing CD, including initial costs and materials for training group leaders (Edwards, Ó CÉilleachair, Bywater, Hughes, & Hutchings, 2007). In other PMT programmes the cost for an American high-risk family involved in the child welfare system completing the PCIT programme was on average \$2,900 (Chaffin *et al.*, 2004), and \$3,000-\$4,000 by US National Registry of Evidence-based Programs and Practise (NREPP; 2009).

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CHAPTER 2

Chapter 2: Systematic Review: Prevalence of child behavioural difficulties in Greece

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2.1 Overview

This chapter aims to identify, appraise, select and synthesise research evidence in an attempt to explore the prevalence of emotional and behavioural difficulties (EBD) in Greek children. To my knowledge, this is the first attempt to systematically review the evidence from this population on this type of problems. This review is important because, as mentioned in the previous chapter, behavioural and emotional difficulties are common among children worldwide, and so it is necessary to establish whether these difficulties are a significant problem in the Greek population. This is essential before developing sound public policies to improve children's wellbeing, whilst reducing mental health difficulties (Jenkins, 2001; Roberts, Attkisson, & Rosenblatt, 1998). Public funds should be used efficiently and effectively for introducing specific interventions aiming to reduce the prevalence and prevent the onset of emotional and behavioural problems.

This chapter presents the introduction, methods, results and discussion based on the guidelines provided by the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-analyses), a statement on the reporting of systematic reviews (Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).

2.2 Introduction

Epidemiological studies have enhanced our understanding of the frequency, worldwide distribution and prognosis of behavioural difficulties within the general population. Early epidemiological studies used the multivariate statistical approach to classify child psychopathology. There were two main factors produced by factorial analysis of behavioural problems; the first important factor that emerged involves the presence of emotional disturbance in the child and has been labeled as 'Personality

Problem' by Peterson (1961) or 'Internalising' by Achenbach and Edelbrock (1981). The second factor relates to aggressive behaviour associated with poor interpersonal relationships and has been labeled as 'Conduct Problems' by Peterson (1961) or 'Externalising' by Achenbach and Edelbrock (1981). 'Externalising' problems is a broad term used by mental health professionals that can be narrowed to ADHD, ODD and CD.

The field of research of behavioural problems in Greece is underdeveloped for several reasons. Initially, one of the main reasons is the relative lack of screening instruments that have been developed or adapted in the Greek language against agreed scientific attributes (Giannakopoulos *et al.*, 2009a; MacDonald, Tsiantis, Achenbach, Motti-Stefanidi, & Richardson, 1995; Roussos *et al.*, 1999a,b; Roussos *et al.*, 2001). For instance, it was not until recently that the psychometric properties of the Greek Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) were investigated (Giannakopoulos, Mihas, Dimitrakakis, & Tountas, 2009; Giannakopoulos *et al.*, 2009b). This is the reason why there are only a few published studies which have examined emotional and behavioural problems among children and adolescents (Bibou-Nakou, Kiosseoglou, & Stogiannidou, 2001).

Secondly, it seems that Greek parents are less concerned with children's behavioural problems than other areas of their life such as their academic performance (Tsiantis *et al.*, 1982). As there are no studies analysing Greek parenting styles, only assumptions can be made. It is speculated that some parents might think of disruptive patterns as typical behaviour because other children around them might exhibit the same problems as their child. It is even possible that the parents themselves displayed the same behavioural patterns when they were children, and hence associate this with the usual child behaviour. These attitudes might derive from

the lack of public awareness towards child behavioural disorders and, consequently, from the lack of psychological information available to parents. It is possible that Greek parents are partly right and that Western cultures might have made too much of child disruptive behaviour (Taylor & Sandberg, 1984).

It is also speculated that some parents might ignore these problematic behaviours because they might think that they are only temporary and will be eliminated with the onset of adolescence and adulthood. Nonetheless, behaviour problems are powerful predictors of juvenile delinquency, crime, substance abuse, social exclusion, contact with mental health service and other similar indices in adulthood (Achenbach, Howell, McConaughy, & Stanger 1995; Conduct Problems Prevention Research Group, 1992; Farrington, 1996). In particular, it would be interesting to investigate the extent to which the significant increase in juvenile and young adult delinquency over the last decade in Greece (Papageorgiou & Vostanis, 2000) is ascribed to conduct difficulties.

This systematic review aims to investigate the prevalence of externalising difficulties in Greek children and adolescents. It is particularly focused on Disruptive Behaviour Disorders including ODD and CD as the child primary disorder because although there might be comorbidity between ODD, CD and ADHD, ADHD is mostly investigated as a separate category. An understanding of the epidemiological aspects of behavioural problems, and of externalising in particular, may provide insight into the burden of the disorder in Greek population as well as information for assessing the need for mental health services.

2.3 Methods

2.3.1 Data Sources

Initial searches through all databases were conducted in November 2010. The following electronic databases were systematically searched: MEDLINE (1966 to December 2010), EMBASE (1980 to December 2010), PsycINFO (1887 to December 2010), CINAHL (1982 to December 2010) and Biosis (1985 to December 2010). The reference lists of all articles retrieved were reviewed for additional studies and the authors of studies initially selected as well as experts on this research field were contacted. The search strategy presented in Table 1 was modified where necessary to search the databases. No language restrictions were applied. This search strategy is in accordance with expert recommendations on the subject (Stroup *et al.*, 2000).

2.3.2 Study Selection

2.3.2.1 Types of Studies

Observational (non-experimental) studies collecting data using standardised previously validated measures to explore the prevalence and incidence of behavioural difficulties, and of externalising problems in particular, in Greek pre-school and school-aged children (2 to 12 years) and adolescents (12 to 18 years), were eligible for inclusion. Observational studies include descriptive and analytic studies, which provide a clear picture of the prevalence and incidence of a population. This review focused on any ecological studies, cross-sectional studies and disease surveillance and surveys. Ecological studies aim to provide the characteristics of population groups and examine the distribution diseases among people with different risk profiles. Cross-sectional studies focus on the entire population and are often used to assess the prevalence of acute or chronic conditions. Surveillance studies and national prevalence surveys also provide useful information due to the continuous monitoring

Table 1. *Search strategy*

1 GREECE	21 MISCONDUCT
2 GREEK	22 OPPOSITIONAL
3 PREVALENCE or RATE	23 DEFIANT*
4 EPIDEMIOLOG*	24 OPPOSITIONAL-DEFIANT-DISORDER
5 ((((((CHILD* or ADOLESCEN*) or YOUTH*) or TODDLER*) or PRESCHOOL*) or BABY) or BABIES)	25 VIOLEN*
6 SCHOOL*	26 AGGRESSI*
7 TEACHER*	27 EXTERNALIS*
8 PARENT*	28 EXTERNALIZ*
9 FAMIL*	29 SPECIAL-NEED*
10 CLINIC*	30 (((((((((((16 or #17) or #18) or #19) or #20) or #21) or #22) or #23) or #24) or #25) or #26) or #27) or #28) or #29)
11 NON-CLINIC*	31 PROBLEM*
12 CROSS-CULTUR*	32 DIFFICULT*
13 (#3 or #4)	33 DISORDER*
14 ((((((#5) or #6) or #7) or #8) or #9) or #10) or #11) or #12)	34 PERCEPTION*
15 (#13 or #14)	35 SEVER*
16 BEHAVIOR*	36 ((((#31 or #32) or #33) or #34) or #35)
17 BEHAVIOUR*	37 (#30 or #36)
18 BEHAVIORAL-SYMPTOMS	38 (#15 or #37)
19 CONDUCT	39 (#1 or #2)
20 CONDUCT-DISORDER	40 (#38 and #39)

of trends in the occurrence and distribution of diseases.

2.3.2.2 *Types of Participants*

The parent(s), carer(s) or teacher(s) of any young person, adolescent or child reporting on the child's behaviour, as well as adolescents reporting on their own behaviour as measured using psychometrically sound assessment tools.

2.3.2.3 *Types of Outcomes*

The primary outcomes considered were the incidence, prevalence or severity of externalising behaviour problems. For outcome instruments some minimum standards were required: (i) the psychometric properties of the instrument should have been described in a peer-reviewed journal, and adequate reliability and validity should have been reported; (ii) the instrument should either be: (a) a self-report, or (b) completed by an independent rater or relative, not the therapist or researcher to avoid reporting bias (Cook, 2010); and (iii) the instrument should be an assessment of a particular area of functioning. Examples include the Child Behavior Checklist (CBCL) (Achenbach & Edelbrock, 1983), the Eyberg Child Behaviour Inventory (ECBI) (Eyberg, 1999), and the Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). From these measures, only the psychometric properties of the Greek CBCL and the Greek SDQ have already been investigated (Motti-Stefanidi, Tsiantis, & Richardson, 1993; Giannakopoulos *et al.*, 2009).

2.4 Results

2.4.1 Types of Studies

This search yielded 477 publications in the databases. Application of inclusion

criteria resulted in 12 studies (Bibou-Nakou, Kiosseoglou, & Stogiannidou, 1996, 2000, 2001, 2002; Kapi, Veltsista, Sovio, Järvelin, & Bakoula, 2007; Macdonald *et al.*, 1995; Motti-Stefanidi *et al.*, 1993; Papatheofilou, Sokou-Bada, Michelogiannis, & Pantelakis, 1989; Paraskeuopoulos & Leoussi, 1970; Roussos *et al.*, 1999a, 1999b; Tsiantis, Motti-Stefanidi, Richardson, Schmeck, & Poustka, 1994). From these studies, six (Bibou-Nakou *et al.*, 1996, 2000, 2001, 2002; Papatheofilou *et al.*, 1989; Paraskeuopoulos *et al.*, 1970) were published in a Greek journal and the remaining six in an international journal (Kapi *et al.*, 2007; Macdonald *et al.*, 1995; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b; Tsiantis *et al.*, 1994). Also, the article of Bibou-Nakou *et al.* in 1996 refers to the main study conducted in 2000, which is why there was no further reference to this study. The full text of two of these studies (Papatheofilou *et al.*, 1989; Paraskeuopoulos *et al.*, 1970) could not be found either after contacting the authors and other authors who had cited these studies, or after looking through various electronic resources.

As a result, nine studies have been included in this review (Bibou-Nakou *et al.*, 2000, 2001, 2002; Kapi *et al.*, 2007; Macdonald *et al.*, 1995; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b; Tsiantis *et al.*, 1994), and six different Greek samples were further analysed (Bibou-Nakou *et al.*, 2000, 2001; Kapi *et al.*, 2007; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b) (Figure 1).

2.4.2 Types of Participants

2.4.2.1 Samples

The selected samples in the studies reviewed here were either nationwide (Bibou-Nakou *et al.*, 2002; Kapi *et al.*, 2007; Roussos *et al.*, 1999a, 1999b) or random samples (Bibou-Nakou *et al.*, 2000, 2001; Macdonald *et al.*, 1995; Motti-Stefanidi *et*

al., 1993; Tsiantis *et al.*, 1994). Some of the original samples seemed to be reused by other studies included in this review. Specifically, this is the case with the sample

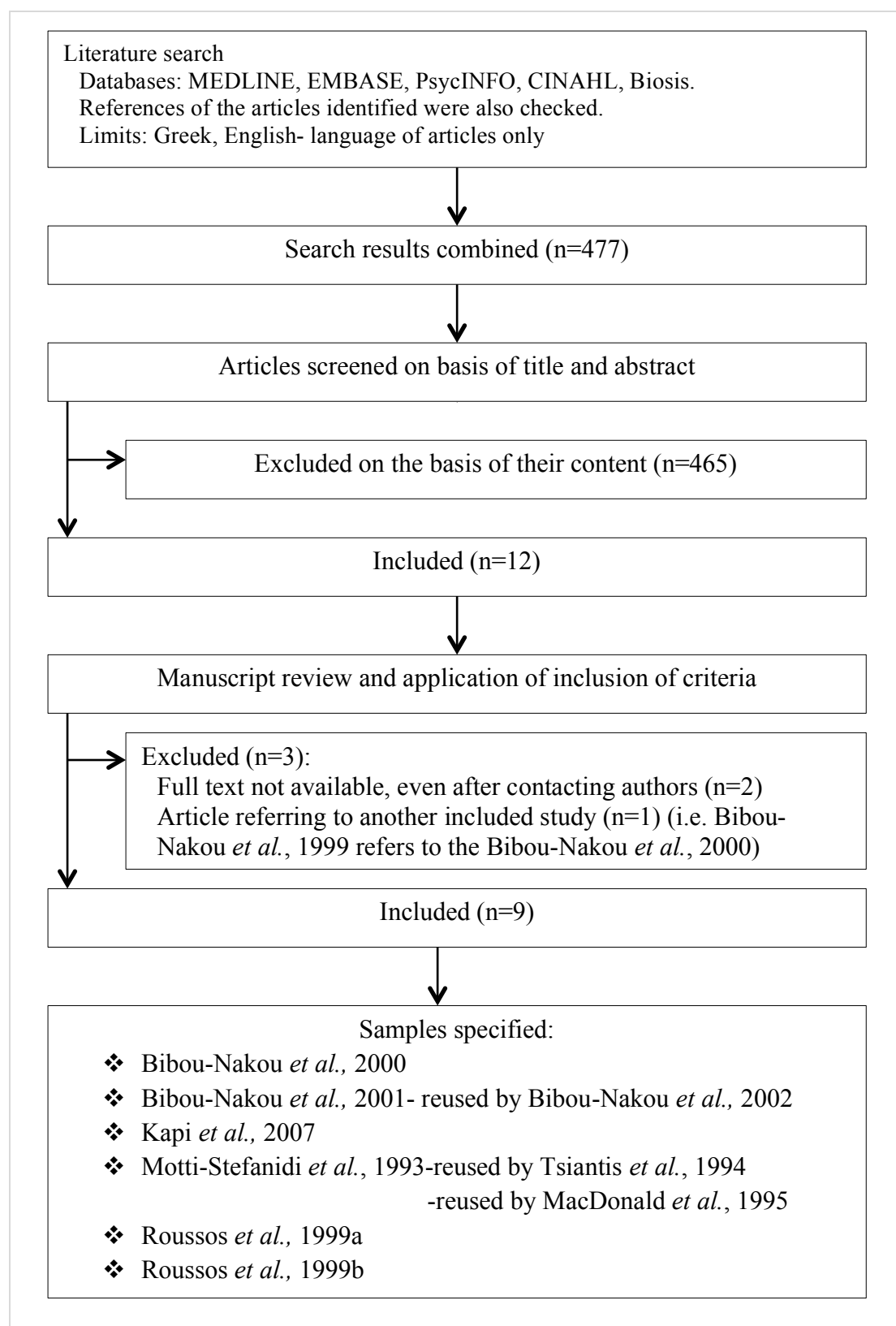


Figure 1. Flow diagram of study selection.

examined in Motti-Stefanidi *et al.* (1993), which was later reused by Tsiantis and his colleagues as well as by Macdonald and his colleagues to compare Greek children with German and American children retrospectively. Also, the sample selected in Bibou-Nakou *et al.*'s study in 2001 seems to have been reused in their own study in 2002. However, a greater number of teachers reported on students' behaviour in 2002 than the year before.

Only one of the included studies (Roussos *et al.*, 1999b) compared clinical and non-clinical samples for the investigation of behaviour difficulties. Also, three of these studies compared Greek children with children from other countries such as the US (Macdonald *et al.*, 1995), Germany (Tsiantis *et al.*, 1994) and Finland (Kapi *et al.*, 2007).

As a result, six different samples were identified among the nine included studies in this review (Bibou-Nakou *et al.*, 2000, 2001; Kapi *et al.*, 2007; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b).

2.4.2.2. *Sample Characteristics*

Parents reported on a total of 6.608 Greek children in the included studies. Their demographic characteristics were inadequately reported in most of the studies. In the vast majority of the studies children were fairly equally distributed by sex with an average of 49% boys (n= 3.237) and 51% (n= 3.371) of girls under investigation. The majority of the children were attending primary school. In one study children who were attending secondary school were also included in the sample (Bibou-Nakou *et al.*, 2002). The data of students' self-reports were not presented though. Also, in another study children aged 18 years were also included (Kapi *et al.*, 2007). Based on the information from three studies, which reported the mean age of children and

standard deviations, most of the children were aged between 6 to 12 years ($M= 9$, $SD= 1.7$) (Bibou-Nakou *et al.*, 2001; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999b). None of these studies examined behavioural difficulties in pre-schoolers (up to the age of 6) and so differences in child age groups could not be further explored.

The demographic characteristics of the parents ($n= 6.608$) were inadequately reported in most of the studies. The mean age of the parents was reported only in one study ($M= 40$, $SD= 4.65$) (Bibou-Nakou *et al.*, 2002). The participants were mainly residents of urban areas (61%) such as the Greater Athens area and Thessaloniki. The minority of participants were selected from semi-rural (14%) and rural areas (25%) of Greece, as outlined in three of the studies (Roussos *et al.*, 1999a, 1999b; Bibou-Nakou *et al.*, 2002). Only Motti-Stefanidi *et al.*'s study (1993) evaluated parents' socio-economic status, indicating that 20% of the families were upper class, 32% middle class and 48% lower class. However, a non-standardised SES classification was used which was based only on the father's education and occupation. Also, in the studies of Bibou-Nakou *et al.* (2000, 2001) an average of 48% of the parents was generally of high education attainment, whereas an average of 5.2% were of low educational attainment. As it has been shown that highly educated people are less likely to belong to the low-income class (Kikilias & Gazon, 2005), it is rather likely that the 48% of the parents with high education were from middle or upper class. Also, teachers ($n= 1.233$) reported on children's difficulties in three studies (Bibou-Nakou *et al.*, 2000, 2001; Roussos *et al.*, 1999a). The mean age of teachers was reported in only one study and it was between 31 to 47 years (Bibou-Nakou *et al.*, 2001).

When there was a comparison group, either a different cultural population or a clinical sample, attempts were made so that the comparison groups were matched to

the Greek non-clinical samples in terms of gender, age, and socio-economic status. However, this was not always achieved. There were differences in age when Greek adolescents (18 years old) and Finnish adolescents (15-16 years) were compared (Kapi *et al.*, 2007). Also, there was a great difference regarding participants' sex between the clinical and the non-clinical sample used by Roussos *et al.* (1999b) as the clinical sample consisted of 49% boys whereas the non-clinical was comprised of 77% boys. Lastly, Greek children were not matched in terms of demographic characteristics with the German sample as the Greek sample was obtained from a large metropolitan area, whereas the German sample was selected from villages and towns. Matching the moderating effects of individual sample characteristics between the comparison groups would have yielded more meaningful outcomes.

2.4.3 Types of Outcomes

Most of the included studies have examined behavioural difficulties in primary school children aged between 6 to 12 years. Only two of these studies investigated these difficulties in adolescents (Bibou-Nakou *et al.*, 2002; Kapi *et al.*, 2007). It is noticeable that earlier studies (Kapi *et al.*, 2007; Macdonald *et al.*, 1995; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b; Tsiantis *et al.*, 1994) used the CBCL (Child Behaviour Checklist, Achenbach & Edelbrock, 1983) as a measure of child behavioural difficulties which was completed by the parent(s) of the child. Other versions of the same measure have been used as well; the teacher version (TRF; Teacher's Report Form; Achenbach, 1991) was completed by teachers regarding their perceptions on the child's problem behaviour in two of these studies (Roussos *et al.*, 1999a, 1999b). Also, in one study (Kapi *et al.*, 2007) adolescents completed the youth self-report version (YSR-Youth Self-report; Achenbach, 1991), which is the self-

reported version of the CBCL and TRF. Parents completed the Conners 28-item (Goyette, Conners, & Ulrich, 1978) in addition to the CBCL only in one study (Roussos *et al.*, 1999b).

The reliability and validity of the Greek CBCL was tested in a pilot study including both clinically and non-clinically studied children (Motti-Stefanidi *et al.*, 1993). By computing Cronbach's alpha internal validity of the scales was found to be on average 0.89 for the total behaviour scale, 0.77 for the internalising scale and 0.88 for the externalising scale. Also, Pearson correlations between test and retest scores were 0.77 on the externalising scale and 0.93 on the internalising scale. This shows that the Greek CBCL has good to acceptable reliability (George & Mallery, 2003). Validity was found to be acceptable, too.

More recent studies (Bibou-Nakou *et al.*, 2000, 2001, 2002) have used the parent and teacher version of SDQ (Strengths and Difficulties Questionnaire; Goodman, 1997) to examine conduct problems on children. The psychometric properties of the Greek SDQ have been recently examined in a nationwide sample (Giannakopoulos *et al.*, 2009). The internal consistency reliability varied from 0.77 (for the total difficulties score) to 0.50 (peer problem scale). By evaluating the fit of the model, modification index (MI) analysis and the χ^2 goodness of fit test denoted that the item 'I usually do as I am told' loaded weakly on the original associated conduct problem scale. Also, the item 'I think before I do things' showed a moderate association with the hyperactivity/inattention scale and a strong association with the prosocial behaviour scale. These results supported previous research findings from other countries (Capron, Therond, & Duyme, 2007; Muris, Meesters, & Van den Berg, 2003; Percy, McCrystal, & Higgins, 2008; Smedje, Broman, Hetta, & von Knorring, 2004). Nevertheless, all participants were adolescents and, as a

consequence, a general conclusion on the psychometric properties of the Greek-SDQ as a measure for children cannot be generated. Additionally, validity was found to be acceptable too.

2.4.4 Prevalence Rates

2.4.4.1 Studies Using the CBCL

Motti-Stefanidi *et al.* (1993) found that there was on average 27.9% of children aged between 6 and 11 years, who were assumed to belong to the high-risk group through application of the American cut-off scores for Externalising Problems. The 90th percentile of the behaviour problem scores was used in the US sample as a cut-off score (Achenbach & Edelbrock, 1983). This indicates that Greek children are almost three times more likely than American children to display severe externalising difficulties. From this 27.9% of Greek children in the high-risk group the 24.7% was boys and the 31.0% was girls. The mean score on externalising problems was higher for girls than boys ($M= 16.4$, $SD= 11.3$ for boys; $M= 18.6$, $SD= 11.7$ for girls). This is mainly because the CBCL contains more items for the girls. Yet, the average score per item was higher for the boys, confirming previous results suggesting that boys display more externalising difficulties than girls (Rutter, 1970; Verhulst, & Van der Ende, 1991).

Roussos *et al.* (1999a) reported lower mean scores for the Externalising scale than in Motti-Stefanidi's study when parents in a nationwide sample reported on child externalising difficulties ($M= 11.9$, $SD= 8.2$ for boys; $M= 9.5$, $SD= 7.1$ for girls), and even lower mean scores based on teacher reports ($M= 8.0$, $SD= 10.4$ for boys; $M= 4.3$, $SD= 6.8$ for girls) (Table 2). This difference may be explained by differences in samples. The sample size used by Roussos was representative of the entire Greek

population and three times larger than the random sample used by Motti-Stefanidi *et al.* In fact, the mean scores for the Externalising scale reported by parents in Roussos *et al.*'s study were quite similar, still slightly higher, than the mean scores reported for the American children by Achenbach and Edelbrock (1983) ($M= 10.8$, $SD= 8.2$ for boys; $M= 10.7$, $SD= 8.6$ for girls).

Table 2. *Total Behavioural and Externalising Scales on CBCL based on parents' and teachers' reports*

	Mean Total Behavioural (SD)		Mean Externalising (SD)	
	Boys	Girls	Boys	Girls
Parents' reports				
Motti-Stefanidi ^a	35.8*	36.3*	18.6 (11.7)	16.4 (11.3)
Roussos ^b	30.4 (18.1)	27.7 (17.4)	11.9 (8.2)	9.5 (7.1)
Teachers' reports				
Roussos (TRF) ^b	25.2 (23.7)	18.8 (17.7)	8.0 (10.41)	4.3 (6.8)
*SD not reported				
a Boys n=263, Girls n=203; b Boys n=570, Girls n=586				

2.4.4.2 Studies Using the SDQ

The findings reported by Bibou-Nakou *et al.* (2000, 2001, 2002) consistently indicated high prevalence rates of externalising difficulties in Greek children aged 6 to 12 years based on SDQ and the use of the Conduct Problems scale. Regarding parental reports, the results based on only the samples used in 2000 and 2001 will be reported in the present review, as those selected in 2001 were reused in the study of 2002. The mean scores in conduct problem and the total score scales based on parents' and teachers' reports are presented in Table 3. The standard deviations were

not mentioned in any of the three papers. Parents and teachers reported more total difficulties across time, whereas there was a slightly decrease on their reports regarding conduct problems. All mean scores are much higher than the norms in Britain (Table 3).

Table 3. *Total Problem Scale and Conduct Problem Scale on SDQ based on parents' and teachers' reports*

	Mean Total Score (SD)		Mean Conduct problems (SD)	
	Parents	Teachers	Parents	Teachers
2000 ^a	8.78*	6.60*	2.14*	1.31*
2001 ^b	9.09*	6.32*	2.02*	1.07*
2002 ^c	9.15*	7.42*	2.02*	1.19*
*SD not reported				
a Parents n= 204, Teachers n= 30; b Parents n= 238, Teachers n= 24; c Parents n= 212, Teachers n= 65				
<i>Note.</i> Norms in British children:				
Parent reports: Total Scale: 8.4 (5.8); Conduct Scale: 1.6 (1.7); Emotional Symptoms Scale: 1.9 (2.0)				
Teacher reports: Total Scale: 6.6 (6.0); Conduct Scale: 0.9 (1.6); Emotional Symptoms Scale: 1.4 (1.9)				

An average of 33.6% of children aged between 6 to 12 years were rated by their parents as having borderline to severe conduct problems. From these children, 17.8% were reported to have severe difficulties in 2001. According to Goodman (1997) roughly 20% of children in a community are expected to belong to borderline and abnormal group, and 10% to the abnormal group alone. The Greek prevalence rates appear to be much higher than the rates suggested by Goodman. Greek children displaying severe difficulties seem to be almost twice as much as those assumed in a community sample.

Regarding teachers' reports the findings of all three studies were taken into consideration as a greater number of teachers reported on children's behaviour in 2002 than the year before. An average of 18.6% was rated by their teachers as having

borderline to severe conduct problems. From these children an average of 11.8% was reported to have severe difficulties in 2001 and 2002. In addition, the perceptions of teachers on the impact of these difficulties on children were reported only from the study conducted in 2002. According to the teachers' overall perceptions, 39.2% of the children with difficulties were rated as having definite or severe behavioural ones. Moreover, it was found that the difficulties had no impact on the everyday life of only 32% of these children. For the remaining 68% of children being perceived as having definite or severe behavioural difficulties, it was estimated that these problems had a great impact on school education or peer relations in 28.4%, and a great impact on school education and/or peer relations in 39.4% of these children. Overall, both parents and teachers recognised conduct problems as the difficulty with the highest frequency.

2.4.4.3 Studies Comparing Clinical and Non-clinical Samples

Roussos *et al.* (1999b) investigated the differences between a referred sample and a community sample on the Conners 28-item scale. By applying the 90th percentile of the distribution in the general population as a cut-off point, 34.2% of the clinical sample exceeded the cut-off value on conduct problems.

2.4.4.4 Cross-cultural Studies

Greek samples were also compared to samples from other countries. The findings comparing a Greek sample with a matched sample of American children aged 6 to 11 years showed that by using the CBCL as a measure of child behaviour significantly more Greek than American children scored in the American borderline or clinical range on aggressive behaviour (Macdonald *et al.*, 1995). Additionally,

more Greek than American girls scored on the borderline or clinical range on externalising problems. It is noticeable that the scores of Greek children were significantly higher than the scores of American children on 38 problem items, 6 of the 8 cross-informant syndromes, Internalising, Externalising and Total Problems ($M= 35.4$, $SD= 17.9$ for Greek children on Total Problems; $M= 25.4$, $SD= 18.2$ for American children on Total Problems).

These findings were confirmed by another study examining the differences between a Greek sample and a random sample of German children aged between 6 to 11 years (Tsiantis *et al.*, 1994). As the Greek sample used in MacDonald's and Tsiantis' studies was a reuse of the sample investigated in Motti-Stefanidi's study the mean score of total behaviour problems of the two studies were quite similar ($M= 36.0$, $SD= 19.4$ for Greek children; $M= 18.5$, $SD= 14.5$ for German children). The scores of Greek children were significantly higher than German children on the Externalising Scale too ($M= 16.4$, $SD= 11.3$ for Greek boys; $M= 10.6$, $SD= 8.9$ for German boys; $M= 18.6$, $SD= 11.7$ for Greek girls; $M= 8.4$, $SD= 7.5$ for German girls) (Table 4). So, Greek boys scored approximately half SD higher than German boys, while Greek girls scored approximately 1 SD higher than German girls. It is also noteworthy that Greek children scored significantly higher than German children on 70 items.

Similar results were also found in Kapi *et al.*'s study (2007), which compared a random sample of Greek adolescents with a random sample of adolescents from Finland. The results suggest that Greek boys scored higher than Finnish boys on all scales of youth self-reports but the somatic complaints, while Greek girls scored higher than Finnish girls on all scales of YSR but the somatic complaints and delinquent behaviour.

Table 4. *Total Behavioural and Externalising Scales on CBCL in different populations based on parents' reports*

	Mean (SD) Total Behavioural	Mean Externalising (SD)	
		BOYS	GIRLS
GREEK [†]	35.4 (17.9) ^a		
	36.0 (19.4) ^b	16.4 (11.3)	18.6 (11.7)
US [†]	25.4 (18.2) ^c	-	-
GERMAN ^{††}	18.5 (14.5) ^d	10.6 (8.9)	8.4 (7.5)

a N= 356 (Boys= 190, Girls= 166), b N= 466 (Boys= 263, Girls= 203)
c N= 356 (Boys= 190, Girls= 166)
d N= 783 (Boys= 379, Girls= 404)
[†] Macdonald *et al.*, 1995
^{††} Tsiantis *et al.*, 1994

2.5 Discussion

To my knowledge this is the first attempt to conduct a comprehensive systematic review of studies addressing prevalence rates of behavioural difficulties in Greece. The findings signify that: (1) in general, Greek children appear to display a high prevalence of behavioural problems according to parental reports using either the CBCL or the SDQ; (2) one third of the clinical population appears to display conduct difficulties; and (3) the scores of Greek children on externalising scales seem to be significantly higher compared to American, German and Finnish children.

Greek children were almost three times more likely than American children to display severe externalising difficulties (Motti-Stefanidi *et al.*, 1993). Even though lower mean scores in the Externalising scale were reported in Roussos *et al.*'s study (1999a) than in Motti-Stefanidi's study, these scores were still higher than those reported for the American children. This finding confirmed previous results by Macdonald *et al.* (1995) in which it was shown that Greek children scored higher than

American children on 38 problem items, 6 of the 8 cross-informant syndromes, Internalising, Externalising and Total Problems.

Bibou-Nakou *et al.* (2000, 2001, 2002) have consistently indicated high prevalence rates of externalising difficulties in Greek children aged 6 to 12 years old. One-third of these children were rated by their parents as having borderline to severe conduct problems, and one out of five of these children were reported to have severe difficulties in 2001. In fact, Greek children displaying severe difficulties were shown to be almost two times greater than those expected in a community sample.

Teachers reported lower levels of behavioural difficulties on children compared with parents. Teachers' estimations are close enough to the expected norms regarding children displaying borderline to severe conduct problems, while they are slightly higher when taking into account only the number of children with severe difficulties. Also, these difficulties had a considerable impact on the educational or social life of two thirds of these children. Overall, it should be underlined that both parents and teachers recognised conduct problems as the difficulty with the highest frequency.

Greek children displayed significantly high behavioural difficulties when compared to a clinical sample or a sample from another country. Regarding the Greek clinical sample, it was found that one third of these children exceeded the cut-off value on conduct problems (Roussos *et al.*, 1999b) indicating the severity of such difficulties in Greece. Also, they scored significantly higher compared to American, German and Finnish children on externalising scales. More Greek than American children scored in the American borderline or clinical range on aggressive behaviour (Macdonald *et al.*, 1995). Greek boys scored approximately half *SD* higher than German boys, while Greek girls scored approximately 1 *SD* higher than German girls.

Nevertheless, this disparity might be due partly to the difference in the sampling methods as a Greek school-based sample was compared to a German population-based sample. Greek children aged 18 years scored higher than Finnish children on almost all scales of YSR.

Due to the high prevalence of behavioural and emotional difficulties, there may be a high demand for addressing the needs of families of children with these difficulties all around Greece. This need might have also increased due to the current financial crisis in this country (World Health Organisation, 2011). At the same time, it seems that there is a lack of public social services for families seeking child psychological support (Bouhoutsos & Vlachouli 1984; Vanger, 1986). For instance, there are no psychological services in Greek public schools and only a few specialised child psychologists (Gavriliidou, de Mesquita, & Mason, 1994; Hatzichristou, 2004; Nikolopoulou, 1986). There might be several underlying reasons why psychological services continue to be underdeveloped in Greece. Apart from financial explanations, it might be that psychiatry has a more established position in terms of practice in the field of public mental health in Greece (Macri, 2001). As psychiatric services are provided by hospitals and psychiatric institutions, stigmatisation attached to having psychological difficulties might act as a restraint on seeking mental health services (Bouhoutsos & Vlachouli, 1984; Hartokollis, Georgas, & Katakis, 1966; Nikolopoulou & Oakland, 1992). In addition, a study of the way people perceive the role of psychologists in Greece indicated that people seem less knowledgeable about the roles of psychologists than psychiatrists or social workers, and there was some reluctance to use psychological services (Houndoumadi, Sotirakopoulou, & Macri, 1998). Despite this, people's attitudes toward psychologists were consistently reported as tending to be positive. Individuals considered visiting a psychologist less

threatening to their self-image than visiting a psychiatrist due to the stigma attached to the latter.

Parents who have children with severe educational difficulties, including behavioural and emotional difficulties, may be referred to state-run Centres for Diagnosis, Assessment and Support (CDAS). These centres are staffed by multidisciplinary teams consisting of school psychologists, regular and special education teachers, social workers and speech pathologists. Their primary goal is to assess and classify the students in need of special education services and to prepare individualised educational plans for these students attending public and private kindergartens, elementary and secondary schools in Greece (Dimakos, 2006). So, it seems that CDAS centers concentrate more on severe cases. As a result, it is expected that parents who may, or may not have particular concerns about their child's development, or those who are receptive to general information on child development, may be reluctant to visit either psychiatric clinics, or the CDAS. These parents can seek professional help through their pediatrician (general practitioner) or the child's teacher, who may not be specialised in child psychology, through the private sector which is an expensive option, and through non-governmental organisations and school groups which may organise parenting groups. To our knowledge no evidence-based parenting programmes have yet been tested in the Greek context.

Despite the high prevalence rates described, there are a number of methodological limitations that should be taken into account regarding the sampling, the measurement and the analysis. Firstly, the representativeness of the included samples is problematic as most of the included studies in this review are limited to the Greater Athens area, rather than around Greece. This is often for the pragmatic reason that almost 40% of the population of the country is covered at much less cost than a

geographically wider study would require. As a consequence, data overrepresented the area of Athens at the expense of other urban and rural areas. Specifically, the society in Greek rural areas differs from the rest of the country in many aspects and this is why relevant information should be collected whenever possible. Moreover, although the included samples were adequately discussed, no studies described the characteristics of the excluded individuals and only half of them estimated the number of non-respondents as a proportion of the target population. As the response rate was above 70% in all studies which reported it (Kapi *et al.*, 2007; Macdonald *et al.*, 1995; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b; Tsiantis *et al.*, 1994), selection bias might have been relatively minimised. The same studies also claimed random sampling as their sampling frame, yet they lacked details on the method of selection (Kapi *et al.*, 2007; Motti-Stefanidi *et al.*, 1993; Roussos *et al.*, 1999a, 1999b). None of Bibou-Nakou's studies (2000, 2001, 2002) referred to either response rate or sampling method.

Secondly, regarding measurements, the instruments used in these studies were namely the CBCL and SDQ, which are considered to be both reliable and valid measures and are often used to study conduct problems. However, the psychometric properties of the Greek version of SDQ for children aged 3-10 years have not yet been standardised. Therefore, no normative range has been established for Greek children and no cut-offs have been indicated. For this reason cut-offs from other countries were applied increasing uncertainty in the findings. Results based on CBCL are also questionable because although the Greek version of CBCL had already been standardised, the suggested cut-off values were not applied in these studies (Motti-Stefanidi *et al.*, 1993). Another limitation is that only three studies used independent trained assessors to determine the behaviour difficulties under scrutiny reducing the

likelihood of expectation bias. In addition, the majority of the studies examined cross-informant (parent, teacher, youth) agreement, but only one study (Bibou-Nakou *et al.*, 2002) referred to their perceptions on the negative impact of individual problem items.

Special attention should be paid to whether these screening instruments are culture-dependent, since what may be considered appropriate in one culture may be inappropriate in another. Therefore, parental attitudes and beliefs towards their children may result in behaviours that are acceptable and even desirable. For instance, clingy and dependent behaviour is considered problematic for school age children in countries such as the USA and Germany, which place more emphasis on independence in children. On the contrary, according to a WHO's report (Tsiantis *et al.*, 1982) Greek parents use strict discipline practices including corporal punishment, have high expectations regarding academic achievement and are overprotective of their children, which tends to result in dependent children (Levy, 1943; Parker & Lipscombe, 1981). As a consequence, parental reporting may cause response scale bias.

Thirdly, concerning the analysis of the results, although frequency estimates were made, no confidence intervals were specified. Confidence intervals are essential as they illustrate the chance that the unobserved target population value falls within a certain range of the observed sample value.

Lastly, when the Greek sample was compared to other samples the substantial difference in the mean scores could be accounted for by not only a number of methodological as well as cultural factors. As WHO reported (Tsiantis *et al.*, 1982) Greek parents are reluctant to acknowledge their children's mental health problems and seem to approach friends, relatives or paediatricians rather than mental health

services to seek help for these problems. Due to the fact that American subjects who were mentally retarded were excluded from the sample in Macdonald *et al.* (1995), the Greek sample may have included more children who would have been excluded from the American sample contributing to higher scores for the Greek sample. In addition, there was a high rate of refusal by the German families. Also, the method of delivery of the CBCL was different between studies as it was sent out for self-completion in Germany, whereas it was presented as an interview in Greece.

Linguistic and cultural differences should also be taken into account. Ambiguous quantifiers such as “often” or “a lot” used in the questionnaire items (e.g. “cries a lot”, “argues a lot”, “talk too much”, “am often unhappy, downhearted or tearful”) may be interpreted differently by different respondents and investigators.

The most important step to overcoming limitations is to conduct further research. Specifically, the psychometric properties of the Greek-SDQ specific for parents and teachers of children between 3 and 10 years need to be investigated so that a normative range is established for Greek children and reliable cut-offs are determined. Also, when studies use the Greek version of CBCL to measure child behaviour difficulties, the suggested cut-off values need to be applied. That way the test scores will have a relative degree of validity and reliability, different groups and subgroups will be reasonably compared and outcomes will be generalisable and replicable. Such findings will also have major implications for the design of appropriate social interventions for families having children with behavioural difficulties.

This review concluded that a high prevalence of externalising difficulties was found in a non-clinical population of Greek children. Both parents and teachers recognised the existence of conduct problems as the most severe difficulty in Greek

children. It is also essential that parental perceptions about the impact of the psychological attributes of the child or adolescent in other areas of life needs to be investigated to further explore the chronicity, distress, social impairment and burden to others. Although it was shown that conduct problems are a significant problem among Greek children, such impact information is critical to establish whether these problematic behaviours are actually recognised as a problem within the cultural context. Behavioural difficulties seem to be a prevalent problem in Greece. Parents may therefore be hesitant to visit either psychiatric clinics, psychologists or diagnostic centres due to stigmatization. Providing detection and intervention programmes at an early stage can prevent the development of severe behavioural difficulties and can reduce the negative effect these problems may have on a child, family and society. Parenting programmes such as Triple P are designed to prevent such difficulties.

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CHAPTER 3

Chapter 3: Literature Review: Triple P Universal Prevention

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3.1 Overview

This chapter aims to review the literature on the effectiveness of the Triple P universal prevention programmes. Despite its uncertain effectiveness, Triple P was chosen among other parenting programmes because of its unique structure, its methods of delivery, its population-based approach as well as its cross-cultural replicability. Also, it has never been trialled in Greece. This review is important in order to examine the overall effects that these interventions have produced on child and parenting outcomes in general populations. The first part of this review summarises what is known on universal prevention by examining the effectiveness of universal self-directed and group prevention programmes in published meta-analyses and other studies. The second part of this review describes a specific Triple P level that is based on the delivery of a Seminar Series and justifies the reasons for its selection for the Greek audience. A detailed critical review of the studies published on the Seminar Series delivered at a universal level is provided in an attempt to identify research gaps in literature, generate and test new hypotheses whilst overcoming methodological pitfalls in research.

3.2 Introduction

Triple P follows a public health approach to strengthen parenting by implementing interventions across a continuum ranging from the promotion of positive parenting to the entire population by means of universal programmes, through prevention of behavioural and emotional difficulties in low-to-moderate risk and high-risk children, to special treatment for severe and chronic diseases and disorders such as asthma (Morawska, Stelzer, & Burgess, 2008), a developmental disability (Plant & Sanders, 2007; Roberts, Mazzucchelli, Studman, & Sanders 2006), Autism Spectrum

Disorder (ASD) (Hoath & Sanders, 2002; Whittingham, Sofronoff, Sheffield, & Sanders, 2008), ADHD, ODD and CD (Bor, Sanders, & Markie-Dadds, 2002; Hoath & Sanders, 2002; Sanders & McFarland, 2000) (Figure 1).

Preventive interventions are classified into three categories depending on the target population: i) indicated prevention aims at individuals who are identified as having minimal but detectable problems foreshadowing a disorder; ii) selective prevention targets a subset of the population which is deemed to be at risk and; iii) universal prevention is conducted with the entire population regardless of the risk (Mrazek & Haggerty, 1994). Studies on the effectiveness of Triple P have been mainly based on research on low-to-moderate risk and high-risk prevention and less on universal prevention.

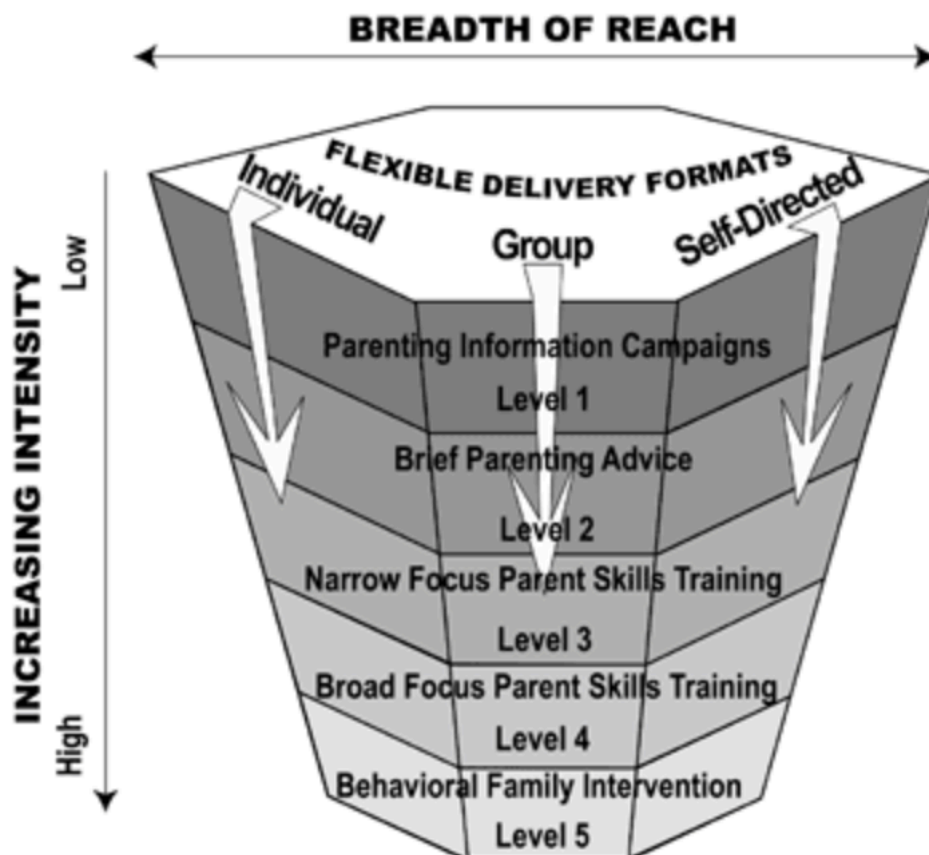


Figure 1. The Triple P Model of Graded Reach and Intensity of Parenting and family Support Services.

3.2.1 Low-to-moderate Risk and High-risk Prevention

Triple P has mainly been studied within low-to-moderate risk and high-risk populations and evidence from recent meta-analyses have demonstrated the positive impact of these interventions on child and parenting behaviour outcomes (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a, 2008b; Nowak & Heinrichs, 2008; Thomas & Zimmer-Gembeck, 2007). De Graaf and colleagues (2008a) carried out a meta-analysis of mainly RCTs to estimate firstly the effectiveness of the Triple P parent skills training in disruptive behaviour disorders of children aged 2 to 12 years compared to a control group; and secondly the degree to which post-intervention effects were stable over time in the intervention group. In particular, the specific Level 4: Standard Triple P, which is based on the therapeutic structure of PMT, was mainly under investigation. Children's disruptive behaviour was measured through the Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999). The studies selected included both urban and rural samples of various cultural backgrounds where parents had concerns about their child's behaviour or their parenting skills, and/or children had a diagnosis for behavioural problems or scored at a clinical range at baseline based on parental reports. Boys tended to be overrepresented in most studies and children were younger than four in six out of 15 studies. The results indicated that Level 4 Triple P has a moderate homogeneous mean effect size ($r = 0.42$) on child disruptive difficulties that remained at post-measurement and at a 6-month and 12-month follow-up. The significant role of family type, types of problems, delivery formats, and the ages of children as moderators was also demonstrated at the meta-analyses.

De Graaf and colleagues (2008b) extended their research by conducting a further meta-analysis regarding the direct impact of the Triple P parenting training on

parental characteristics, and consequently, its influence on child behaviour. Parenting style and competencies were measured through Parenting Style (PS; Arnold, O’Leary, Wolff, & Acker, 1993) and Parenting Sense of Competency Scale (PSOC; Gibaud-Wallston & Wandersman, 1978) accordingly. The findings showed that enhancing parenting skills by decreasing dysfunctional parenting style and increasing parental satisfaction with their parenting role and feelings of efficacy resulted in lessening negativistic child behaviours. These results were maintained for at least 3 to 12 months. In addition, variables such as the child’s age or whether the child had been diagnosed with disruptive disorders in the clinical or non-clinical range did not affect parenting styles and competencies. Gender is found to be a moderating factor though, as Triple P was more effective for parents of boys, likely because boys display a higher level of behaviour problems than girls (Rutter, 1970; Verhulst & Van der Ende, 1991).

Thomas and Zimmer-Gembeck (2007) compared Triple P to another parenting intervention (PCIT) in their meta-analysis composed by eleven Triple P RCTs. The samples selected included Australian and American parents with children in the clinical or borderline range of externalising behaviours. Both interventions had a positive impact on both child behaviour and parenting style. To illustrate, parental warmth and self-efficacy were increased while parental hostility and stress were decreased. Also, significant treatment effects on child disruptive behaviours such as aggression, opposition and extreme tantrums were demonstrated. Measures were taken at pre- and post-treatment periods and the intervention positive effects were maintained up to 3 months. PCIT had large effects on child behaviour whereas Triple P had medium effects. This discrepancy might be due to differences in the implementation of the two programmes as well as the dissimilar methodologies used in the included studies. For instance, although PCIT is an individualised treatment, studies on other delivery

formats of the Triple P beside the individual one, such as group, media and self-directed formats were included in the meta-analyses. So, in PCIT parents are directly observed and get immediate feedback from the therapist about their performance while interacting with their children, and so they have the opportunity to remodel their practice by increasing the retention rates of newly acquired skills (Driskell, Willis, & Copper, 1992), whereas in Triple P there is no immediate parent-child interaction. In addition, methodological issues include: (i) the severity of child difficulties; in PCIT children display externalising difficulties (Hollenstein, Granic, Stoolmiller, & Snyder, 2004) whereas Triple P targets the prevention of low-to-moderate risk or high-risk children, and as a consequence, the level of intervention of the two programmes is different; (ii) the variant recruitment methods and; (iii) the dissimilar observation measures and measures of parental reports on child behaviour that were used.

A variability of effect sizes for Triple P ranging from small to large ($d= 0.04-1.14$) was reported. Triple P operates on multiple levels of intervention intensity, so such a range was expected. These findings were basically derived from either a fixed-effect approach (Thomas & Zimmer-Gembeck, 2007) or random-effects approach (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a, 2008b). Nevertheless, reporting an overall mean effect size by incorporating the mean effect size of five levels of intensity (Level 1-5) and various delivery formats such as individual, group, telephone-assisted and completely self-directed, may not be the most reliable approach to statistically report on the efficacy of a programme. This is because in fixed-effects models sources of among-studies variation are ignored by assuming one single underlying population effect size for all trials. As a result, when substantial variation between studies even after controlling for explanatory variables is expected, the mixed-effects model as a generalisation of the fixed-effects approach seems to be a more

suitable method (Konstantopoulos, 2006). Nowak and Heinrichs (2008) investigated the effect variability of the Triple P programme by applying a mixed-effects hierarchical linear model. Their meta-analyses integrate the data of 29 RCTs, 11 quasi-experimental studies and 15 uncontrolled studies (HLM; Bryk & Raudenbush, 1992). The overall effect sizes of Triple P for parenting and child disruptive behaviour ranged between 0.35 and 0.48 for between-groups and 0.45 and 0.57 for within-groups post-intervention comparisons, supporting the results of previous meta-analyses (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008a, 2008b; Thomas & Zimmer-Gembeck, 2007).

The findings on the overall effects of the Triple P programme should be treated with caution due to inadequate reporting and conflict of interest (Eisner 2009, 2014; Wilson *et al.*, 2012). Firstly, the reported positive effects of Triple P might be due to selective reporting bias as there is inconsistent reporting of sub-scale results in Triple P studies. This increases the likelihood of providing findings in favour of hypothesis and omitting less favourable outcomes. This is also evident in most abstracts of Triple P studies, which tend to report more positive findings than negative ones, presenting a more favourable picture of the Triple P intervention effects. Eisner and Ribeaud (2008) also reported detection bias in a trial carried out by the German licence holders of Triple P (Heinrichs *et al.*, 2006). In this study, the outcome assessors, who were aware of the participants' allocation, considered non-compliant respondents initially allocated to the treatment group as members of the control group in the statistical analysis. This resulted in a severe inflation of effect sizes.

Triple P studies have also been criticised for bias derived from affiliation authorship and developer-led research as trials have mainly been evaluated by the programme developer or licence holders of Triple P, leading to a conflict of interest. For instance, Eisner mentioned that although a positive mean effect on child behaviour

($d = 0.35$) was reported in Nowak and Heinrichs' meta-analyses of 43 studies, this effect was not confirmed in an independently evaluated study (Eisner, Ribeaud, Jünger, & Meidert, 2007). Eisner (2009) suggested that systematic bias might have been introduced in the meta-analyses because of the conflict of interest presented when researchers acted as programme disseminators and evaluators at the same time. Such claims are inadequately supported because although developer involvement by consulting the authorship of papers is apparent in many papers, it is unknown whether those conducting the trials benefit financially from promoting Triple P products, and so the extent of a conflict of interest is still uncorroborated. The developer asserted that none of the programme authors had shares in the company licensed by the University of Queensland, the Triple P International, which aimed to disseminate the programme worldwide (Sanders *et al.*, 2012). However, authors of Triple P interventions may receive consultant payments or royalty payments from sales of training and material (Sanders, Stallman, & McHale, 2011). For these reasons, they should clearly declare any conflicts of interest in their papers; this should happen especially where developers were involved as no such statements were made (Coyne, 2014). The same principle should be applied to those reviewing Triple P studies. One of the authors of the Wilson *et al.* review was a co-author of a different parenting programme (Sanders *et al.*, 2012); this might have led to biased interpretations of the findings as different programmes might compete for the same funding.

3.3 Universal Prevention

Triple P has also developed a universal parenting strategy. It provides all interested parents with specific information on common parenting issues through a coordinated promotional campaign using print and electronic media as well as parenting

tip sheets and videotapes that depict specific parenting strategies. This way, it aims to increase community awareness of parenting resources and the involvement of parents in such programmes as well as to create a sense of optimism by illustrating solutions to common child behavioural and developmental difficulties. Because of its flexible delivery format, Triple P universal level is delivered as an individual, self-directed, and group option. A literature review was conducted to examine all the published and unpublished studies on Universal Triple P. Relatively few studies have been conducted on the effects of Universal Triple P, and most of these studies have mainly focused on the universal self-directed option. Although the effects reported on Triple P early prevention studies for parenting practices and child behavioural difficulties seem to be positive, they are inconclusive.

3.3.1 Universal Self-directed Prevention

There are many effective parenting interventions for behavioural problems which have been tested in RCTs (Gardner, Burton, & Klimes, 2006; Hutchings *et al.*, 2007; Kazdin, 2005; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2007). However, widespread dissemination of these interventions is limited by cost and feasibility issues, hence the need for simpler, low-cost interventions. One solution is to employ media-based or ‘self-help’ interventions, which can be delivered through the web, videotapes, booklets, other print or electronic material and as a mass media intervention. A Cochrane review (Montgomery, Bjornstad, & Dennis, 2006) suggests that these may be promising avenues for helping families deal with behavioural difficulties.

Sanders and his colleagues (2000) assessed the effects of videotapes on parent and child behaviour using a randomised control design. An “infotainment” style media

production including a television series of 12 30-minute episodes, named as “*Families*”, on disruptive child behaviour and family adjustment and 12 written self-help information sheets were provided in a 6-week period. Although child behaviour problems reduced and parental competence improved, and these effects maintained for 6 months, there was no effect on parenting style, parental health and parental conflict over rearing the child.

Television programmes such as “*Driving Mum and Dad Mad*” developed by Triple P as a six-episode series formed on the basis of Group Triple P, have shown improvements in parenting and child behaviour outcomes (Calam, Sanders, Miller, Sadhnani, & Carmont, 2008; Calam, Miller, Sadhnani, Carmont, & Sanders, 2008; Sanders, Calam, Durand, Liversidge, & Carmont, 2008). Parents with the most severe problem behaviour children and those from socio-economic disadvantaged backgrounds were more likely to get engaged and complete the intervention than parents with the highest levels of dysfunctional parenting and lowest self-efficacy. However, limitations regarding the samples involved and the study design have been reported.

Montgomery and colleagues’ review (2006) suggested that brief, low-cost, media-based parenting interventions can lead to improvement in children’s behavioural problems at least for moderate cases. However, there is no adequate evidence to determine whether video self-help programmes or written self-help programmes are the most effective. In any case, it is suggested that up to two hours added therapist input would significantly improve a child’s behaviour.

3.3.2 Universal Group Prevention

Universal Group Prevention is a face-to-face intervention that aims to reach the whole population in order to have an impact on the general level of public health (Prinz

& Sanders, 2007; Sanders, 2008; Sanders *et al.*, 2008; Sanders, Cann, & Markie-Dadds, 2003). These interventions can be delivered to small or large groups of the population by service providers from several disciplines and settings, including family support services, social services, educational services, non-governmental organisations, private-sector practitioners, health centers and other community services.

There have been a few studies conducted on Universal Group Triple P. It seems that there is a misuse of the word “universal” though. For example, Triple P implemented a large-scale, so-called “universal”, prevention strategy which demonstrated its positive impact on population indicators such as child maltreatment, hospitalisations, emergency room visits due to maltreatment-related injuries, and out-of-home placements, after 3 years of implementation in the first U.S. Triple P System Population Trial (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). In this study, over 600 practitioners were trained to disseminate the different levels of Triple P across a whole population. Most families (70-75%) received Level 2/3 that target parents with specific concerns about their child’s behaviour or development who may also require consultation or active skills training, and the rest (25-30%) received Level 4/5 that target parents of children with severe behaviour problems and dysfunctional family relationships. So, as practitioners were delivering these programmes through various services in several disciplines, families with concerns or at elevated risk actually were more likely to access these services and receive the interventions. Therefore, it might have been selective or indicated rather than universal prevention. The only element of this strategy that could be considered as universal is the use of media and communication vehicles to raise public awareness. Also, this trial did not specifically focus on conduct difficulties, but on coercive parenting.

Zubrick and his colleagues (2005) provided Group Triple P as a large-scale, so-

called “universal”, intervention for the prevention of child behavioural difficulties in comparison to usual care provided by health care and family support services. Positive effects were reported on both child and parent measures, and the effects were maintained at a 2-year follow-up. Again, this was not, it appears, a universal but a selective prevention as they recruited families who were also receiving the Family Crisis Program benefits and were living in high-risk neighborhoods where there were high rates of child abuse notifications relative to other urban regions within Western Australia. This is why there was a high prevalence and great intensity of behavioural difficulties in children as well as high levels of dysfunctional parenting at baseline assessments.

In contrast, a few Triple P universal prevention studies were detected in this review. Every Family Trial is a large cluster-randomised population-based trial in which a population health approach was designed to decrease the prevalence of common behavioural and emotional problems in young children and their families (Sanders *et al.*, 2008). Families from 30 socio-demographically matched catchment areas in Brisbane, Sydney and Melbourne, were recruited through promotion in local schools, newspapers, childcare centres, churches and community centres. The newsletters aimed all parents regardless of their children’s difficulties. The areas then were randomly allocated to the high intensity intervention condition (full exposure), the medium intensity intervention condition (partial exposure) and the low intensity intervention comparison condition (usual care). Every Family Trial includes different studies with different designs testing the interventions at different levels of Triple P. For instance, Group Triple P was run in schools, libraries and child centers. In a pre-post with no comparison group design, after the delivery of the groups, there was a significant reduction in dysfunctional parenting style, parental distress, and child

emotional, conduct and total difficulties scores. Also, they reported a significant increase in parent self-efficacy in managing problem behaviour, in relationship happiness and in child behaviour problems. However, there were limitations regarding the small sample size and the lack of a randomised, controlled design.

Group Triple P was also recently delivered by Hahlweg and his colleagues (2010) as a universal prevention intervention in Braunschweig, a German city where there is a relatively small prevalence rate of child emotional and behaviour difficulties (0.5-5%) (Kuschel *et al.*, 2004). In this study, recruitment was conducted after they contacted all potential eligible preschools; yet, the criteria that made the preschools eligible were not described. The positive effects indicated in Zubrick's study were confirmed in this small scale, fully randomised trial. One of the limitations of this study was the small sample which made it difficult to establish a true prevention effect as only one-third of all potentially eligible families participated.

Eisner and his colleagues conducted a cluster-randomised field trial in which Group Triple P was provided as a universal programme (Eisner, 2009). In this study 1,300 children participated from 56 schools in Zurich, Switzerland. Although they confirmed the positive effect of the programme on parenting, they demonstrated no positive effect on any of the child problem behaviour measures. However, the absence of a positive effect on child behavioural measures could be partially explained through the particular design of the study and the nature of the intervention delivered. First of all, children in the same class were not considered independently of one another, as randomisation by cluster rather than randomisation by individual was followed, and for this reason some loss of power was expected (Bland & Kerry, 1997; Kerry & Bland, 1998a,b). No power calculation was included, and also it is clearly stated in the study that the final sample size and the number of units were small, and for this reason

insufficient power was generated. Achievable power increases with increasing numbers of clusters and increasing effect size (Hemming, Girling, Sitch, Marsh, & Lilford, 2011).

Secondly, the nature of the intervention should be taken into consideration when interpreting these findings. Universal prevention programmes include all parents regardless of their child's developmental difficulties. This means that parents of children with no difficulties may be included in the study sample, too. At this study, Group Triple P (Level 4), which is mainly recommended to families with children with severe behavioural difficulties, was offered as a universal strategy. No large differences would be expected to be found in a sample group derived from the general population, in which only a small fraction of parents can be expected to be at risk of dysfunctional parenting practices and have children at risk of developing behavioural disorders. It might be that high intensive interventions may not work at a universal level, and should be conducted as selective or indicated prevention strategies; unless it is established that they work for children with high level of difficulties. No subgroup analyses of clinical or most severe cases were included to verify such assertions. These reasons explain the low effect on child behaviour measures.

A common issue with universal prevention interventions is that only 15-30% of parents participate and around half of those who initially enroll dropout and do not complete a meaningful part of the programme for various reasons (Dumas, Nissley-Tsiopinis, & Moreland, 2007; Eisner & Meidert, 2011; Heinrichs, Bortman, Kuschel, & Hahlweg, 2005; McTaggart & Sanders, 2003; Myers *et al.*, 1992; Spoth & Redmond, 2000; Webster-Stratton, Reid, & Hammond, 2001). The possible reasons for such low engagement rates in universal programmes were further investigated (Eisner & Meidert, 2011). In Eisner's study (2009), the target population was 821 families of first-year

primary school children in 28 schools in Zurich. Only 32% enrolled in the course, 27% attended one or more Triple P sessions, 19% finished all four sessions, and a mere 13% had applied the suggested strategies in their everyday life. During enrollment, parents who had organisational and timing constraints or were from low socioeconomic background were less likely to participate. Larger families and cases where both parents worked increased the likelihood of absences from the parenting course during the period of participation. Once they had attended one session, only language and low socioeconomic status led to non-completion of the programme. They also found that the perceived level of problematic parenting practices and externalising problem behaviour were unrelated to parental engagement at all different stages. Interestingly, these results contradict the model of parent involvement proposed by McCurdy and Daro (2001) and previous research findings indicating that perceived need for support is predictive of actual enrollment (Fontana, Fleischman, McCarton, Meltzer, & Ruff, 1988; Luker & Chalmers, 1990). These contradictory findings may be explained by the preventive intervention which might have been too intensive for a general population resulting in low parental motivation, the low prevalence of child emotional and behavioural problems in Switzerland, and the existing well-organised parent support services in Zurich (Eisner, Nagin, Ribeaud, & Malti, 2012; Rescorla *et al.*, 2007).

Universal Group Triple P is also a therapist-led intervention which includes, apart from four two-hour workshops, four 15-min consultations, one book and one workbook. Less intense preventive programmes might be more preferable to parents. A much briefer Group Triple P intervention has been implemented in the format of a two-hour topic- and age-specific parent discussion group (Briebe Cerda, 2011; Joachim, Sanders, & Turner, 2009; Morawska, Haslam, Milne, & Sanders, 2011). Two brief telephone consultations, a workbook, and/or tip sheets were also provided. In two of

these studies, which were designed as RCTs, parent discussion groups had a positive effect on child behaviour problems, dysfunctional parenting, parental self-efficacy and confidence. These effects were maintained at least for 6 months (Joachim, Sanders, & Turner, 2009; Morawska, Haslam, Milne, & Sanders, 2011). Yet, these studies focused on specific topics such as bedtime difficulties, disobedience, shopping trip difficulties and targeted parents who had concerns about their child behaviour or whose children had already shown behavioural difficulties. For this reason these studies cannot be considered as universal preventive interventions.

Overall, in studies conducted on Group Triple P, apart from methodological limitations regarding the sample and the design, parents were offered booklets, tip sheets and telephone consultations to encourage them to revise and practise, adding to the standard cost of the intervention. Parents also received personal attention and direct feedback during the telephone consultations as well as during the workshops and discussion groups, which were organised in small groups (10-20 families). As a result, they had the opportunity to share their concerns, ask further questions during and after the session, receive direct guidance and remodel their practice increasing their retention rates of newly acquired skills.

To sum up, there is inadequate evidence on the effectiveness of Universal Triple P. Most of the studies have examined the self-directed universal format, and the few studies conducted on universal Group Triple P seem to have contradictory results. The main limitation among studies reporting either positive or negative effects is recruitment. First of all, in some cases it is unclear how they recruited participants and consequently it is difficult to determine whether participants had specific problems or not. Secondly, most studies have been based around small samples of participants. Larger sample sizes are critical to boost power. Also, high attrition rates might decrease

through the implementation of less intensive programmes, which provide information relevant to the needs of a greater number of people rather than restricted to those with concerns or existing problems, are less time consuming and potentially more cost-effective, and so might be more appealing to a general population. There is also a research gap regarding the effectiveness of low-cost universal preventing interventions, which offer general information to the entire population by providing minimal therapist contact and minimal additional parenting resources. A Seminar format is one possible strategy.

3.4 Seminar Series

Despite the effectiveness of different delivery methods of parenting prevention and intervention programmes, only a few families get involved and/or have access to such interventions (Ford, Goodman, & Meltzer, 2003; Sanders, Markie-Dadds, Rinaldis, Firman, & Baig, 2007). One type of group-based programmes is psycho-education which is implemented through informational seminars. Triple P programme provides a brief, large group *Seminar Series* (Level 2), which is based on presentations and brief discussions. The Seminar Series aims to improve parenting skills in order to overcome common child behavioural and emotional difficulties. Parents focus their learning on the principles of positive parenting as well as on strategies for raising confident, competent, and resilient children.

This intervention may be helpful for parents who may not have particular concerns about their child's emotional and behavioural development, but are receptive to child- and/or parent-related information to prevent possible child developmental difficulties. It may also be beneficial for those parents who might have some concerns about their child's development, but hesitate to approach child and family health

services for fear of being judged and stigmatised by others as being weak or incapable of being good parents. It may also be useful for families who may not have access to such services either for financial or residential reasons (Connell, Sanders, & Markie-Dadds, 1997) or in cases when health services do not offer any specific parenting programmes. As a consequence, brief parenting interventions could potentially target any parent.

Psycho-education interventions based on informational seminar series provide parents with knowledge about child development and parenting without publicly exposing any possible concerns about their competence as parents or the developmental functioning of their children. This type of intervention requires 90 minutes of parents' time once every month for a 3-month period.

Such universal preventive programmes are typically delivered through primary care services including maternal and child health services, general practitioners and family doctors, day care centers, kindergartens and schools. Access may be facilitated by locating these brief interventions in normal places where parents naturally gather, such as schools or community centers that are close to their living area. Therefore, psycho-education group-based interventions might prove to be an effective preventive strategy which may be helpful to all parents, produce lowered stigma, significantly reduce or eliminate cost and feasibility issues such as transportation and time commitments from parents, and be applied from one child to another.

3.5 Critical Review of Evidence on Seminar Series

3.5.1 Introduction

This review aims to critically appraise the published studies related to the effectiveness of Level 2: Selected Triple P, which is based on Triple P Seminar Series.

Two inclusion eligibility criteria were set for this review; firstly, the studies should have been published in a research journal; and secondly, they should have studied the effect of the Seminar Series alone on parenting and child development measures.

The search strategy remained simple, as the intervention under study was too specific. The following terms were used: ‘Triple P’, ‘positive parenting program(me)’, ‘Level 2’, ‘Selected’, and ‘Seminar Series’. No language restrictions were applied. The following electronic databases were systematically searched: MEDLINE (1966 to December 2011), EMBASE (1980 to December 2011), PsycINFO (1887 to December 2011), CINAHL (1982 to December 2011) and Biosis (1985 to December 2011). The reference lists of all articles retrieved were reviewed for additional studies; the authors of studies initially selected, as well as experts on this research field, were also contacted.

Two large-scale population trials of Triple P, the Every Family Trial (Sanders *et al.*, 2008) and the Triple P System Population Trial in the United States (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009) incorporated the brief Seminar format. The Triple P System Population Trial in the United States was a population-based prevention study which aimed to reduce child maltreatment. To this purpose, 18 counties in the US were randomly allocated to either dissemination of the Triple P system or to services-as-usual. By implementing the different levels of this evidence-based parenting programme, a positive impact was demonstrated on three independently derived population indicators, such as substantiated child maltreatment, child out-of-home placements, and child maltreatment injuries. The Seminar Series were delivered along with all the five levels of prevention that the Triple P System offered, and so its separate effect remained unknown, which is why this study was excluded.

The only study which has examined the separate impact of the Seminar Series

was included in the Every Family Trial in 2008 as part of the main studies supporting the overall effectiveness of Triple P programme under the title “*Study 3: How effective was the Triple P Seminar series in changing parenting practices?*” and published as “*An evaluation of a brief universal seminar series on positive parenting: a feasibility study*” (Sanders, Prior, & Ralph, 2009). An additional study, “*Study 4: What did parent consumers think of the Triple P Seminar Series*”, evaluating the acceptability of the Seminar Series was also incorporated in the Every Family Trial. The major objective of this study was to explore the effectiveness of a brief Seminar Series of positive parenting (Selected Triple P) on behavioural and emotional problems in pre-adolescent children and on parenting variables. Participants were allocated under three conditions: (1) partial exposure condition involving attendance at a single introductory seminar; (2) full exposure including attendance at all three seminars; or (3) a waitlist control group. There was a significant reduction in parental reports of problem behaviour and dysfunctional parenting styles with the introductory seminar alone. However, full exposure to all three seminars resulted in significant improvements in all dysfunctional parenting styles and in the level of inter-parental conflict.

The published article on the separate impact of the Seminar Series will be critically appraised in conjunction with the study presented in the Every Family Trial as the primary study under review. The study on the acceptability of the Seminar Series in the Every Family Trial will be evaluated as a secondary source of evidence. To critically appraise this trial the Consolidated Standards of Reporting Trials was used as a guiding tool (CONSORT; Schulz, Altman, Moher, & CONSORT Group, 2010) along with the Critical Appraisal Checklist for randomised trials (Public Health Resource Unit, 2006). Overall, although some parts of these studies are based upon methodologically strong decisions, there are several limitations that should be

addressed as they have a significant influence on both the internal and external validity of the findings.

3.5.2 Critical Appraisal

3.5.2.1 Title and Abstract. The article under the title “*An evaluation of a brief universal seminar series on positive parenting: a feasible study*” introduced the main focus of research as well as the type of study. The abstract provided was well structured, despite the lack of headings, as it incorporated all the standardised information regarding the design, conduct, analysis and interpretation of trial results.

3.5.2.2 Introduction

Scientific background and explanation of rationale. The article was written in a way that followed specific steps in the research process in a logical manner. There was a clear link between the steps beginning with the purpose of the study and following through the literature review, the research question, the methodology section, the data analysis and the findings as already indicated in the Summary section (Ryan-Wenger, 1992).

As Triple P is a product designed to help parents who may be in need, the efficacy of each of its five levels should be based on empirical evidence demonstrating its suitability for the care of individual patients (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Such a study was important because no other research study had previously investigated the actual effect of the universal delivery of the Seminar Series. The literature review successfully identified the gap in the literature, but no theoretical framework was set (Robson, 2002). Neither a conceptual model was used as a guide for the study (Conkin, 2005), nor were themes from the literature, which were conceptually

mapped and used to set boundaries for the research, set to support the rationale of the Seminar Series as a format for the delivery of parenting information (Miles & Huberman, 1994). The main reason underlying the absence of a theoretical framework might have been the specific nature of the Seminar Series as a method of a parenting intervention. The Seminar Series is comprised of three seminars, which are 90-minute presentations involving 60 minutes of presentation material and 30 minutes for questions. As different therapeutic elements are combined, for example the presentations as an informational tool, the group-based format, and the facilitator who interacts to a certain extent with a group of parents, it seems difficult to categorise this type of delivery in a conventional type of therapy such as a group-based therapy or a typical self-help method. One suggestion would be that the Seminar Series be considered as a media-based programme. According to Montgomery and his colleagues (2006) media-based treatments offer little or no personal support to the clients and there is only minimal contact, which is defined as being less than two hours contact time, otherwise it might be considered as a “brief therapy.” In the Seminar Series, the facilitator delivering the presentations is acting as a “medium” and has minimal interaction with the clients. The aim of the 30 minutes’ question time is to clarify any doubts parents might have on the content of the presentations. As a consequence, there is no personal therapeutic guidance to the client by the facilitator, meaning that no specific counselling is provided for the personal cases of each individual. While attending the Seminar Series, parents need to understand the different concepts of parenting and child development, and then develop their own approach to parenting by applying this knowledge to their own particular case themselves.

Before assessing the methodology used in this study, it is useful to clarify that the Level 2: Selected Triple P is addressing parents who are interested in parenting

education or with specific concerns about their child's development or behaviour (Sanders, 2008). On this basis, in the present study, the Seminar Series of the Selected Triple P (Level 2), unlike selective prevention interventions, was universally administered to parents in Queensland, Australia. This distinction is important in order to understand and evaluate the target population as well as the level of prevention.

The problem that necessitated the work was described and a clear rationale was justified in the introduction. This is particularly important, as it would be unethical to unnecessarily expose human subjects to the risks of research. Authors described briefly the broad approach taken to studying the problem and objectives were set at the beginning of the project. Although there was no evidence of an independent ethics review by a board or a committee (Burns & Grove, 1999), specific ethical procedures were followed to establish the protection of the participants and minimise any possible risks. All seminar facilitators, who were psychologists completing postgraduate training in clinical psychology, completed a competency-based accreditation process. In addition, participants were informed of the evaluation research being conducted through a standard telephone script and their consent to participate was obtained. Confidentiality was also guaranteed through the anonymity of the participants. No further details were available about the standardised telephone script and the terms of the informed consent. Also, no information was given on how researchers approached cases where participants in the intervention groups had further questions or requested further information regarding the Triple P programme after the completion of a Seminar. Finally, it is important that at the end of the waitlist period control parents received the Seminar Series in exchange for their participation in the study.

3.5.2.3 Methods

Sampling. Regarding the sampling of the study, a biased sample may have been used due to the sample selection procedures followed. This study was not a full RCT as it involved a mixture of parents who were randomly assigned to condition, and an additional sample of parents who were non-randomly assigned to condition. A systematic error was made due to the non-random sample of parents added resulting in a sample which may have not been equally balanced or objectively represented (Kalton, 1983; Kish, 1965; Schulz & Grimes, 2002; Sudman, 1976). So, at pre-test period existing differences between groups may have been interacted with the independent variable and thus may have been “responsible” for the observed outcome. For instance, parents who enrolled on the day of the seminar, and subsequently were not randomly allocated to a condition, might have differed in terms of determination or level of need from those registered at the stage of enrolment. As a result, the use of a non-random sample might have affected both the external and internal validity of the study. Specifically, non-random assignment reduces the internal validity of a study, because the groups are different at the start of the study, and the magnitude of this difference determines the degree of reduction in internal validity. Also, a non-random sample reduces the external validity of the study because it may not be representative of a larger population (Campbell & Stanley, 1963; Cook & Campbell, 1979; Shadish, Cook, & Campbell, 2002).

What is more, no method was indicated to implement a random allocation sequence. No information on who generated the allocation sequence, who enrolled the participants, and who assigned participants to their groups was given. It is critical that investigators strived for complete separation of the people involved in generation and implementation of the assignments. No matter the methodological quality of the randomisation process, failure to separate the creation of the allocation sequence from

assignment to study groups may have introduced selection bias. As no information regarding the allocation concealment was provided, selection bias might have been introduced (Cortes, Mohri, Riley, & Rostamizadeh, 2008; Fadem, 2009).

High attrition rates might have also contributed to attrition bias, which is a type of selection bias. Although researchers provided childminding services to reduce barriers to accessing seminar, there was a 49% attrition rate on the randomly assigned group (79 out of 162) and 68% on the non-randomly assigned group (56 out of 82). Almost a quarter of the randomly assigned parents (43 out of 162) and a third of the non-randomly assigned parents (25 out of 82) were excluded on the basis that they attended the incorrect combination of seminars. During the post-assessment there was a 24% attrition rate in the waiting list group, and on average a further 42% nonresponse rate in the randomised and non-randomised intervention groups, with especially high loss of participants in the partial exposure groups reaching 45% dropout in the randomised and 68% in the non-randomised group. This different loss of subjects in intervention and comparison groups may have changed the characteristics of these groups and outcomes irrespective of the studied interventions, which in turn might have introduced confounding bias affecting the internal validity of the study (Cuddeback, Wilson, Orme, & Combs-Orme, 2004).

The degree to which a sample reflects the population it was drawn from is known as representativeness and it is considered a determined factor in assessing the adequacy of a study (Polit & Beck, 2006). In the present study, the sample size might have influenced its external validity. In general, there should be an adequate number of participants enrolled in each of the intervention and control or comparison groups for statistically significant differences as well as clinically significant differences in outcomes to be detected. A rough guide for the minimum number of participants in

each group is 30 (Kallenberg, 1997). A sample fewer than 30 participants per group generally does not yield adequate statistical power (Cohen, 1988). In this study, there was no sample size calculation. Although there was some inconsistency in the numbers of the initial samples reported between the article published and the study included in the Every Family Trial, the final sample sizes seemed to match. It also seemed that if randomly assigned and non-randomly assigned groups had not been collapsed for further analysis, neither the groups would have been of the same size (Campbell & Stanley, 1963; Hill, 1971; Kleinbaum, Kupper, & Morgenstern, 1982) nor would there have been enough participants in each group for the study to produce adequate statistical power. Small samples are also at risk of being overly representative of small subgroups within the target population. The risk of sampling errors decreases as larger sample sizes are used (Burns & Grove, 1997). A large, randomly selected sample or a carefully matched sample is required to enhance the external validity of a study.

The external validity of the study might have been affected by other factors too. For instance, no clear eligibility criteria were set for the target population. The only indicator of the target population was a criterion set explaining that parents were excluded on the basis of not having at least one child in the target age range of four to seven years. The reasons for applying this specific exclusion criterion were not specified. The number of participants excluded on this basis was not mentioned either. Participants should also have been excluded in case they were attending any other parenting intervention while participating in this study. This is of significant importance to avoid any confounding bias, and consequently to ensure the internal validity of the study. The specification of clear eligibility and exclusion criteria was critical for the generalisability and interpretation of the findings.

Data collection. The research design chosen to address the primary aims of the research was a quantitative study because only questionnaires were used to achieve pre-specified objectives focused on testing preconceived outcomes (Casebeer & Verhoef, 1997). Quantitative methods seemed to be a rational choice because the research sought to provide numerical estimations and draw statistical inferences to prove or disprove the hypothesis about the impact of the Seminar Series on children's behavioural and emotional difficulties and on parenting.

In both efficacy and acceptability studies, questionnaires were used to assess the family background, child and parent behaviour, parenting adjustment and client satisfaction. Through the questionnaires used, people's thoughts and feelings were accessed (i.e. *How confident you are that you can successfully deal with your child if they engage in difficult behaviour in shopping with your child; I really feel like part of a team with my partner*), as well as what people would do in certain situations without having to set them up (i.e. *If my child gets upset when I say "No", I back down and give in to my child/ I stick to what I said*) (De Vaus, 2002). The rationale of the selection of the particular questionnaires was given and all the instruments were congruent with the research hypotheses. Yet, as the study aimed to determine whether sufficient content could be delivered in the form of a brief seminar format, and whether the content and format were acceptable to parents, a focus group analysis would have provided more in-depth information on the intervention.

Certain limitations associated with the data collection might have introduced response bias into the study. First of all, since questionnaires constitute a self-report method, it may be ineffective in collecting data because participants need to possess a number of qualities to be reliable. The findings might lack reliability if participants are dishonest and/or inarticulate, lack confidence and/or insight or had a poor memory

(Furnham, 1986; Schroder, Carey, & Vanable, 2003). It is also possible that researchers affect participants' responses, who may feel pressured to give socially desirable responses (Van de Mortel, 2008). Checking for cross-informant agreement, if possible, could enhance reliability. For example, in the efficacy study, researchers could have checked the reliability of the responses regarding parents' reports on child behavioural difficulties through teachers' reports, as teachers appear to be more reliable as informants for detecting externalising difficulties (Goodman, Renfrew, & Mullick, 2000). Another way to improve reliability and validity of the results is by choosing highly reliable and valid assessment tools. The reliability of all the questionnaires used was reported through internal reliability that was ranging from 0.70 to 0.97, and test-retest reliability that was ranging from 0.60 to 0.90 indicating an acceptable to high reliability. Yet, validity was measured for only one of the six questionnaires used; the Relationship Quality Index (RQI; Norton, 1983) has both high reliability and validity. Researchers were expected to provide the appropriate evidence in relation to both the validity and reliability of the instruments (Polit & Beck, 2006).

Another reason why response bias might have been introduced to the study was related to the actual process of distributing the questionnaires. During the pre-assessment period parents in both the intervention (full exposure, partial exposure) and control groups (waiting list) received the assessment booklet by mail and returned them by reply-paid mail. However, parents in the intervention groups had the possibility to return them at the first Seminar. In this case, responses may be biased due to the fact that people who sent back their questionnaires may differ systematically not only from the ones who did not respond (response bias), but also from those who returned the booklets at the first seminar. Therefore, respondents might have not been representative of the originally selected sample due to the specific data collection process followed

resulting in diminished external validity (Leedy & Ormrod, 2001). If these differences were linked to the variables under investigation, then the sample of the study might have been problematic and their responses biased (Groves, Dillman, Eltinge, & Little, 2002).

Also, the settings and locations where the data were collected were not adequately described. The authors mentioned the country and the city where the Seminars took place, but no further information on the immediate environment was given. This type of information was essential in order to assess the extent to which possible factors related to locations and settings could have influenced the observed results such as problems with transportation that might have affected patient participation.

Blinding. Blinding refers to the procedures that prevent study participants, caregivers or outcome assessors from knowing which intervention was received (Wood *et al.*, 2008). Certain strategies could have been applied to ensure that participants, those administering the interventions and those assessing the outcomes were blinded to group assignment. This is necessary especially in subjective outcomes, such as self-reports, where enthusiasm and psychological factors may lead to an improved perceived outcome by either the patient or assessor. In this study, no information about the blinding process conducted was provided. Participants and assessors could have been blinded, yet it would seem impossible to blind the administrators of the intervention. Blinding patients is imperative because knowledge of group assignment may influence responses to treatment. If participants in the partial exposure group knew that Seminar Series included three seminars and they would only receive one, they might have felt discriminated against, and those in full exposure condition might have had favourable

expectations. Also, they should have specified what strategy was used to keep the parents in the waiting list reassured so as not to seek out any other parenting programmes in the meantime. Blinding of the data analyst could have also been achieved to prevent bias. Knowledge of the intervention received may influence the choice of analytical strategies and methods (Gøtzsche, 1996). Yet, due to the nature of the intervention, which was based on a sequence of seminars, administrators could have not been blinded to the group assignment in all conditions. For instance, the administrators could have only been blinded before delivering the first seminar to the partial or full exposure groups. After delivering the first seminar, they would know that parents attending the second and the third were parents in the full exposure condition. For this reason, it was critical that at least participants and assessors were blinded. Overall, in pragmatic RCTs, although the participants and providers were often unblinded, it is still desirable and often possible to blind the assessor or obtain an objective source of data for evaluation of outcomes (Zwarenstein *et al.*, 2008). At least, the authors should have mentioned whether or not blinding was used, and if not they should have explained why any participants, administrators or assessors were not blinded. In this way performance and assessment bias would have been prevented and as a result internal validity would not have been jeopardised (Boutron *et al.*, 2006).

3.5.2.4 Results

The presentation and analysis of the findings fit with the research questions set at the introduction of the study. To enhance the readability researchers presented their results and data analysis section under the headings of the research questions (Russell, 2005). A flow diagram of participants through each stage of the study was presented to clearly report the number of participants who underwent randomisation, those who

received intended treatments and those who were excluded from the analysis of the primary outcomes. Authors did not seem to have published a protocol before the implementation of the study. Yet, they reported the major unplanned change to method of analysis, which was to collapse the data from the non-randomised and randomised participants. There were two underlying reasons justifying this choice; as this was a feasibility study researchers used the largest possible data set available to determine the impact of the intervention and assess its plausibility as an effective parenting strategy, and also no significant differences on any selected demographic characteristic or dependent variable were detected between each of the non-randomised and randomised groups at baseline. Such decision, however, as already explained, might have yielded biased results.

Baseline characteristics. The baseline characteristics of the participants were provided along with a comparative analysis of each of the non-randomised and randomised group. As no differences were found between the groups, the data collapsed, and an additional comparative analysis of the study groups at baseline for important demographic was presented. No significant differences were identified between the study groups which guaranteed that the groups were equivalent at baseline. Despite the similarity of the groups in demographics, a full random assignment should have been achieved to prevent possible selection bias. The authors included statistical analyses not only for those who attended the correct combination of seminars and returned post-intervention assessment measures, but for those who failed to return them too. So intention-to-treat analyses were conducted to assess the robustness of the findings when data from participants who failed to return post-intervention measures were included in the analyses. An intention-to-treat analysis is generally favoured

because it avoids bias associated with non-random loss of participants (Lee, Ellenberg, Hirtz, & Nelson, 1991; Lewis & Machin, 1993; Lachin, 2000). No imputation technique for handling missing data was mentioned.

Analysis. The researchers clearly identified the statistical methods used to compare groups for primary outcomes. To illustrate, the statistical tests undertaken were mentioned, and the rationale behind the choice of each test was adequately justified. As this study was an experimental one, inferential statistics were used to identify whether the differences between the variables were statistically significant (Clegg, 1990). Statistical significance is used to determine whether the difference between groups is likely to represent a real treatment effect or it could have occurred simply by chance. The smaller the p value, the less likely it is for the difference to have occurred by chance alone. The use of high p value is properly interpreted as a lack of evidence of a treatment effect. A mix of p values was used in this study such as 0.05, 0.01 and 0.001. Although a significant level of 0.05 is the most conventional level in psychology, significant levels which are too stringent such as 0.01 or less, may lead to a Type II error, meaning that the authors could have wrongly retained H_0 rather than rejecting it, owing to the stringency of a significant level (Field & Hole, 2003; Herbert, 2000).

It is uncertain whether the outcomes presented in this study could have approximated the average outcomes in the population that the sample represented. The degree of uncertainty associated with the size of a treatment effect could have been described with a confidence interval (Gardner & Altman, 1989; Sim & Reid, 1999). So, confidence intervals describe the degree of uncertainty about the average effect on the population, not the degree of uncertainty of the effect on individuals (Altman, 2000;

Lang & Secic, 1997). In this study, results were reported solely as p values and no confidence intervals were specified. Confidence intervals should have been reported at a conventional level of 95% to illustrate the chance that the unobserved target population value fell within a certain range of the observed sample value (Bailar & Mosteller, 1988; Gardner & Altman, 1989).

Results were presented for all planned primary outcomes, and a further analysis on the clinical significance of the effects at post-intervention was also reported demonstrating no adverse events. Additionally, although the authors noted that follow-up measures were collected for all groups at the same time, according to the dates defining the periods of assessment, it seemed that the data from the intervention groups and the control groups were collected at different points in time. Parents in the waiting list completed the battery of self-reports initially, and again four weeks later. On the other hand, parents in the intervention groups returned their post-assessments four to eight weeks after the completion of the final seminar in the series. Taking into account that the delivery of each seminar was two to three weeks apart, the post-assessment measures of the intervention groups might have been selected at least eight weeks after the first seminar; and therefore, at least a month after the measurements from the waiting list were obtained. If this was the case then the time difference in collecting the post-assessment measures between the groups might have produced biased results. Also, no follow-up measurements were undertaken to determine the long-term effects of the preventive parenting programme.

3.5.2.5 Discussion

Interpretation. In the last section, the discussion of the findings flowed logically from the data and was related back to the study hypotheses thus placing the study in

context (Russell, 2005). Possible mechanisms and explanations were provided to clarify the significance or non-significance of the findings. As this was the first study evaluating the effectiveness of the Seminar Series, no comparisons with relevant findings from other published studies were made. The significance of the findings was considered with the overall limitations identified, such as the use of self-reports without cross-checking the results with other informants, and the lack of long-term follow-up assessment of outcomes (Polit & Beck, 2006). Moreover, other biases related to the methodology of the study were not addressed perhaps because the authors did not initially aim for a full RCT design. Despite the design, confidence intervals would have provided valuable insight into whether the trial results were compatible with a clinically important effect, regardless of the p value (Altman & Bland, 1995). This way, they would have avoided the common error of interpreting a non-significant result as indicating equivalence of interventions.

Generalisability. Some consideration should have been given to the generalisability of the findings. Researchers did not undertake any assessment of the key factors in the design, sampling and analysis of the study to support the external validity of the study. Although some of the basic information was provided such as the participants' characteristics, the treatment regimens and the outcomes assessed, more information concerning the eligibility criteria, the trial setting and locations, the administration of the interventions and the recruitment is required to adequately assess the external validity of the study.

3.6 Discussion

The aim of this review was to critically appraise the published studies which

have investigated the effectiveness of Level 2: Selected Triple P. In this study, a mix of randomly assigned and non-randomly assigned groups of parents participated and provided pre- and post-assessment measures. So, it was initially treated as a feasibility study and not a full RCT (Cochrane, 1972). A major threat to the internal validity of a study is selection bias. The method of recruitment, enrolment and the lack of clarity regarding the participant selection, inclusion and exclusion, criteria might have generated group differences at pre-assessment period. High loss of participants at post-baseline might have caused attrition bias, which in turn might have changed the basic characteristics of the participants, resulting in confounding bias. The lack of allocation concealment might have also enhanced selection bias. Moreover, the absence of blinding might have introduced performance and assessment bias affecting the internal validity of the study (Table 1). A full RCT would have minimised systematic bias as a sample of participants would have been randomly selected from a particular population and they would have been allocated randomly to intervention and control groups.

Table 1. <i>Table of Risk of Bias</i>	
Random Sequence Generation (Selection bias)	+
Allocation concealment (Selection bias)	-
Blinding of participants and personnel (Performance bias)	?
Blinding of outcome assessment (Detection bias)	-
Incomplete outcome data (Attrition bias)	-
Selective reporting (Reporting bias)	-
Other bias	-
(+) Low risk of bias (-) High risk of bias (?) Unclear risk of bias	

The external validity refers to the applicability of the results to other populations, settings, treatment regimens and outcomes assessed. The generalisability of the findings is primarily based on the characteristics of the population and the care setting. Due to the mix of randomly and non-randomly assigned participants, the inconsistency in time and method of delivery of data collection, and the high attrition imbalanced or unrepresentative study groups might have been developed which put at risk the external validity of the study. There was also lack of information regarding the setting, location, and immediate environment that is important to understand the context of the intervention (Forehand & Kotchick, 2002). In addition, confidence intervals were not specified, avoiding any implication on the scientific importance of the findings regarding the unobserved population. Lastly, it also seems that focus groups would have provided more in-depth information and greater insight into participants' understanding of and perspectives on the Seminar Series would have been gained (Morgan, 1997; Stewart & Shamdasani, 1990).

Overall, despite the limitations, there were certain strengths that minimised some of the risks addressed. For instance, all measures used in this study had high reliability and they have used in other parenting interventions too. All selections of statistical tests used for each analysis were thoroughly described and adequately justified. Intention-to-treat analyses were carried out to include participants who failed to return post-intervention measures. Lastly, analyses were also conducted to investigate whether there was any clinical significance of change in children's level of emotional and behavioural difficulties.

3.6.1 Rationale and Significance of the Pilot RCT

The research will fill an existing significant gap in academic research and

literature, as it would be the first time that a brief and easily replicable group universal prevention parenting programme will be studied in a general population using a RCT design. So far, many programmes labeled as “universal” (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009; Zubrick *et al.*, 2005) either do not specify how participants were recruited or turn out to frequently target parents who had concerns about their child’s behaviour or their children might have been at risk of developing behavioural difficulties, which is defined as selective prevention. It is equally important to determine the short-term and long-term effects of universal prevention programmes that provide general and not topic-specific information to the entire population. The long-term effects of this parenting intervention on child and parent outcomes through a 6-month follow-up assessment will also be assessed for the first time. In-depth information and a great insight into parents’ perceptions of the Triple P Seminar Series will contribute to our general knowledge about this delivery format. These results can provide useful knowledge to the current studies of Triple P on its worldwide acceptability, feasibility and cultural relevance, especially because this is the first time that Triple P will be implemented in the Greek context.

The present study is also designed to overcome previous methodological limitations. Several methodological changes will enhance the internal and external validity of the study. A RCT design will be used. The details on the processes of random allocation sequence will also be provided to clarify how potential selection bias is avoided. Specific procedures during recruitment and before randomisation will also be designed to reduce attrition rates. Eligibility criteria will also be set to enhance external validity. Regarding measurements, the same process of distributing the measures across groups and across assessment periods will be applied to eliminate response bias. Blinding to outcome assessment will also be followed to avoid

assessment bias. To enhance external validity specific details on the settings, immediate environment and administration of the intervention will also be described. Regarding the analysis of the data, imputation strategies for missing data will be discussed, confidence intervals will be specified to illustrate the chance that the unobserved target population value fall within a certain range of the observed sample value. The data will also be analysed at a significance level of 0.05 to avoid Type I and Type II errors. Finally, it is critical to point out that this study will be completely independent as neither the developer of Triple P nor any of his colleagues or licence holders will be involved with at any methodological or evaluation stage of this trial (Eisner, 2009). All the procedures designed in this study have been approved by the Central Oxford University's Research Ethics Committee. The trial will be registered with ClinicalTrials.gov.

3.6.2 Research Hypotheses and Questions

This study focuses on the investigation of the following research questions and hypotheses. Firstly, the impact of a brief preventive intervention on a general population sample of parents will be investigated through standardised parent reports on the primary outcome, child behavioural difficulties, as well as on secondary outcomes including child emotional difficulties, parenting style, parenting confidence, common distress, as measured at three assessment time points, at baseline, at post-intervention and at 6-month follow-up. It is predicted that, compared to a control condition, parents attending the Seminar Series will report a lower level of child disruptive and emotional behaviour at post-intervention. In addition, the parent-specific impact supplement assessing the severity of the symptoms on social and educational function, distress and burden on others will be evaluated and reported for the first time to better understand

the impact of these difficulties on everyday life.

At the same time, it is postulated that parents who will attend the Seminars will show a decrease in dysfunctional discipline styles, higher levels of satisfaction with parenting, feelings of efficacy as a parent and task-specific self-efficacy as well as lower levels of distress than parents in the control group. It is also presumed that these differences in child and parent behaviour will last at least for a 6-month period.

Lastly, and vitally, as this study involves transferring a parenting programme to a new country and culture, parents' perceptions on the suggested parent management training programme will be thoroughly examined. The programme will be assessed in terms of its acceptability, feasibility and cultural relevance. It is expected that the programme will be acceptable, feasible and culturally relevant in the Greek context too, as was previously found in a pilot focus group (Foskolos, 2010).

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CHAPTER 4

Chapter 4: Pilot Randomised Controlled Trial

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4.1. Overview

This chapter examines the efficacy of a Triple P positive parenting Seminar Series for universal prevention of behavioural and emotional difficulties in a general Greek sample of parents with children aged 2 to 12. It presents a pilot RCT in which 124 participants were randomly allocated to a brief universal parenting intervention or to a control condition. Parents in the intervention group received three 90-minute seminars and tip sheets over a 2-month period, while parents in the control group received information on child health at home. The primary aim of the study was to investigate whether this brief parenting intervention could improve children's disruptive and emotional difficulties. Secondly, it examined whether this programme could reduce parents' dysfunctional discipline styles, improve feelings of self-efficacy as well as decrease levels of distress. The effects of the intervention were assessed using child and parental behaviour measures at baseline, at post-intervention and at 6-month follow-up. Further analyses were conducted to explore the possible effects of the intervention on children with average vs. high levels of behavioural difficulties, the association between the number of seminars attended and the change in child and parent behaviours, and the association between attending an additional focus group session and parenting outcomes. Lastly, parents' levels of satisfaction with each seminar and with the Seminar Series as a whole were assessed to get a better understanding of the delivery of this type of intervention.

4.2. Introduction

The previous chapters describe the necessity for a preventive strategy in Greece. The systematic review of the prevalence of behavioural and emotional problems in Greek school-age children presented the evidence for early prevention;

Greek children seem to display a high incidence of externalising and internalising behaviour difficulties. Parenting has been found to play a significant role in the development and maintenance of emotional and behavioural difficulties (Gardner, Sonuga-Barke, & Sayal, 1999; Patterson, 1997; Wood, McLeod, Sigman, Hwang, & Chu, 2003). For this reason, early detection and early prevention programmes designed to modify common behaviour problems can prevent the further development of these difficulties as well as reduce the negative effects these problems may have on familial and child environment.

Previous meta-analyses on the effectiveness of the Triple P programme suggest that prevention studies for parenting practices and child behavioural difficulties seem to produce small to large effects; yet, the findings are not conclusive as some trials have shown positive results (Hahlweg, Heinrichs, Kuschel, Bertram, & Naumann, 2010; Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009; Zubrick *et al.*, 2005) while others have found no effects (Malti, Ribeaud, & Eisner, 2011; Little *et al.*, 2012; Schappin *et al.*, 2013). Studies have been mainly based on research on low-to-moderate risk and high-risk prevention, and less on universal prevention. A literature review was conducted to examine all the published and unpublished studies on universal Triple P (Chapter 2). Relatively few studies have been conducted on the effects of universal Triple P and most of these studies have mainly focused on the universal self-directed option. Other formats, such as universal group Triple P, have been examined but they seem to have contradictory results. A common barrier of these intensive universal prevention interventions is that a small proportion of parents take part (15-30%) and around half of those who initially enroll, drop out and do not complete a meaningful part of the programme for various reasons. So, high attrition rates might decrease through the implementation of less

intensive programmes, which are likely to be of a greater appeal to a general population. This is because such programmes provide information relevant to the needs of a greater number of people, rather than that restricted to those with concerns or existing problems, and may be less time consuming and more cost-effective. The effectiveness of brief, low-cost universal preventive interventions, which offer general information to the entire population by providing minimal therapist contact and minimal additional parenting resources, was examined in this trial.

Research indicates that the Triple P programme, which is contingent upon the principle of positive parenting, is both effective and culturally acceptable, based on RCTs in various cultural contexts such as Hong Kong (Leung, Sanders, Leung, Mak, & Lau, 2003), Japan (Matsumoto, Sofronoff, & Sanders, 2007), Germany (Heinrichs *et al.*, 2006), Switzerland (Bodenmann, Cina, Ledermann, & Sanders, 2008), Australia (Sanders, Markie-Dadds, Tully, & Bor, 2000), and New Zealand (Venning, Blampied, & France, 2003). There is, however, no evidence to support the interventions evaluated in studies conducted in the Netherlands (Schappin *et al.*, 2013), UK (Little *et al.*, 2012) and Switzerland (Malti, Ribeaud, & Eisner, 2012) probably because of poor fidelity of implementation and other methodological issues. For instance, in the English study, unlike other programmes under evaluation, Triple P practitioners (with varying degrees of training) were chosen by the implementation team for the delivery of the intervention and there was no mandatory supervision for the practitioners to attend. Also, the measures used in the Swiss study had poor reliabilities, and in the Dutch study there was a comparison group that showed significant positive changes similar to the Triple P group. As such, Triple P might be the most elaborate and structured parenting support system available that has led to

its wide dissemination and adoption across 20 countries. However, Triple P has never before been studied in the Greek context.

In addition, it has been found that although there are some differences between children in Italy, Spain and Portugal they seem to share similar levels of conduct problems (Marzocchi *et al.*, 2004). The SDQ clinical cut-offs appear to be slightly lower for abnormality in southern European countries in comparison to central and northern countries of Europe. This indicates that southern European children may have a higher level of difficulties than northern or central European children. As Greece is a Mediterranean country, it may share similar cultural and societal characteristics with the other southern countries. According to the Organisation for Economic Cooperation and Development (OECD), it seems that the family structure of southern European countries is more similar to each other than to those in central or northern European countries. For instance, more than 90% of the families in Greece (93.6%), Spain (91.5%) and Italy (92.1%) are nuclear families compared with the United Kingdom (68.9%), Germany (82%) or Sweden (78%) (OECD, 2010). In addition, there are less children living in reconstituted or stepfamilies in southern countries than northern countries. Triple P has been disseminated in Northern and Central European countries like the UK, Germany, Sweden, Switzerland and the Netherlands, and so investigating the transferability of the Triple P to a Southern country would be beneficial to our knowledge on the wider dissemination of positive parenting programme.

A previous pilot study was conducted in Greece (Foskolos, 2010) where parents watched a 55-minute DVD entitled “*Every Parent’s Survival Guide*” and rated the Triple P strategies as acceptable, feasible and culturally relevant suggesting that this parenting intervention could be delivered in the Greek context. This

proposition had to be trialled first, and more information on parental perceptions was required before any wider implementation would be warranted. A brief format of the Triple P programme (Level 2: Seminar Series) was selected to introduce positive parenting in Greek parents as it integrates all the core elements of positive parenting. The effectiveness or efficacy of this type of intervention has neither been studied in a fully randomised controlled published study, nor in one with a follow-up to test its long-term effects. It has also been trialled in the cultural context of Australia and Indonesia, and so its cross-cultural replicability is relatively questionable. To the best of my knowledge, no evidence-based parenting programmes have been tested in RCTs in Greece. Lastly, previous research on the Seminar Series focused on short-term effects. To investigate the long-term effects of brief universal interventions, assessments were carried six months after the post-intervention.

This study investigates the efficacy of a Triple P Seminar Series on positive parenting for universal prevention of behavioural and emotional difficulties in a general Greek sample of parents with children aged 2 to 12. Due to the small number of participants the study is a pilot RCT. It is predicted that, in comparison to a control condition, parents randomised to the Seminar Series will report lower levels of children's disruptive and emotional difficulties at post-intervention. At the same time, it is postulated that parents will show a decrease in dysfunctional discipline styles, greater feelings of self-efficacy as well as lower levels of distress. Lastly, it is hypothesised that the effects observed at post-intervention will remain at 6-month follow-up.

This chapter presents the trial's design, conduct, analysis and interpretation, as well as the validity of results, based on the guidelines provided by the CONSORT statement on the reporting of RCTs (Schulz, Altman, & Moher, 2010) and on other

extended versions of the CONSORT statement (Bourton, Moher, Altman, Schulz, & Ravaud, 2008).

4.3 Methods

4.3.1 Trial Design

This was a randomised (with imbalanced randomisation 2:1), parallel-group study. The trial was registered with ClinicalTrials.gov (Registration number: NCT02030730). Although a study protocol was not published before the trial started due to time restrictions, a detailed proposal was submitted at the Central University Research Ethics Committee of Oxford University and at the Department of Social Policy and Intervention.

4.3.2 Participants

The study took place in Athens from April 2012 to April 2013. The sample of this trial was drawn with the aid of family, child and health organisations in the general area of Athens, Greece. Athens is the capital of Greece with a population of 3.8 millions (Hellenic Statistical Authority, 2011). During the recruitment stage, a child and family organisation, “*Network for Children’s Rights*”, in cooperation with the “*Institution of Social and Preventive Medicine*” invited the general public by advertising the study. The promotion of this study was conducted through the organisations’ member lists, contacts with schools and other health institutions, social networks and mass media such as free press, newspapers, magazines, websites and web-radios. Parents were recruited from mid-March 2012 to mid-April 2012. To eliminate response bias, parents could apply until the day when the first seminar was

repeated. Parents who applied during the second or third seminar were allowed to attend the seminars but were not included in the study.

In the advertisement to nursery and primary schools, it was specified that parents with at least one child between 2-12 years old would be eligible to participate. There were two possible information-based interventions: (1) the intervention group would receive the Seminar Series, educational-based seminars related to parenting and child development to help them deal with common and everyday problems by increasing their understanding about child behaviour and improving the relationship with their children; (2) the control group would receive the Child Health Information Linked to Development Sheets (CHILDS), leaflet information on general child health. The intervention was delivered as a universal preventive programme, which targeted a general population, and for this reason, all parents got an equal chance to attend the Seminar Series. However, this was incorrectly stated in the advertisement, informed consents and participant information sheets as parents had a better chance to attend the Seminar than the control group due to the unequal randomisation (2:1). The Department Research Ethics Committee was informed about this error.

Parents could contact the organisations for further information and registration. The organisations shared the list of parents who were interested in taking part in the study with the researcher's assistant instead of the researcher to avoid any selection bias (Jadad & Enkin, 2007). The voluntary research assistant position was advertised in the social media and a sociologist, independent from the organisations and the researcher, was chosen. All parents who expressed their initial interest to participate in this study were informed that there were two ways to complete a compulsory registration, either on paper or online. For the former option,

participants received an envelope which included the following materials: (i) a “thank you” letter; (ii) a participant information sheet and two copies of the informed consent, one to keep and one to return to the researcher, to ensure that the study satisfies legal and ethical norms; (iii) the pre-assessment baseline characteristics booklet including background information, parenting and child measures; (iv) a pre-paid envelope to return the forms. In case participants had more than one child, they had to complete the child behaviour measures for each child within the set age range. Alternatively, an online registration, which included the same information as described above, was also available for parents.

The parents who returned the consent forms and the baseline assessment booklet moved to the next part of the recruitment, which was the “Eligibility Criteria Stage”. Parents were re-contacted by the researcher and his assistant through email and phone calls if they did not respond to the initial request. In this case, they were asked to give phone-consent and return the baseline measures. If they completed all these processes they moved to the next stage of the recruitment.

Further eligibility and exclusion criteria were applied to determine the number of the sample that was included in the randomisation process. Specifically, parents who were eligible for the randomisation process were those parents who: (i) returned a signed informed consent or gave phone-consent; (ii) completed baseline measures; (iii) had children who met the age criteria and (iv) were residents of the general area of Athens. The target population were all parents of children aged between 2 to 12 years from the general area of Athens. These steps were carried out before the randomisation process to minimise drop out rates in the next stages of research.

4.3.3 Intervention

A new reporting guideline, the Template for Intervention Description and Replication (TIDieR; Hoffmann *et al.*, 2014) was used to report the intervention characteristics. In this study, participants were randomly allocated to the experimental or the control group. Parents in the experimental group received a brief prevention, psychoeducational parenting intervention, the Level 2: Selected Triple P: Seminar Series, whereas parents in the control group received Tip Sheets related to child health.

The Seminar Series is a type of intervention that is delivered by accredited facilitators. Facilitators are required to attend a training day and an accreditation workshop organised by Triple P before delivering this intervention. Practitioners are required to have attended either a Level 3 or Level 4 Triple P Provider Training Course prior to enrolment to Level 2. To enhance the adherence of practitioners to the protocol and principles of Triple P Organisation interventions are conducted using standardised materials. Practitioners of the Seminar Series are provided with the Facilitator's Kit for Selected Triple P which includes a Facilitator's Manual and a CD Rom with Seminar Series PowerPoint presentations; a series of parenting Tip Sheets is also available with the kit (Sanders & Turner, 2005). The written manual illustrates a scripted presentation and provides a clear description of each slide of the PowerPoint. The Tip Sheets of each Seminar are also based on the information of the presentations and elaborate the core principles of positive parenting and behaviour change as well as the strategies for promoting children's development in accordance with the specific topic of each seminar.

Due to the fact that the PowerPoint presentations and the Tip Sheets were in English, all materials were translated, with forward and backward translations to

enhance the validity of the material used (Guillemin, Bombardier, & Beaton, 1993). First, the Triple P Glossary of Clinical Psychology was translated from English to Greek by the researcher. The Glossary contains a list of terms used in psychology (e.g. behaviour chart, descriptive praise, Time Out, incidental teaching, parenting scale) while others have been created by the Triple P Organisation in particular (e.g. Universal Triple P, Standard Triple P) (Sanders, 1999; Sanders, Markie-Dadds, Tully, & Bor, 2000). As some of these terms were used in the PowerPoints and Tip Sheets, the aim was to translate them in a way that parents could understand the meaning without losing the scientific content. The Glossary translation was initially reviewed by a Greek Lecturer in Linguistics at University of Cambridge and then by two Greek parents for understanding and relevance of the translated material. The translation was adjusted to the comments of the reviewers. The PowerPoint presentations and the Tip Sheets were translated by a Greek assessor of the Triple P Organisation at the University of Queensland, Australia. Adjustments were also made regarding the child names used in the Tip Sheets. The materials were then sent back to the researcher for review and approval. The final Greek PowerPoint presentations and the Greek Tip Sheets were produced and published by Triple P International Pty Ltd (TPI) without any charge.

After the randomisation process, parents allocated to the experimental group received a letter inviting them to attend the Seminar Series. Invitations were sent via mail, email and phone message. The Seminar Series is comprised of three discrete but inter-related seminars. The first seminar entitled “*The Power of Positive Parenting*” aims to inform parents about positive parenting. It focuses on the principles of positive parenting, analyses the causes of behaviour problems, sets goals for change and introduces monitoring. Then, it presents strategies for building

positive relationships between parents and their children, encouraging desirable behaviour and teaching children new skills. It also details strategies for managing misbehaviour and family survival tips to help parents take care of themselves. The second seminar entitled “*Raising Resilient Children*” comprises strategies through which their child can learn to recognise and accept feelings, express feelings appropriately, build a positive outlook, develop coping skills, and also deal with negative feelings and stressful events. In the third seminar entitled “*Raising Confident, Competent Children*”, parents are introduced into strategies to help their child show respect to others, be considerate, have good communication and social skills, have healthy self-esteem, become a good problem solver and become independent. The intervention was not planned to be personalised, but all the examples that were used during the presentations were adjusted to reflect the age range of the participants’ children as well as the current social, economic and cultural aspects of life in Greece.

The Seminar Series is primarily based on social learning theory as well as on other scientifically based theories of child development, family systems and family interaction, developmental psychopathology and resilience, communication, attachment and attribution theories, and therapeutic practice, which underlie the principles of cognitive, behavioural and affective change. It is assumed that parents’ behaviour may unintentionally reinforce children’s behavioural and emotional difficulties. This Seminar Series aims to reduce dysfunctional parenting practices by encouraging more effective, positive parenting practices. By learning how to discipline their children, encourage children’s positive behaviours and create an engaging, supportive and safe home environment, parents can demonstrate to their children how to regulate their own behaviour and emotions. In turn, children may

develop better behavioural, emotional and social skills, build stable family and friend relationships, and improve various aspects of their life (Sanders, 2012).

Each of the three seminars is comprised of a 90-minute presentation involving 60 minutes of scripted presentation material and 30 minutes' question time for discussion. At the end of each of the three Seminars, the parents also received a detailed handout with the information presented during each seminar. The delivery of each seminar was 2-4 weeks apart. At the end of the last Seminar, the attendees were divided into groups of maximum 10 according to their availability and convenience for the focus groups (stage 5). A total number of six focus groups were formed.

The Seminar Series was delivered in a conference room located within a well-known bookshop, named "*Bookshop Patakis*," in the centre of Athens, to ensure reasonably feasible and cheap access for parents from different parts of the city. The seminars were delivered on Saturday afternoon or evening to increase parent attendance. In most of the cases, the Seminars were repeated on a Friday or Monday evening so that parents could attend them after work. The bookshop offered childcare services in the Children's Book Department. The seminars were delivered by the researcher and accredited Triple P Practitioner. The researcher was completely independent as neither the developer of Triple P nor any of his colleagues or licence holders interfered at any methodological or evaluation stage of this trial.

Although high implementation fidelity was pursued, two major difficulties arose regarding the location and time of the Seminars. First of all, due to the economic recession, there were protests organised in the centre of Athens during the day and evening. This might explain why some parents did not show up when invited to the Seminars. Also, the administration of the second seminar was postponed because of the unexpected legislative elections for government formation in May

2012. The seminar was rescheduled for the following week after another event in the bookshop. Unfortunately, the previous event lasted longer than it was initially planned, and so the seminar was delayed. Further delay was caused as the room had to be set up for the Seminar. By the time the seminar started there was only one hour till the bookshop closed. Under these circumstances, further questions on the second seminar were answered mainly outside the bookshop, which was inconvenient for the majority of the parents who complained about it to the bookshop management team.

All participants randomised into the intervention group had to confirm their attendance to the researcher's assistant within a set time via phone, text message or email; otherwise they were recontacted by the assistant to check on their attendance. Minimal contact was achieved through reminders via phone, text message or email, which was used to keep parents engaged. In the original protocol, to enhance parental engagement in the seminars, it was proposed that a text in-between the seminars would be sent to remind parents to read the Tip Sheet given at the previous seminar, and a second text the day before the seminars to remind them about the time and setting of the seminars. Only texts related to the time and setting of the seminars were sent to minimise the contact with the participants as well as financial costs, and increase the ecological validity of the study. No additional contact was initiated in order to ensure the brief nature of this intervention.

A wait-list control design could not be justified initially because this is an intervention aimed at a general population rather than a clinical or highly distressed sample; and secondly, there is little evidence concerning the effectiveness of the Seminar Series, which has never been delivered in Greece, and there are no other studies that have tested its efficacy or effectiveness outside Australia. For the above reasons, a control group received leaflet information on child health provided by the

Greek National Health Services of the Ministry of Health. The CHILDS include general information on child health and development and were based on multiple online resources offered to the general public. Child health topics, such as vaccinations, common childhood illnesses, first aid guide on severe injuries and cuts, nutrition, were chosen so that they did not overlap with the Seminar Series, or the general purpose of the study, which is the prevention of emotional and behavioural difficulties through positive parenting. The information provided on the CHILDS was accurate and updated and permission was obtained to use it. Each CHILDS was distributed to the control group at the same time as the Seminar Series was delivered. This way parents in the control group were engaged with the study, possibly resulting in low attrition rates. Otherwise, parents in the control group would be required to fill in an assessment booklet at three time periods without receiving anything in return.

4.3.4 Sample Size

To calculate an appropriate number of participants for this study, a formula for statistical superiority design was used (Wittes, 2002). Superiority trials are used to attest that a new treatment is more effective than a standard treatment from a statistical or clinical point of view (Zhong, 2002). This sample size calculation formula includes the following key elements: (1) N = size per group; (2) z_x = the standard normal deviate for a one or two sided x ; (3) δ = the real difference between two treatment effect and; (4) S^2 = Polled standard deviation of both comparison groups.

$$N = 2 \times \left(\frac{z_{1-\frac{\alpha}{2}} + z_{1-\beta}}{\delta} \right)^2 \times s^2$$

Based on mean scores, standard deviations and effect sizes on the primary outcome, that is child behaviour difficulties, from previous research (Sanders, Prior, & Ralph, 2009), and by using a conventional .05 value for α (Type Error I) and a conventional .80 value for power, a sample size calculator indicated that a sample size of 65 parents per arm or 130 in total would be required to achieve an effect size of 0.8 for the primary outcome measure at the 5% significance level with a ratio of 2:1 intervention to control. After we allowed for expected drop out of 40% based on similar studies (Sanders, Prior, & Ralph, 2009) the target population was 182 parents. The final sample (N=124) seems to be satisfactory given what is possible for a D.Phil. candidate to achieve in a limited amount of time. This study was a pilot RCT. Nevertheless, the sample size was not large enough for sufficient power to detect differences and associations between the variables in exploratory analyses.

4.3.5 Randomisation

During the randomisation process, the names of those who met the eligibility criteria were included in the “Participant List”. The rest were excluded from the study. A two-stage randomisation process was followed.

During the first randomisation stage, the “Participant List” was shared with the assistant who coded the participants; thus, the researcher who ran all statistical analyses could not identify the participants. After the participants were coded, the researcher stratified them into permuted blocks according to three child factors (sex,

age and child behaviour difficulties-clinical status) in order to balance known child confounding variables across the groups. Using an online computerised random integer generator (*www.random.org*) the assistant then randomised the participants into two allocation groups: intervention and control group (Altman, 1991; Altman & Bland, 1999). Sequentially numbered, opaque, sealed envelopes were used to ensure allocation concealment and avoid selection bias. Only the assistant was aware of the random allocation list and was able to identify the participants (Machin, Campbell, Fayers, & Pinol, 1997; Schulz & Grimes, 2005; Vickers, 2003).

Unequal randomisation (2:1=84:42) was applied for methodological and practical reasons (Dumville, Hahn, Miles, & Torgerson, 2006; Edwards & Braunholtz, 2000): (a) unequal randomisation of 2:1 moves a study's power from 80% to 75%, unlike a 3:1 ratio or more which might allow a serious loss of power; (b) unequal randomisation is also beneficial in studies where a group treatment is compared to individual treatment or nothing, as it helps to obtain enough participants for the groups to run; (c) lastly, as the intervention is delivered for the first time in Greece there might be potential unknown effects of the Seminar Series; and so it is beneficial to have more people to pick up such effects (Gail, Williams, Byar, & Brown, 1976).

Randomisation was conducted one week before the beginning of the Seminars so that the organisation had enough time to send the invitations to the parents of the experimental group. Randomisation was justified by a maximum number of participants allowed to attend the Seminar Series. After initial randomisation, the researcher's assistant followed the same unequal randomisation process for parents who turned up uninvited to the seminars, so called "on-the-day" or "late entries" (Clayton & Hills, 1993). Parents were allowed to attend the seminars

but they were randomised at the second stage of randomisation. On this basis, the data of the “on-the-day” parents who were allocated to the seminar group and control group remained in the intention-to-treat (ITT) analyses. Analyses were run with and without these additional parents to control for possible selection bias.

After trial commencement, there were some deviations from the original protocol regarding the process of randomisation. After baseline analyses, it was found that there were a few deviations in the number of participants allocated to the final groups than had been proposed in the list administered by the researcher. The possible reasons for the errors made during the stratification process were related to administrative issues. Due to an increased interest in participation, randomisation was delayed to increase the sample of the study and it took place a few days before the intervention started. In addition, although all parents who completed child measures were included in the initial randomisation plan, some of them were later excluded since they did not submit parenting measures. The children were also mistakenly stratified according to their behavioural difficulties status (clinical, non-clinical), instead of the actual score on the intensity scale of the Eyberg Child Behaviour Checklist (ECBI), which is the primary measure of the study. For these reasons, slight imbalances in child factors between the allocation groups were expected. The unequal randomisation process is illustrated and the exact number of additional or needed participants is also specified in Table 1.

Table 1. *Method of unequal randomisation including stratification process*

Age	2-5 (n=74)	ECBI Intensity	Seminars	Seminars	Sex	Boys	Seminars	18 (75%)	
			52 (70%)	34 (68%)		Below	[+2]		
			[+3] ^a	Below		[+1]	cut-off	Control	6 (25%)
				cut-off			(n=25)	[-2]	
				(n=57)		Control	Girls	Seminars	16 (62%)
				16 (32%)		[-1]	Below	[-1]	
	6-12 (n=50)	ECBI Intensity		Seminars		Boys	Seminars	12 (71%)	
			Control	22 (30%)	18 (75%)	Above	[+1]		
			[-3]	Above	[+2]	cut-off	Control	5 (29%)	
				cut-off		(n=17)	[-1]		
				(n=22)	Control	Girls	Seminars	6 (86%)	
				6 (25%)	[-2]	Above	[-1]		
			cut-off	Control	1 (14%)				
			(n=7)	[+1]					
6-12 (n=50)	ECBI Intensity	Seminars	Seminars	Sex	Boys	Seminars	14 (78%)		
		33 (67%)	23 (61%)		Below	[+2]			
		[-]	Below		[-2]	cut-off	Control	4 (22%)	
			(n=31)		Control	(n=17)	[-2]		
			15 (39%)		[+2]	Girls	Seminars	9 (45%)	
						Below	[-4]		
	6-12 (n=50)	ECBI Intensity		Seminars		Boys	Seminars	7 (87%)	
			Control	17 (33%)	10 (83%)	Above	[+2]		
			[-]	Above	[+2]	cut-off	Control	1 (13%)	
				cut-off		(n=8)	[-2]		
				(n=12)	Control	Girls	Seminars	3 (75%)	
				2 (17%)	[-2]	Above	[-]		
			cut-off	Control	1 (25%)				
			(n=4)	[-]					

a. The exact number of additional or needed participants

4.3.6 Blinding

In pragmatic trials placebo control and blinding is hard to achieve (Macpherson, 2004). In this study, the facilitator and the outcome assessor was the same person due to limited financial resources. To ensure blindness all data was collected by the researcher's assistant, who was the only person who could identify the participants' reports. The assistant collected the data through an online system, or by post. The data was shared with the researcher after all of the participants' identifying features were removed. To diminish possible contamination bias, specific strategies were followed; after initial randomisation, the list of the participants at the control group was cross-checked with the list of seminar attendees by the research assistant. In addition, the participants in the control group were asked at follow-up assessment whether they had received any information regarding Triple P Seminar Series during their participation in this study. For ethical and practical reasons, it was difficult to keep participants blind to their allocated intervention. Deception was required to conceal the aim of the study but it might have resulted in a smaller sample size given the limited time frame to advertise the trial and recruit participants.

A different seminar series could have been offered to the control group, such as first aid seminars parallel to the delivery of the Triple P Seminar Series to the intervention group, but it would have been difficult to organise it due to feasibility issues. Participants were aware of their treatment assignment, that is why they could have responded more favourably when they received the intervention (Wood *et al.*, 2008). Therefore, it was likely that members of the control group may have inadvertently attended the seminars or been exposed to the intervention through people they might have known in the experimental group. As a result, contamination bias might have been introduced, potentially minimizing the difference in outcomes

between the two groups (Krishna, Maithreyi, & Surapaneni, 2010). Cluster randomisation processes could have been used to reduce contamination bias (Macpherson, 2004). Yet, there would have been several potential limitations derived from this process (Torgerson, 2001). If participants of the experimental group were given the choice to come to the Seminars with one or more friends, then arguably they would have to be randomised and analysed as a cluster. It was unlikely that everyone brought a friend to the Seminars, and as a result unequal cluster sizes might have been produced. Therefore, a conventional cluster-randomised design did not seem to be feasible in this case because there were no natural clusters. In addition, a larger sample size would have been required to increase the power of the study, which may have increased the cost, the length and the complexity of the trial (Campbell, & Grimshaw, 1998; Kerry & Bland, 1998a,b).

If any of the participants of the control group either attended the intervention, or received information regarding Triple P, their data was only included in the intention-to-treat analyses. Secondly, as in most parenting trials, couples were randomised as a unit, and so the participants' surnames and the addresses were also cross-checked by the research assistant, so that a mother and a father were in the same arm and were counted as one participant.

4.3.7 Outcomes

The measures used in this study aim to evaluate the basic characteristics of the parents, children and family environment. The measures include questionnaires that are used to collect information about the demographic characteristics of the family, child and parent adjustment and parenting. Child behaviour was assessed as the primary outcome, and parent behaviour as secondary outcome. This is because

the main aim of the study is to assess the efficacy of the programme to prevent child difficulties, possibly by reducing dysfunctional parenting. The primary outcome was also used for the sample size calculation.

There is evidence of the validity and reliability of all the measures used. They are validated measures of child conduct problems and parenting skills, which have been used in parenting studies before worldwide, especially in the Triple P studies (Barlow, Parsons, & Stewart-Brown, 2005; Sanders *et al.*, 2008). This allows for comparison of the outcomes from this study with outcomes of similar studies.

All parents completed the questionnaires at three different time points: at baseline, immediately after the intervention (post-assessment) and 6-months after the intervention. The same parent had to complete the booklets at the different time points; where both parents attended the seminars, the parent who completed the baseline assessment was asked to fill in the other assessments as well. A 3-month follow-up data collection was initially planned. However, at the time the post-assessment period was planned, some parents were already on holidays. Consequently, they delayed completing the post-assessment booklets. The deadline for the final submission of the booklets was extended from end of June to the beginning of September, which is the start of the school year. For this reason the 3-month follow-up assessment period changed to a 6-month follow-up period.

At all times, the booklets were available online or sent by post with a pre-paid envelope for those who had no online access. By offering different methods of delivering and specifying the periods for returning the assessment booklets with both groups at all assessment periods, possible response bias that may generate individual differences during assessment periods, as well as subsequent selection bias during baseline assessment were minimised. All performance measures were assessed at all

time points by one assessor, who was blinded to the allocation group of the participants.

4.3.7.1. Primary Outcome: Child Behaviour

Different child measures were used to assess child disruptive behaviours; (i) the *Eyberg Child Behaviour Inventory* was selected because it is sensitive enough to treatment effects as it consists of 36 items but it has not previously been translated or tested in Greece (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993; Nixon, Sweeney, Erickson, & Touyz, 2003); (ii) subscales of the *Conners Parent Rating Scale – Revised* were used because the scale has been translated in Greek and used in studies of child difficulties. The conduct disorder subscale was used to cross-check the scores on disruptive behaviours in the ECBI, and the anxiety subscale as the main measure of emotional difficulties and finally; (iii) subscales of the *Strengths and Difficulties Questionnaire* were chosen as it has been translated in Greek and has been used in prevalence studies on child emotional and behavioural difficulties. The impact supplement was also used to accurately interpret the results, as there are no standard cut-off points for the Greek population, as well as to rule out the possibilities that Greeks complete the SDQ in a certain way due to cultural or other differences, or because the meaning may be different in translation.

The *Eyberg Child Behaviour Checklist* (ECBI; Eyberg & Pincus, 1999) is a 36-item multidimensional questionnaire that measures parental perception of disruptive behaviour in specific contexts in children aged 2-16 years. The ECBI incorporates the intensity and problem subscales. The child's disruptive behaviour is rated on a 7-point scale and the amount of disruptive behaviours that are perceived as a problem by the parents. The ECBI discriminates reliably between children with and

without conduct problems. The parents' versions were used. The clinical cut-off of ECBI was initially established to be 127 for the Intensity scale and 11 for the Problem scale (Eyberg & Ross, 1978), yet it was later restandardised to 132 for Intensity scale and 15 for Problem scale (Colvin, Eyberg & Adams, 1999). Some studies have used the established clinical cut-offs (Bywater *et al.*, 2009; Jones, Daley, Hutchings, Bywater, & Eames, 2008; De Graff, Speetjens, Smit, de Wolff, & Tavecchio, 2008; McGilloway *et al.*, 2012). Since the ECBI has not been standardised in Greece yet, the new cut-offs (132 and 15, for Intensity and Problem scale accordingly) were applied because they may be more precise than the older, more established ones (Colvin, Eyberg & Adams, 1999). A cut-off of 132 may also provide more conservative results since fewer children will be identified as problematic than using a cut-off of 127.

The *Strengths and Difficulties Questionnaire* (SDQ; Goodman, 1997) is a screening instrument that provides a dimensional checklist-based assessment of positive and negative psychological functioning of children and adolescents. It is available for both parents and teachers reporting on 4-16 year olds, and as a self-report version for 11-16 year olds (Goodman, Renfrew, & Mullick, 2000). The 25 items are grouped into five sub-scales consisting of five items each, relating to Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention, Peer Problems and the positive attribute of Prosocial Behaviour. The four difficulty subscales are summed to give a Total Difficulties score. Also, an extended version of the SDQ includes items assessing whether the informant considers the child to have a problem and to what extent this problem impacts on various aspects of the child's life. The Prosocial and the Emotional subscales along with the impact supplement were used

in this study. Both parent-rated versions of the SDQ were used depending on the age of their child (P 2-4 and P 4-17).

Since SDQ has not been standardised in Greece, the decision on cut-offs was made upon other southern European countries. Although it was found that there are some slight differences between children in Italy, Spain and Portugal, they seem to share similar levels of conduct problems (Marzocchi *et al.*, 2004). The SDQ clinical cut-offs appear to be slightly lower for abnormality in southern European countries in comparison to central and northern countries of Europe. For instance, Britain's cut-off for abnormal behaviour are set to 5-10 on Emotional subscale (0-3 normal; 4 borderline), and 0-4 on the Prosocial subscale (6-10 normal; 5 borderline). On the other hand, in Spain, a child is classified as abnormal if they score between 4-10 on Emotional subscale (0-2 normal; 3 borderline), 0-3 on the Prosocial subscale (5-10 normal; 4 borderline), and 2-10 on the Impact subscale (Fajardo Bullon, Leon del Barco, Felipe Castano, & Ribeiro Dos Santos, 2012). This indicates that southern European children may have a higher level of difficulties than northern or central European children. As Greece is a mediterranean country, it may share similar cultural characteristics with the other southern countries, and so the Spanish cut-offs were applied to this study.

The *Conners Parent Rating Scale – Revised* (CPRS-R; Goyette, Conners, & Ulrich, 1978) is a parent report measure of behaviour problems and hyperactivity in children aged 3 to 17 years (Conners, 1989). The original CPRS (Conners, 1970) was modified in 1978 to form a 48-item scale. The CPRS-48 retained the strong psychometric properties of the original scale (Conners, 1989). The items on this scale cover the full range of common childhood problems and include hyperactivity, learning and conduct problems, and anxiety. Each item is rated on a 4-point Likert

scale. The CPRS-48 has demonstrated adequate levels of reliability and validity (Conners, 1989). Correlations between mother and father ratings ranged from .46 (Psychosomatic) to .57 (conduct Problem), with a correlation of .55 on the Hyperactivity Index. Item-total correlation coefficients ranged from .13 to .65 (Goyette, Conners, & Ulrich, 1978) and the *a* internal consistency coefficient was .92 for the Hyperactivity Index (Sandberg, Wieselberg, & Shaffer, 1980). Although the Hyperactivity Index has been found to confound ADHD symptoms with aggressive and oppositional/defiant behaviours (Barkley, 1988), it is one of the most widely used measures of ADHD and its associated difficulties. The CPRS has been previously applied in the Greek context (Roussos *et al.*, 1999).

4.3.7.2. Secondary Outcome: Parent Behaviour

A *background questionnaire* was used to collect participants' demographic and socioeconomic information. The questionnaire asks participants to respond to items regarding their family characteristics including marital status, child's age, number of children, their education level and employment status, including occupation and income level.

The *Parenting Scale- Revised* (PS; Arnold, O'Leary, Wolff, & Acker, 1993) is a 30-item questionnaire which measures dysfunctional discipline styles in parents by asking about the probability with which the parent uses particular discipline strategies. It yields a Total score and three recently revised factors (Rhoades & O'Leary, 2006): Laxness (permissive, inconsistent, discipline); Overreactivity (harsh, emotional, authoritarian discipline and irritability); and Hostility (use of verbal or physical force). One of the main reason why the PS was selected as the main parenting measure was because overreactive, coercive, and authoritarian or lax,

permissive and inconsistent parental discipline is associated with the development and maintenance of child behavioural problems (Lahey, Moffitt, & Caspi, 2003; Prinzie *et al.*, 2003; Patterson, Reid, & Dishion, 1992) as well as emotional difficulties (Rubin & Burgess, 2002). Additionally, evidence shows that it may be a valid measure for the inadequate discipline practices of parents of pre-school and school-aged children, may be helpful for identifying early families at risk of developing dysfunctional parenting practices and may be clinically useful as it can specify the parenting skills that most need to be improved for individual parents (Prinzie, Onghena, & Hellinckx, 2007). Lastly, it has been used in previous parenting research studies, especially in the Triple P studies, allowing for outcome comparisons.

In terms of its psychometric properties, the alphas corrected for scale length were as follows for mothers and fathers, respectively: Laxness (0.85 and 0.82), Overreactivity (0.80 and 0.80) and Hostility (0.78 and 0.83) showing that the scale has adequate internal consistency. Evidence has shown that the scale has been found to have good test-retest reliability, to discriminate between parents of clinic (Total score $M = 3.1$, $SD = .07$) and non-clinic children (Total score $M = 2.6$, $SD = .06$), and to correlate with self-report measures of child behaviour, marital discord and depressive symptoms, and also with observational measures of dysfunctional discipline and child behaviour (Arnold, O'Leary, Wolff, & Acker, 1993). For a clinical assessment of dysfunctional parenting, the recommended cut-off scores in Parenting scale are as follows: (a) for Total the clinical cut-off score is 3.2 and higher for mothers and fathers; (b), for Laxness the clinical cut-off score is 3.6 and higher (3.4 for fathers); (c) for Overreactivity the cut-off score is 4.0 and higher for mothers

(3.9 for fathers) and; (d) for Hostility is 2.4 and higher for mothers (3.5 for fathers) (Prinzle, 2004; Prinzle, Onghena, & Hellinckx, 2007).

The *Parenting Tasks Checklist* (PTC; Sanders & Woolley, 2005) is a 28-item tool used to assess task-specific self-efficacy. Parents rate how confident they are that they can deal with their child if they engage in difficult behaviour in common parenting situations. Confidence is rated on a scale from 0 (Certain I can't do it) to 100 (Certain I can do it). The PTC consists of two subscales, behavioural self-efficacy (confidence in dealing with specific child behaviours) and setting self-efficacy (confidence in dealing with difficult behaviour in different settings).

The *General Health Questionnaire* (GHQ-12; Goldberg & Williams, 1988) is the most extensively used screening instrument for common psychological distress. In its original version, it had 60 items (GHQ-60), which were reduced to 30 (GHQ-30), 28 (GHQ-28), 20 (GHQ-20) and 12 items (GHQ-12). The last version describes 12 mood states, six of which are positively phrased and six negatively phrased. Each item of the GHQ-12 has four possible response options. Analyses used during the development of the measure indicated that it has good content validity, internal consistency ranging from .77 to .93, and good reliability after using split-half and test-retest correlations (Goldberg & Huxley, 1980).

The *Client Satisfaction Questionnaire* (CSQ; Turner, Markie-Dadds, & Sanders, 1998) is a 13-item measure of consumer satisfaction with parent training programmes. The questionnaire assesses the quality of services provided; how well the programme met the parent's needs, increased the parents' skills and decreased the child's problem behaviours and whether the parent would recommend the programme to others. The measure derived is a composite score of programme satisfaction ratings on 7-point scales, ranging from 13 to 91. The CSQ also prompts

parents for general comments or suggestions about any aspect of the programme. The scale has a high internal consistency ($\alpha = .96$). The CSQ was distributed to parents in the intervention group at the beginning of the focus groups.

The *Parent Satisfaction Form* (PSF; Sanders *et al.*, 2008) contains 10 items relating to the parents' satisfaction with the seminars, including aspects such as the clarity of explanations provided, the usefulness of the Triple P tip sheet provided and likelihood of implementing the parenting advice received. For the first two items, parent satisfaction ratings are made on a 7-point scale (1 = Poor and 7 = Excellent) and for the other eight items, satisfaction ratings were made on a 7-point scale (1 = No, definitely not and 7 = Yes, definitely). The scale generates a minimum score of 10 and a maximum score of 70. Finally, the Parent Satisfaction Form also prompts parents for general comments or suggestions about any aspect of the programme. The PSF was distributed to parents in the intervention group after the completion of each seminar.

4.3.8 Analysis Strategy

All families were included in an intention-to-treat (ITT) analysis irrespective of uptake of intervention. These results were compared to those who adhered strictly to the protocol in a per protocol (PP) analysis. To check for demographic differences, baseline and attrition analyses were conducted.

The aim of the study was to assess whether data provided evidence of superiority of Seminar Series to control for child behavioural difficulties (primary objective) and parenting measures (secondary objective). The primary endpoint was change in child behavioural difficulties during the eight weeks and after six months of the study. Secondary endpoints included change in child emotional difficulties,

dysfunctional parenting, parental competence in dealing with specific child behaviours and in dealing with specific child behaviours in different settings, and parental distress.

Short-term and long-term intervention effects were calculated using change scores to partial out the effect of the pretest scores and focus on possible change following the intervention. This could not be achieved by using difference scores as the dependent variable in one-way ANOVA tests or independent t-tests, since analysing difference scores does not control for baseline imbalances (Dugard & Todman, 1995). Analysis of covariance (ANCOVA) adjusts each participant's post-intervention score for the baseline score without being affected by baseline differences. Baseline differences might occur through sampling error/chance fluctuations. As presented in baseline data analysis, there were significant differences in the primary child outcome, ECBI Intensity scale, as well as in socio-demographic variables such as parents' education level and number of children in their family. So groups did not start out on an equal footing with respect to these factors. To measure and remove the effects of any systematic differences between the groups on the socio-demographic factors, ANCOVAs and MANCOVAs are used to statistically equate groups (Vickers & Altman, 2001). MANCOVAs were run separately on each multidimensional questionnaire (two scales of ECBI, two scales of PTC), whereas ANCOVAs were conducted for unidimensional questionnaires (Conners Conduct Problem scale, Conners Anxiety scale; SDQ Emotional scale, SDQ Prosocial scale, four scales of PS, GHQ).

In these tests the independent variable was intervention allocation group. Change scores were used as the dependant variable instead of including baseline conduct scores as a separate covariate, thereby avoiding any addition power

reduction. Change scores were calculated by simple subtraction, such that a positive change score represented greater improvement in the desired therapeutic direction. Although there is extensive controversy about the use of change scores for the analysis of treatment effects in clinical trials, subtracting the follow-up scores from baseline scores removes stable individual differences between the subjects increasing the power of the statistical test (Austin, Manca, Zwarenstein, Juurlink, & Stanbrook, 2010b). It may also correct possible baseline differences between the allocation groups (Norman, 1989). So to control for baseline differences in the primary outcome, results present the treatment effect as the estimated mean group difference in change scores over assessment periods (baseline to post-intervention, and baseline to 6-month follow-up) controlling for socio-demographic differences on parental education and number of children in the family.

A conventional p value of .05, the effect sizes using Cohen's d , and the estimated effect at 95% confidence intervals were also presented in the results (Altman, 2005a,b; Bailar & Mosteller, 1988). The p value chosen indicates that there is a probability of 5% that the observed data could have arisen by chance when the interventions did not truly differ (Altman, 2000; Altman, Gore, Gardner, & Pocock, 2000; Lang & Secic, 2006). Confidence intervals for the estimated effect were included to illustrate a central range of uncertainty for the true estimated effect. The confidence interval was interpreted as the range of values for the treatment effect that is compatible with the observed data. A 95% confidence interval was used to show the range expected to include the true value in 95 of 100 similar studies (Altman, 2005b; Gardner & Altman, 1986).

For each of child and parenting outcome, results are reported as a summary of the outcome in each group including the number of participants, the estimated

marginal means, which were reported as mean scores adjusted for the covariates used, and with the standard error (Austin, Manca, Zwarenstein, Juurlink, & Stanbrook, 2010a).

The effect size, which is the contrast between the groups, is also indicated. For binary outcomes, the effect size is presented by the risk difference, while for continuous outcomes, it is the difference in means. A conventional 95% confidence interval presented for the contrast between groups denotes the precision of the estimates for the treatment effect (Altman, 2000; Lang & Secic, 2006). Confidence intervals are particularly valuable in relation to non-significant differences, for which they indicate that the result does not eliminate an important clinical difference. So, results are reported as p values in addition to confidence intervals (Bailar & Mosteller, 1988; Gardner & Altman, 1986).

The measure of effect size was not calculated using the conventional partial eta squared (η^2), because it tends to overestimate the variance explained, and is therefore a biased estimate of proportion of variance explained (Kirk, 1982; Tabachnick & Fidell, 1989). Instead, an alternative, unbiased measure, omega squared (ω^2), was used as a population estimate, instead of a sample estimate. An ω^2 of .01 indicates a small effect size, .06 a medium, and .14 a large one.

$$\omega^2 = \frac{SSQ_{effect} - df_{effect} MS_{error}}{SSQ_{total} + MS_{error}}$$

Significant effects were further explored using pairwise comparisons to determine whether dependent variables were significantly different between conditions. The significant p value was compared to the *a priori* alpha level after making Bonferroni adjustments to protect against inflating the Type I error rate.

Bonferroni adjustments were based on the number of pairwise comparisons conducted. The effect size (d) of the differences found was also indicated.

4.3.9 Ethical Requirements

This study received ethical clearance by the University of Oxford Central Research Ethics Committee (Reference No.: SSD/CUREC2/12-05). The British Psychological Society Guidelines (British Psychological Society, 2006) were used in designing this project. The informed consent process involved presenting a detailed written description of the purpose of the study. It specified who was conducting the research and how to contact him. All participants were offered a copy of the informed consent form. Tracking and contact procedures for scheduling follow-up assessments were explained. For parents who requested additional professional help, a list with psychological health services was provided.

The researcher and his assistant re-contacted parents who did not respond to their invitation for the Seminars through emails and phone calls. They were asked to give phone-consent. The phone-consent includes exactly the same stages as described above. Participants had to sign the consent form at their convenience (Appendix A).

4.4 Results

4.4.1 Participant Flow

During the first stage, enrolment, 153 parents showed an interest in taking part in the study and were evaluated for potential enrolment. From this group, 33 parents did not meet the inclusion criteria or they met the inclusion criteria but did not complete registration. Specifically, two parents were excluded as they were

living abroad, 23 parents did not submit the baseline measures and 11 parents submitted either the child measures or parent measures. It was quite common for parents to complete one of the two parts of the questionnaires, possibly because the online registration required participants to follow two separate links; this was due to technical restrictions in the design of the online questionnaires. Reminders through emails were sent to the participants to encourage them to complete their registration. If parents had no online access, the assessment booklet along with a pre-paid envelope was sent by post. In the end, 120 parents were eligible for initial randomisation.

In the second stage, initial randomisation (I), 80 parents were randomly allocated to the intervention group and 40 parents were randomly assigned to the control group based on an unequal randomisation schedule (2:1). During the first Seminar an additional 14 parents expressed their interest to participate and were included in the 'late entries' randomisation process (stage 3). From these parents, five did not meet the eligibility criteria, as three of them had children who did not match the age requirements and two parents did not have children but one was interested in attending the seminars because they knew someone who had a difficult child, and the other was a baby sitter. Also, three of them did not submit the baseline measures and two parents submitted only one part of the registration. Therefore, four parents were included in the late entries randomisation (II) process where three were randomly assigned to the intervention group and one to the control group.

In the fourth stage, allocation, 83 parents were randomly allocated to the intervention group and 41 parents to the control group. From the 83 parents, 42 attended all three seminars, 20 attended two seminars, 19 attended one seminar, and two parents did not show up. The main reasons for not attending all three seminars

were related to health issues, personal arrangements or clashes with family schedules at the time of the seminars. From the 41 parents who were allocated to the control group, one parent did not receive the treatment as allocated and attended two seminars even though she had not received an invitation.

At post-intervention, 62 parents (75%) in the intervention group and 27 (66%) in the control group remained in the study. From the 21 intervention parents who did not submit the post-assessment booklet, two parents attended all three seminars, nine parents attended two seminars, nine parents attended one seminar, and one parent did not attend any seminars. From the 14 control parents who did not submit the post-assessment booklet, 13 did not complete the post-assessment and one dropped out. At the 6-month follow-up 52 (63%) intervention parents and 27 (66%) control parents remained in the study. From the 31 intervention parents who did not submit the follow-up booklet, six parents attended all three seminars, 11 parents attended two seminars, 12 parents attended one seminar, and two parents did not attend any seminars. In the control group, 14 parents did not submit the follow-up assessment booklet. The participant flow chart by randomised group at the different stages of the study (ITT analysis) is presented in Figure 1.

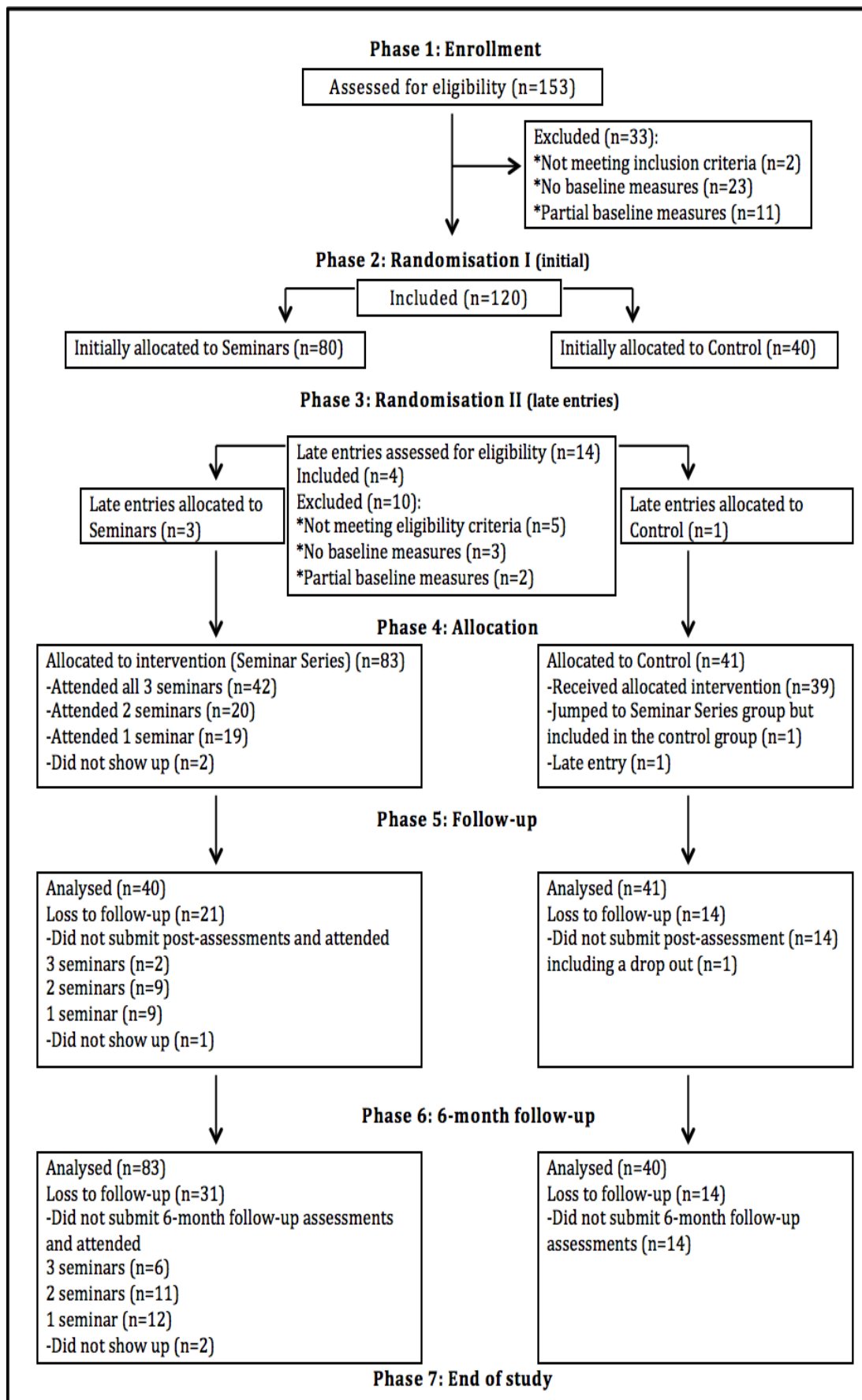


Figure 1. Flow of participants through the trial: Intention to Treat Analysis (ITT).

4.4.2 Baseline Data

Participants were randomly allocated between the intervention group (n=83, 67%) and control group (n=41, 33%). While proper random assignment prevents selection bias, it does not guarantee that the groups are equivalent at baseline. Any observed differences in baseline characteristics can be the result of chance rather than bias (Altman & Doré, 1990). Table 2 and Table 3 present the demographic characteristics of the participants and their children by randomised group. In statistical literature, there is a general agreement on the inappropriateness of performing a significant test to compare baseline differences between allocation groups in RCTs (Altman, 1985; Altman & Doré, 1990; Begg, 1990; Rothman, 1977; Senn, 1994). This is because it is known that any significance of the associations between the covariates and the treatment may be the result of chance, and so assessing the probability of the differences having occurred by chance would be unnecessary (Altman, 1985). The use of significant tests for baseline differences was followed, initially, to examine the process of randomisation itself. Secondly, despite the stratification into permuted blocks, drop out creates an imbalance in the number of participants in each allocation group. For this reason, significant tests for baseline differences were performed to adjust for chance imbalance in any uncontrolled prognostic factors of the outcome in regression model, thereby increasing the precision of the estimated treatment effect (Altman & Doré, 1991; Lavopi, Louis, Bailar, & Polansky, 1983; Senn, 1994, 1989).

A series of chi-squares were conducted on categorical variables, and independent sample t-tests on continuous variables to test for differences in socio-demographic variables between the allocation groups. Regarding chi-squares, the median of each categorical variable was used to convert all multinary categorical

variables to binary in order to increase the power of analyses. For 2*2 chi-squares, Pearson's chi-square was used unless cells had an expected count of less than 5. In these cases, Fisher's Exact Test was applied instead (Siegel & Castellan, 1988).

There was a significant difference between the two allocation groups on education and number of children in the family at baseline, as shown on Table 4. Specifically, there was a significant relationship between the allocation groups and the education of parents: $\chi^2 = (1, N=124) = 17.69, p < .001$. The association was of moderate strength: $\phi = .38$, and thus 14% of the variance in frequency counts of allocation groups can be explained by parents' education. It would seem there were more parents with a university degree in the Seminar group (92%), whilst 40% of the Control group had no university degree. Also, families allocated to the Seminar group had significantly fewer children in the family ($M=1.48, SD=0.65$) than families allocated to the control group ($M=1.80, SD=0.85$). The mean difference between allocation groups was -0.32 and the 95% confidence interval for the estimated population mean difference was between -0.62 and -0.01. The effect size was almost medium ($d = 0.43$). An independent t -test showed that the differences between allocation groups were significant ($t = -2.08, df=64.28, p = .041$, two-tailed). The same significant differences were found for per protocol analysis.

Table 2. *Characteristics of parents in the sample*

	Baseline		Loss to follow-up		Loss to 6-month follow-up	
	Intervention (n=83)	Control (n=41)	Intervention (n=21)	Control (n=14)	Intervention (n=31)	Control (n=14)
No (%) of Fathers	11 (13%)	8 (20%)	5 (24%)	5 (36%)	7 (23%)	5 (36%)
No (%) of Mothers	72 (87%)	33 (80%)	16 (76%)	9 (64%)	24 (77%)	9 (64%)
Age						
<30	1 (1%)	4 (10%)	1 (5%)	-	1 (3%)	-
31-40	53 (64%)	22 (54%)	13 (62%)	8 (57%)	20 (64%)	8 (57%)
41-50	27 (33%)	15 (36%)	7 (33%)	6 (43%)	10 (32%)	6 (43%)
>51	1 (1%)	-	-	-	-	-
Marital status						
Married	70 (84%)	39 (95%)	17 (81%)	13 (93%)	29 (94%)	14 (100%)
Single	3 (4%)	1 (2%)	1 (5%)	1 (7%)	-	-
Divorced	2 (2%)	1 (2%)	2 (9%)	-	-	-
Separated	5 (6%)	-	1 (5%)	-	1 (3%)	-
De facto	2 (2%)	-	-	-	1 (3%)	-

	Baseline		Loss to follow-up		Loss to 6-month follow-up	
	Intervention	Control	Intervention	Control	Intervention	Control
Education						
Senior Certificate	-	2 (5%)	-	-	-	-
Tertiary Certificate	6 (7%)	12 (29%)	2 (10%)	5 (36%)	3 (10%)	4 (29%)
Bachelor	50 (60%)	21 (51%)	11 (52%)	7 (50%)	18 (58%)	8 (57%)
Masters/Phd	26 (31%)	4 (10%)	8 (38%)	1 (7%)	10 (32%)	1 (7%)
Other	1 (1%)	2 (5%)	-	1 (7%)	-	1 (7%)
Occupation						
Full time	53 (64%)	22 (54%)	21 (51%)	9 (64%)	19 (61%)	10 (71%)
Part time	7 (8%)	7 (17%)	7 (18%)	3 (21%)	2 (7%)	2 (14%)
Home duties	10 (12%)	3 (7%)	3 (8%)	1 (7%)	5 (16%)	1 (7%)
Unemployed	11 (13%)	5 (12%)	5 (13%)	-	3 (10%)	-
Other	2 (2%)	4 (10%)	3 (8%)	1 (7%)	2 (7%)	1 (7%)
Monthly income						
Low	23 (28%)	12 (29%)	6 (28%)	2 (14%)	8 (26%)	1 (7%)
Middle	40 (48%)	16 (39%)	10 (48%)	7 (50%)	12 (39%)	7 (50%)
High	18 (22%)	12 (29%)	5 (24%)	5 (36%)	10 (32%)	6 (43%)
Number of children						
1	48 (58%)	18 (44%)	11 (52%)	8 (57%)	16 (52%)	7 (50%)
2 or more	35 (42%)	23 (56%)	10 (48%)	6 (43%)	15 (48%)	7 (50%)

Table 3. *Characteristics of children in the sample*

	Baseline		Loss to follow-up		Loss to 6-month follow-up	
	Intervention (n=83)	Control (n=41)	Intervention (n=21)	Control (n=14)	Intervention (n=31)	Control (n=14)
Child sex						
No (%) of Boys	49 (59%)	17 (41%)	11 (52%)	3 (21%)	21 (68%)	3 (21%)
No (%) of Girls	34 (41%)	24 (59%)	10 (48%)	11 (79%)	10 (22%)	11 (79%)
Child age						
No (%) of 2-5	51 (61%)	23 (56%)	13 (62%)	8 (57%)	18 (58%)	8 (57%)
No (%) of 6-12	32 (39%)	18 (44%)	8 (38%)	6 (43%)	13 (42%)	6 (43%)
Child ECBI intensity scale						
Below cut-off	57 (69%)	32 (78%)	16 (76%)	10 (71%)	22 (71%)	10 (71%)
Above cut-off	26 (31%)	9 (22%)	5 (24%)	4 (29%)	9 (29%)	4 (29%)

Table 4. *Demographic differences in categorical and continuous variables between allocation groups*

Variables	Difference	Sign. (2-tailed)	Effect size
Allocation group * parent's sex	$\chi^2 = (1, N=124) = 0.94$	$p = .332$	$\phi = .09$
Allocation group * parent's age	$\chi^2 = (1, N=123) = 0.13$	$p = .716$	$\phi = .03$
Allocation group * marital status	(25% of cells have expected count less than 5)	$p = .141$	$\phi = .14$
Allocation group * education	$\chi^2 = (1, N=124) = 17.69$	$p < .0001$	$\phi = .38$
Allocation group * occupation	$\chi^2 = (1, N=124) = 1.45$	$p = .228$	$\phi = .11$
Allocation group * monthly income	$\chi^2 = (1, N=121) = 1.00$	$p = .318$	$\phi = .09$
Number of children in the family	$t(64.28) = -2.08$	$p = .041$	$d = 0.43$
Allocation group * sex of child	$\chi^2 = (1, N=124) = 2.97$	$p = .085$	$\phi = .16$
Allocation group * age of child	$\chi^2 = (1, N=124) = 0.46$	$p = .495$	$\phi = .06$

Note. N (intervention)= 83, N (control)= 41

A series of independent t-tests was also carried out to test for any baseline differences on the main outcomes. In an intention-to-treat analysis (ITT), there was a significant difference between the two assignment groups in the primary outcome. Children's ECBI Intensity mean score was significantly higher in the intervention group ($M=118.35$, $SD=26.24$) than in the control group ($M=106.53$, $SD=26.29$): $t=2.34$, $df=122$, $p=.021$, two-tailed. The mean difference between allocation groups was 11.82 and the 95% confidence interval for the estimated population mean difference was between 1.82 and 21.83. The effect size was almost medium ($d=0.45$). There were also significant differences in children's Conners conduct disorder scale (intervention group, $M=32.27$, $SD=7.89$; control group, $M=28.80$, $SD=7.14$) and in parents' hostility subscale of the parenting scale (intervention group, $M=2.20$, $SD=1.31$; control group, $M=1.73$, $SD=0.89$). There were no other significant baseline differences on demographics or dependent variables (Table 5).

Table 5. *Baseline differences in dependent continuous variables between allocation groups*

	Equal variances	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Upper	Lower
ECBIIntensityT1	Assumed	0.12	.725	2.34	122	.021	11.82	5.05	1.82	21.83
ECBIProblemT1	Assumed	0.71	.401	0.54	122	.591	0.77	1.43	-2.05	3.59
ConnersCDT1	Assumed	1.34	.249	2.35	122	.020	3.46	0.67	0.55	6.38
ConnersEmotionalT1	Assumed	0.76	.385	0.74	122	.463	0.49	0.38	-0.83	1.82
SDQEmotionalT1	Assumed	1.85	.176	0.16	122	.871	0.06	0.38	-.678	.811
SDQProsocialT1	Assumed	0.56	.457	-1.78	122	.077	-0.68	0.27	-1.42	0.07
SDQImpactT1	Not assumed	8.11	.005	1.90	120.60	.060	0.52	0.13	-0.02	1.06
PSTotalT1	Assumed	2.68	.104	1.67	122	.097	0.21	0.23	-0.04	0.46
PSOverreactivityT1	Assumed	1.22	.271	1.30	122	.196	0.30	0.21	-0.16	0.75
PSLaxnessT1	Assumed	2.78	.098	0.29	122	.770	0.06	0.20	-0.35	0.47
PSHostilityT1	Not assumed	9.15	.003	2.30	111.03	.024	0.46	2.95	0.06	0.86
PTCSettingT1	Assumed	0.32	.571	-1.77	122	.080	-5.22	2.99	-11.06	0.63
PTCBehaviouralT1	Assumed	0.88	.350	-1.88	122	.062	-5.65	3.00	-11.59	0.29
GHQT1	Assumed	3.31	.071	-0.97	122	.332	-1.12	-1.12	1.15	0.20

Note. N (intervention)= 83, N (control)= 41

4.4.3 Numbers Analysed

The primary analysis of the study was “intention-to-treat” and involved all participants according to their original group assignment, regardless of their adherence to the entry criteria, the intervention they received, and/or subsequent withdrawal from intervention or deviation from the protocol (Fisher *et al.*, 1990). As recommended in the Consolidated Standards of Reporting Trials (CONSORT) guidelines on the reporting of RCTs (Hollis & Campbell, 1999), the number of participants in each group should be analysed by “intention-to-treat” principle (Moher, Schulz, Altman, & the CONSORT group, 2001). CONSORT states that any

deviations from random allocation and missing responses need to be fully reported as part of justifying an ITT approach.

ITT analysis is usually more pertinent for various reasons: firstly, the exclusion of noncompliant participants and drop outs from the statistical analyses might create important prognostic differences among treatment groups, affect the interpretation of the findings as subjects may be noncompliant or drop out from the study due to their response of treatment, and lastly reduce the sample size significantly, resulting in the reduction of statistical power (Lachin, 2000; Lee, Ellenberg, Hirtz, & Nelson, 1991; Lewis & Machin, 1993; Ten Have *et al.*, 2008; Wertz, 1995). Secondly, it does not take into account inferences based on arbitrary or ad hoc subgroup analysis in the study and demonstrates greater accountability for all participants enrolled in the trial, allowing for greater generalisability too (Fergusson, Aaron, Guyatt, & Hébert, 2002). For the reasons above, the estimate of treatment effect may be conservative because of dilution due to non-compliance; however, it is generally unbiased (Heritier, Gebiski, & Keech, 2003; Montori & Guyatt, 2001; Wertz, 1995). Overall, it evaluates the effectiveness of a treatment in terms of the public health benefits of administering the treatment to a community while taking into consideration the subsequent treatment non-adherence. In this trial, 124 participants were included in the ITT analysis, 83 from the intervention and 41 from the control group, as shown in Figure 1.

Other Non-ITT analyses were also carried out, such as “per protocol” analysis. “Per protocol” analysis is restricted to the subjects who fulfilled the protocol, in terms of eligibility, interventions, and outcome assessment. So, it limits the comparisons of the treatments to the “ideal” subjects, who adhered perfectly to the trial guidelines as specified in the protocol. In this trial, 66 participants were

included at post-intervention: 40 from the intervention group (i.e. from the 42 parents who attended all three seminars two did not submit post-assessments) and 26 from the control (i.e. from the 27 who submitted post-assessments one moved from the control group to the seminars group but did not attend all three seminars; the parent who was allocated to the control group at the second randomisation stage did not submit the post-assessment and so was excluded from the per protocol analyses). At follow-up, 60 participants were included at post-intervention: 35 from the intervention group (i.e. from the 42 parents who attended all three seminars six did not submit the follow-up assessments, and one submitted the follow-up assessment but had not submitted the post-assessment) and 25 from the control (i.e. from the 27 who submitted post-assessments one moved from the control group but did not attend all three seminars and one submitted the follow-up assessment but had not submitted the post-assessment) (Ten Have *et al.*, 2008) (Figure 2).

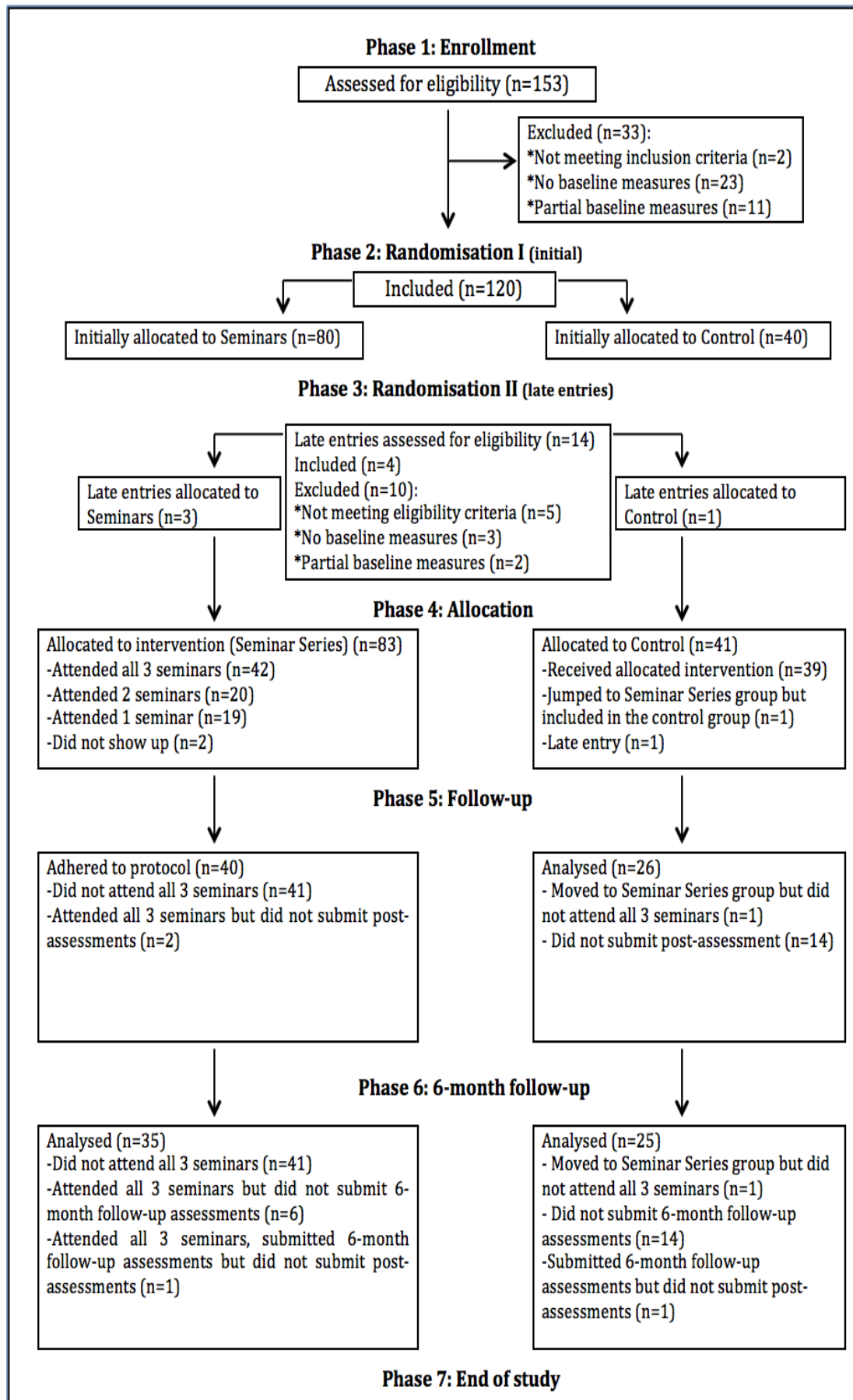


Figure 2. Flow of participants through the trial: Per Protocol Analysis.

4.4.3.1 Attrition

Based on the ITT analysis, a series of chi-squares and independent sample t-tests were conducted on categorical and continuous variables respectively to test differences in socio-demographic characteristics or dependent variables between parents who failed to complete the post-assessment measures and those who completed the assessment measures at baseline. The same analyses were run for parents who failed to complete the 6-month follow-up measures and those who completed the assessment measures at baseline.

At post-intervention, in the general sample, it was found that there was a difference between those who did not submit the post-assessment measures and those who did regarding parents' sex. Specifically, the relationship between attrition group and parents' sex was significant: $\chi^2(1, N=124)=7.02, p=.008$. The association was of small to moderate strength: $\phi=.24$, and thus parents' sex accounted for 6% of the variance between the groups in the whole sample. Therefore, it would seem that fathers were less likely to return the post-assessment booklets (29.4%), whereas mothers were more likely to submit it (89.9%). No other significant differences were found on demographic characteristics and dependent variables (Table 6).

At 6-month follow-up, in the general sample, it was found that there was a difference between those who did not submit the post-assessment measures and those who did regarding parents' sex. Specifically, the relationship between attrition group and parents' sex was significant: $\chi^2(1, N=124)=7.33, p=.007$. The association was of small to moderate strength: $\phi=.24$, and thus parents' sex accounted for 6% of the variance between the groups in the whole sample. Therefore, it would seem that fathers were less likely to return the follow-up assessment booklets (27.3%), whereas mothers were more likely to submit it (91.1%) No other significant differences were

found on demographic characteristics and dependent variables (Table 7).

To conclude, in the general sample, it seems that fathers were less likely to return any assessments. Although the differences were significant, the effect sizes were small as there was only a small sample of fathers ($n=19$) compared to mothers ($n=105$).

Table 6. *Differences between those who returned the post-assessment ($N=89$) and those who did not ($N=35$)*

Variables	Difference	Sign. (2-tailed)	Effect size
Attrition group * parent's sex	$\chi^2 = (1, N=124) = 7.02$	$p = .008$	$\phi = .24$
Attrition group * parent's age	$\chi^2 = (1, N=123) = 0.18$	$p = .667$	$\phi = .04$
Attrition group * marital status	(25% of cells have expected count less than 5)	$p = .531$	$\phi = .06$
Attrition group * education	$\chi^2 = (1, N=124) = 0.72$	$p = .396$	$\phi = .08$
Attrition group * occupation	$\chi^2 = (1, N=124) = 0.40$	$p = .525$	$\phi = .06$
Attrition group * monthly income	$\chi^2 = (1, N=121) = 1.20$	$p = .272$	$\phi = .10$
Number of children in the family	$t(122) = 0.52$	$p = .604$	$d = 0.11$
Attrition group * sex of child	$\chi^2 = (1, N=124) = 2.94$	$p = .086$	$\phi = .16$
Attrition group * age of child	$\chi^2 = (1, N=124) = 0.01$	$p = .941$	$\phi = .01$
ECBI Intensity T1_2	$t(119.81) = 0.41$	$p = .686$	$d = 0.18$
ECBI Problem T1_2	$t(53.89) = -0.58$	$p = .562$	$d = -0.12$
Conners CDT1_2	$t(50.00) = -0.06$	$p = .954$	$d = -0.01$
Conners Anxiety T1_2	$t(49.23) = -1.36$	$p = .181$	$d = -0.30$
SDQ emotional T1_2	$t(46.24) = -1.61$	$p = .114$	$d = -0.36$
SDQ prosocial T2_1	$t(49.84) = -1.32$	$p = .182$	$d = -0.30$
SDQ impact T1_2	$t(51.06) = -1.45$	$p = .121$	$d = -0.28$
PS total T1_2	$t(48.47) = -0.04$	$p = .968$	$d = -0.10$
PS overreactivity T1_2	$t(122) = 1.13$	$p = .112$	$d = 0.34$
PS laxness T1_2	$t(43.11) = -1.31$	$p = .198$	$d = -0.30$
PS hostility T1_2	$t(122) = -1.52$	$p = .130$	$d = -0.31$
PTC setting T2_1	$t(122) = 0.42$	$p = .673$	$d = 0.09$
PTC behavioural T2_1	$t(122) = 0.26$	$p = .796$	$d = 0.05$
GHQT1_2	$t(122) = -0.64$	$p = .525$	$d = -0.13$

Table 7. *Differences between those who returned the 6-month follow up assessment (N=79) and those who did not (N=45)*

Variables	Difference	Sign. (2-tailed)	Effect size
Attrition group * parent's sex	$\chi^2 = (1, N=124) = 7.33$	$p = .007$	$\phi = .24$
Attrition group * parent's age	$\chi^2 = (1, N=123) = 0.04$	$p = .846$	$\phi = .02$
Attrition group * marital status	$\chi^2 = (1, N=123) = 3.25$	$p = .071$	$\phi = .16$
Attrition group * education	$\chi^2 = (1, N=124) = 0.01$	$p = .913$	$\phi = .01$
Attrition group * occupation	$\chi^2 = (1, N=123) = 0.34$	$p = .557$	$\phi = .05$
Attrition group * monthly income	$\chi^2 = (1, N=121) = 1.28$	$p = .284$	$\phi = .10$
Number of children in the family	$t(122) = 0.45$	$p = .655$	$d = 0.08$
Attrition group * sex of child	$\chi^2 = (1, N=124) = 0.02$	$p = .883$	$\phi = .01$
Attrition group * age of child	$\chi^2 = (1, N=124) = 0.18$	$p = .670$	$\phi = .04$
ECBI IntensityT1_3	$t(122) = -0.45$	$p = .654$	$d = -0.08$
ECBI Problem T1_3	$t(73.00) = -1.06$	$p = .074$	$d = -0.30$
Conners CDT1_3	$t(77.89) = -1.56$	$p = .124$	$d = -0.30$
Conners AnxietyT1_3	$t(122) = -1.52$	$p = .122$	$d = -0.24$
SDQ emotionalT1_3	$t(65.84) = -1.46$	$p = .168$	$d = -0.17$
SDQ prosocialT3_1	$t(122) = -1.68$	$p = .114$	$d = -0.28$
SDQ impactT1_3	$t(66.23) = -1.53$	$p = .131$	$d = -0.24$
PS totalT1_3	$t(67.86) = 0.20$	$p = .842$	$d = 0.03$
PS overreactivityT1_3	$t(67.63) = 1.87$	$p = .060$	$d = 0.32$
PS laxnessT1_3	$t(68.38) = -0.40$	$p = .692$	$d = -0.08$
PS hostilityT1_3	$t(122) = -1.16$	$p = .247$	$d = -0.22$
PTC settingT3_1	$t(122) = -0.67$	$p = .503$	$d = -0.12$
PTC behaviouralT3_1	$t(122) = -1.84$	$p = .068$	$d = -0.17$
GHQT1_3	$t(122) = -0.90$	$p = .370$	$d = 0.18$

4.4.3.2 Participants who did not meet inclusion criteria before randomisation

In this study, there were 47 parents who were excluded prior to randomisation as they did not meet the eligibility criteria. Specifically, there were two parents who were living abroad, three whose children did not match the age requirements, and two parents who did not have children but one was interested in attending the seminars because they knew someone who had a difficult child and the other was a baby sitter. In addition, 26 parents did not submit the baseline assessments and 13

submitted either the child or the parenting assessments (Figure 1, pp.26).

The main characteristics of the 13 parents excluded before randomisation who submitted only one part of their assessments were further explored. Eleven parents submitted only the child assessment, whereas two submitted only the parenting one. Most of them were mothers (n=11, 85%), married (n=10, 77%), were working full-time (n=9, 69%), had one child (n=6, 54%) and had a boy (n=7, 54%). This sample seemed to match the selected sample based on these demographic characteristics. Also, the mean scores of all different child outcomes of this sample (eg. ECBI intensity scale: 110.82) were similar to the mean scores of the selected sample (eg. ECBI intensity scale: 114.50).

However, there were some demographic differences in terms of education, monthly income, and the age of the children. In this sample, there were fewer parents with a Bachelor degree (23% vs. 57% in the selected sample), more parents with low monthly income (64% vs. 29% in the selected sample), and more parents who had older children (54% vs. 40% in the selected sample). Also, the mean scores of the parenting measures derived from the two parents who submitted the assessments were higher in PS total, laxness and hostility scales, and lower in PTC setting and behavioural scales. However, due to the small sample size, no conclusion can be drawn based on these parenting measures. Overall, selection bias might have been introduced as parents who were excluded from the analyses before randomisation might not have been a representative sample of those who participated in the study.

4.4.4 Outcomes and Estimations

Exploratory data analysis.

An Exploratory Data Analysis was conducted to statistically test the distribution of the data for normality and steps were taken to manage cases with occasional missing data and the existence of outliers in the data set. Firstly, analyses were conducted using a pro-rating method; that is both with and without a mean imputation of occasional missing values in the data set to check whether there was any substantial effect on the interpretation of results with missing values imputed. The questionnaires were considered valid providing the participant had answered at least 70% of the items in the scale (Fichman & Cummings, 2003). If not, the data were excluded from the analyses. There were only a few participants ($n=22$) who missed at least an item in one of the questionnaires in the assessment booklets. On the rare occasion that an item was not filled in at any assessment point ($n=4$), missing values were replaced with the individual's mean scale score. Most of the times ($n=16$), there was an item in the post-assessment or follow-up missing, and therefore the last observation carried forward was applied. In few cases ($n=8$) where parents missed an item at baseline, this was replaced with the next available score (Altman, 2009).

There are several imputation techniques for handling missing data for those who did not submit their assessment booklets. Two of the most common methods of imputation are the single imputation and multiple imputation. Single imputation provides the dataset with a specific number in place of the missing data and includes techniques such as mean imputation, hot-deck imputation, last observation carried forward and predicted mean. Multiple imputation, which represents a random sample of missing values, was introduced by Rubin (1976) to overcome the limitations of single imputation which neither reflects the uncertainty about the predictions of the unknown missing values nor does it display variation as the estimated variances of

the model parameters are biased towards zero. By running the Little's Missing Completely at Random (MCAR) Test, the null hypothesis that the data were missing randomly was explored. As the p -value was greater than .05 ($p = .106$), the null hypothesis was accepted, and so the data were missing completely at random. In this study single imputation was chosen because around 20% of data was missing, which is considered a small amount of missing data (Little & Rubin, 2002). This method is used when there are few data missing, as it completes the data points well and the variance between the results of the analyses is not likely to be modified by any significant margin.

Common conservative methods of replacing missing values are the 'last observation carried forward' (LOCF) and group mean scores. As drop outs are more likely to be less successful in treatment effects using the group mean as a method of imputation would overestimate the treatment effects, while the LOCF is considered to be more conservative (Cole, 2008). Group median scores were used for imputation in the analyses due to the inclusion of an outlier in the analysis. In addition, to test the robustness of the results, statistical analyses were carried out using the LOCF method. All significant results of post-intervention and 6-month follow-up analyses using the group median were also significant using the LOCF (ECBI intensity scale, $p = .022$ and $p = .046$ respectively; PS Total scale, $p = .022$ at post-intervention; PS Overreactivity scale, $p = .029$ at post-intervention). It was also found that in contrast to the non-significant results in emotional difficulties as measured by Conners Anxiety scale using the group median, intervention children now improved significantly more than control children at post-intervention ($p = .047$) and at 6-month follow-up ($p = .043$).

The group median score at post-intervention for the noncompliant or drop

outs was used to impute values based on existing data to eliminate the effects of a severe outlier and skewed data presented in the dataset (High, 2000). The z -score of skewness was within the limits for normality ($1.95 < z_{\text{score}} < -1.95$) for change scores in ECBI Intensity scale for parents who submitted the post-intervention assessments ($z_{\text{skewness}}=0.19$, significant at $p < .05$) unlike the z -score of kurtosis ($z_{\text{kurtosis}}=3.49$, significant at $p < .05$). Contrary to the mean imputation, which is generally “pulled” in the direction of the outliers, the median imputation is influenced only by the most common cases but not all cases, and so it is less affected by outliers or skewed data (Aron, Aron, & Coups, 2009; Jönsson & Wohlin, 2006).

Secondly, as outliers increase, the probability of Type II error rates also increases, analyses were conducted both with and without the deletion of outliers on each variable of interest, and again the results were checked for any substantive differences when outliers were removed. Table 8 presents the mean scores of all outcomes along with the means scores after removing the outliers, and after replacing the extreme values with the highest (SDQ impact, PS hostility) or lowest (PCT setting) outlier according to the type of measure. The number of outliers/extreme values for each measure is also specified. Regarding the primary outcome, the ECBI intensity scale, there was one outlier (score of 191) but there were no extreme values. The mean score of ECBI intensity scale ($M=114.50$, $SD=26.73$) did not change significantly after removing the outlier ($M=113.88$, $SD=25.92$). The outlier was detected in the intervention group. The mean score of the intervention group on ECBI intensity scale ($M=118.35$, $SD=26.24$) did not change significantly after removing the outlier ($M=117.46$, $SD=25.12$). For these reasons, the outlier was included in the statistical analyses.

Concerning the distributions of the primary outcome, it was found that the skewness and kurtosis distribution of ECBI Intensity scores were both normal in the entire population ($t_{\text{skewness}}=0.30$, $t_{\text{kurtosis}}=0.08$, significant at $1.95 < t < -1.95$). In addition, as the sample size was greater than 50, the Kolmogorov-Smirnov test of normality was conducted (Corder & Foreman, 2009). It was found that ECBI Intensity scores were normally distributed ($p < .05$) supporting the previous findings on the distribution of the scores. Also, according to the Central Limit Theorem when the sample size of each group in a study exceeds 30, the sample means will be approximately normally distributed, and hence normal distribution theory can be used to obtain the appropriate p value for a test (Kallenberg, 1997; Mendenhall & Sincich, 1995). For this reason, parametric analyses were carried out on this data on the basis that sample size was sufficiently large ($N > 30$).

Table 8. *Baseline scores with/without outliers/extreme values in the entire sample (N=124)*

Measures	Sample							Without Outliers ⁿ	Extremes replaced ⁿ
	Mean (SD)	Skewness	Skew SE	z Skew	kurtosis	Kurt SE	Z Kurtosis		
ECBI intensity	114.50 (26.73)	.066	0.218	0.30*	.036	0.433	0.08*	113.88 (25.92) ¹	-
ECBI problem	8.57 (7.39)	.660	0.218	3.03	-.421	0.433	-0.97*	-	-
Conners CD	31.14 (7.80)	.589	0.218	2.70	-.235	0.433	-0.54*	-	-
Conners anxiety	14.36 (3.47)	.576	0.218	2.64	1.146	0.433	2.65	14.09 (3.07) ³	-
SDQ emotional	2.67 (1.96)	1.206	0.218	5.53	1.414	0.433	3.27	2.61 (1.85) ¹	-
SDQ prosocial	7.57 (1.98)	-.767	0.218	-3.52	.112	0.433	0.26*	7.62 (1.90) ¹	-
SDQ impact	0.93 (1.73)	2.536	0.218	11.63	7.675	0.433	17.73	0.51 (0.91) ⁹	0.88 (1.53) ³
PS total	3.23 (0.67)	.498	0.218	2.28	.528	0.433	1.22*	3.17 (0.54) ⁸	-
PS overreactivity	4.02 (1.19)	-.133	0.218	-0.61*	-.442	0.433	-1.02*	-	-
PS laxness	2.69 (1.08)	.703	0.218	3.21	.200	0.433	0.46*	3.92 (1.23) ⁶	-
PS hostility	2.05 (1.21)	1.595	0.218	7.32	2.504	0.433	5.78	1.76 (0.79) ¹¹	2.02 (1.13) ²
PCT setting	79.96 (15.47)	-1.768	0.218	-8.11	3.580	0.433	8.27	83.54 (9.51) ¹⁰	80.20 (14.66) ²
PCT behavioural	77.11 (15.57)	-1.400	0.218	-6.42	1.983	0.433	4.58	79.48 (12.00) ⁶	-
GHQ	13.29 (5.98)	.701	0.218	3.22	.053	0.433	0.12*	-	-

(n)number of outliers/extremes values

*-1.95 < z < 1.95 significant at $p < .05$

Programme attendance.

Of the 83 intervention parents 77 (93%) attended the first seminar, 63 (76%) attended the second seminar and 48 (58%) attended the third seminar. Also, 42 (52%) parents attended the whole Seminar Series, 20 (24%) parents attended two seminars and 19 (23%) parents attended only one seminar.

4.4.4.1 Primary analyses: Child outcomes

Parental reports of child behaviour difficulties at pre- and post-intervention and at 6-month follow-up were measured by the ECBI, two of Conners subscales and three subscales of SDQ. MANCOVAs and ANCOVAs were used to assess differences between groups on child behavioural and emotional difficulties controlling for parental education and number of children within the family at post-intervention and at 6-month follow-up (Table 9a,b,c).

*Behavioural difficulties.**ECBI Intensity scale*

At post-intervention in an ITT analysis, a significant effect for the allocation group was found in the change score of child behaviour on ECBI intensity scale $F(1,120)= 11.79, p= .001$. For the primary outcome, there was a reduction in disruptive behaviours in the intervention group, but an increase in the control group. The mean group difference in the change scores was 13.46 points (95% C.I. 5.70 to 21.23, $p= .001$, $ES= 0.74$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 11.30 (2.09) for the intervention group and -2.16 (3.12) for the control group. The allocation group

accounted for approximately 7% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2 = 0.07$).

The significant effect remained at 6-month follow-up, $F(1,120) = 4.87$, $p = .029$; the mean group difference in the change scores was 11.31 points (95% C.I. 1.16 to 21.47, $p = .029$, $ES = 0.47$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 9.68 (2.73) for the intervention group and -1.64 (4.08) for the control group. The allocation group accounted for approximately 2% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2 = 0.02$).

In the PP analysis, a significant effect for the allocation group was found in the change score of child behaviour on this scale $F(1,63) = 8.23$, $p = .006$. There was a reduction in disruptive behaviours in the intervention group, but an increase in the control group. The mean group difference in the change scores was 18.31 points (95% C.I. 5.55 to 31.07, $p = .006$, $ES = 0.58$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 15.02 (3.73) for the intervention group and -3.29 (4.75) for the control group. The allocation group accounted for approximately 8% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2 = 0.08$).

The significant effect remained at 6-month follow-up, $F(1,57) = 7.77$, $p = .007$; the mean group difference in the change scores was 18.68 points (95% C.I. 5.26 to 32.10, $p = .007$, $ES = 0.84$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 14.12 (4.02) for the intervention group and -4.56 (4.86) for the control group. The allocation group

accounted for approximately 7% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2 = 0.07$).

ECBI Problem scale

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the ECBI problem scale, $F(1,120) = 0.07$, $p = .788$. The mean group difference in the change scores was 0.33 points (95% C.I. -2.12 to 2.79, $p = .788$, ES = 0.06). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 1.04 (0.66) for the intervention group and 0.70 (0.99) for the control group. The allocation group accounted for approximately 2% of the total variance in children's ECBI problem change scores, controlling for the socio-demographic factors ($\omega^2 = 0.02$).

There remained no effect at 6-month follow-up, $F(1,120) = 1.45$, $p = .230$; the mean group difference in the change scores was 1.59 points on this scale (95% C.I. 1.02 to 4.21, $p = .230$, ES = 0.26). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 2.30 (0.70) for the intervention group and 0.70 (1.05) for the control group. The allocation group accounted for approximately 0.4% of the total variance in children's ECBI problem change scores, controlling for the socio-demographic factors ($\omega^2 = 0.004$).

In the PP analysis, no significant effect for the allocation group was found in the change score of child behaviour on this scale, $F(1,63) = 0.29$, $p = .594$. There was a reduction in the number of behaviours reported in both the intervention group and the control group. The mean group difference in the change scores was 0.80 points on the ECBI problem scale (95% C.I. -2.18 to 3.79, $p = .594$, ES = 0.15). The adjusted

means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.88 (0.87) for the intervention group and 0.08 (1.11) for the control group. The allocation group accounted for approximately 3% of the total variance in children's ECBI problem change scores, controlling for the socio-demographic factors ($\omega^2= 0.03$).

There remained no effect at 6-month follow-up, $F(1,57)= 3.60$, $p= .063$; the mean group difference in the change scores was 3.16 points on this scale (95% C.I. - 0.18 to 6.50, $p= .063$, ES= 0.57). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 2.10 (1.00) for the intervention group and -1.06 (1.21) for the control group. The allocation group accounted for approximately 2% of the total variance in children's ECBI problem change scores, controlling for the socio-demographic factors ($\omega^2= 0.02$).

Conners Conduct Problem

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the Conners Conduct Problem scale, $F(1,120)= 2.57$, $p= .111$. There remained no effect at 6-month follow-up, $F(1,120)= 0.66$, $p= .417$.

In the PP analysis, a significant effect for the allocation group was found in the change score of child behaviour on this scale, $F(1,62)= 5.36$, $p= .024$. There remained no effect at 6-month follow-up, $F(1,56)= 3.24$, $p= .077$.

SDQ Prosocial scale

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the SDQ

Prosocial scale, $F(1,120)= 0.39, p= .535$. There remained no effect at 6-month follow-up, $F(1,120)= 0.21, p= .648$.

In the PP analysis, no significant effect for the allocation group was found in the change score of prosocial skills on this scale, $F(1,62)= 0.01, p= .918$. There remained no effect at 6-month follow-up, $F(1,56)= 0.23, p= .632$.

Emotional difficulties.

Conners Anxiety

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the Conners Anxiety scale, $F(1,120)= 1.34, p= .249$. There remained no effect at 6-month follow-up, $F(1,120)= 0.98, p= .325$.

In the PP analysis, no significant effect for the allocation group was found in the change score of child behaviour on this scale, $F(1,62)= 3.64, p= .061$. There remained no effect at the 6-month follow-up, $F(1,56)= 2.27, p= .137$.

SDQ Emotional

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the SDQ Emotional scale, $F(1,120)= 0.004, p= .949$. There remained no effect at 6-month follow-up, $F(1,120)= 0.31, p= .577$.

In the PP analysis, no significant effect for the allocation group was found in the change score of emotional difficulties on this scale, $F(1,62)= 0.02, p= .878$. There remained no effect at 6-month follow-up, $F(1,56)= 0.75, p= .390$.

SDQ Impact Scores

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of child behaviour on the SDQ Impact scale, $F(1,120)= 0.24, p= .626$. There remained no effect at 6-month follow-up, $F(1,120)= 2.44, p= .121$.

In the PP analysis, no significant effect for the allocation group was found in the change score of impact scores on this scale, $F(1,62)= 0.53, p= .469$. There remained no effect at 6-month follow-up, $F(1,56)= 2.24, p= .140$.

Table 9a. *Summary of measures in children at baseline and post-intervention*

	Intention to treat				Per protocol (40 intervention, 26 control)	
	Estimated Mean Change (SD) scores		Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)	Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)
	Intervention (n=83)	Control (n=41)				
<i>Child measures</i>						
ECBI	11.30	-2.16	13.46 (5.70 to 21.23)	0.74	18.31 (5.55 to 31.07)	0.82
intensity	(2.09)	(3.12)	<i>p</i> =.001***	(0.31 to 1.16)	<i>p</i> =.006**	(0.25 to 1.39)
ECBI	1.04	0.70	0.33 (-2.12 to 2.79)	0.06	0.80 (-2.18 to 3.79)	0.15
problem	(0.66)	(0.99)	<i>p</i> =.788	(-0.37 to 0.48)	<i>p</i> =.594	(-0.42 to 0.72)
Conners	1.60	-0.52	2.13 (-0.50 to 4.75)	0.34	3.51 (0.48 to 6.54)	0.66
Conduct disorders	(0.71)	(1.06)	<i>p</i> =.111	(-0.08 to 0.77)	<i>p</i> =.024*	(0.09 to 1.23)
Conners	0.65	-0.20	0.85 (-0.60 to 2.29)	0.25	1.74 (-0.08 to 3.56)	0.55
anxiety	(0.39)	(0.58)	<i>p</i> =.249	(-0.18 to 0.67)	<i>p</i> =.061	(-0.03 to 1.12)
SDQ	0.53	0.55	-0.03 (-0.82 to 0.77)	-0.02	0.06 (-0.76 to 0.89)	0.04
Emotional	(0.22)	(0.32)	<i>p</i> =.949	(-0.44 to 0.41)	<i>p</i> =.878	(-0.52 to 0.61)
SDQ	0.46	0.22	0.24 (-0.52 to 1.00)	0.13	0.05 (-0.91 to 1.01)	0.03
Prosocial	(0.20)	(0.31)	<i>p</i> =.535	(-0.29 to 0.56)	<i>p</i> =.918	(-0.54 to 0.60)
SDQ	0.30	0.14	0.16 (-0.49 to 0.82)	0.10	0.24 (-0.42 to 0.89)	0.22
Impact	(0.18)	(0.26)	<i>p</i> =.626	(-0.32 to 0.53)	<i>p</i> =.469	(-0.39 to 0.82)

* Significant at *p*< .05, **Significant at *p*< .01, ***Significant at *p*< .001

Table 9b. *Summary of measures in children at baseline and 6-month follow-up*

	Intention to treat				Per protocol (35 intervention, 25 control)	
	Estimated Mean Change (SD) scores		Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)	Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)
	Intervention (n=83)	Control (n=41)				
<i>Child measures</i>						
ECBI	9.68	-1.64	11.31 (1.16 to 21.47)	0.47	18.68 (5.26 to 32.10)	0.84
Intensity	(2.73)	(4.08)	<i>p</i> =.029*	(0.05 to 0.90)	<i>p</i> =.007**	(0.24 to 1.44)
ECBI	2.30	0.70	1.59 (-1.02 to 4.21)	0.26	3.16 (-0.18 to 6.50)	0.57
Problem	(0.70)	(1.05)	<i>p</i> =.230	(-0.17 to 0.68)	<i>p</i> =.063	(-0.03 to 1.17)
Conners	1.68	0.45	1.23 (-1.76 to 4.21)	0.17	3.46 (-0.39 to 7.31)	0.54
Conduct disorders	(0.80)	(1.20)	<i>p</i> =.417	(-0.25 to 0.60)	<i>p</i> =.077	(-0.06 to 1.14)
Conners	0.34	-0.39	0.74 (-0.74 to 2.21)	0.21	1.42 (-0.46 to 3.30)	0.45
anxiety	(0.40)	(0.59)	<i>p</i> =.325	(-0.21 to 0.64)	<i>p</i> =.137	(-0.15 to 1.05)
SDQ	0.51	0.27	0.24 (-0.61 to 1.08)	0.12	0.42 (-0.55 to 1.38)	0.26
Emotional	(0.27)	(0.34)	<i>p</i> =.577	(-0.31 to 0.54)	<i>p</i> =.390	(-0.34 to 0.86)
SDQ	0.40	0.20	0.20 (-0.66 to 1.05)	0.10	0.03 (-1.23 to 1.29)	0.01
Prosocial	(0.23)	(0.34)	<i>p</i> =.648	(-0.33 to 0.52)	<i>p</i> =.632	(-0.60 to 0.63)
SDQ	0.62	0.17	0.45 (-0.12 to 1.03)	0.33	0.49 (-0.17 to 1.14)	0.45
Impact	(0.15)	(0.23)	<i>p</i> =.121	(-0.09 to 0.76)	<i>p</i> =.140	(-0.16 to 1.05)

* Significant at $p < .05$, **Significant at $p < .01$, ***Significant at $p < .001$

Table 9c. *Summary of measures in children over time*

	At post-intervention						At 6-month follow-up					
	ITT analysis			Per Protocol analysis			ITT analysis			Per Protocol analysis		
	Estimated Marginal Means (SD)			Estimated Marginal Means (SD)			Estimated Marginal Means (SD)			Estimated Marginal Means (SD)		
	Seminars (n=83)	Control (n=41)	Ω^2	Seminars (n=40)	Control (n=26)	Ω^2	Seminars (n=83)	Control (n=41)	Ω^2	Seminars (n=35)	Control (n=25)	Ω^2
ECBI	11.30	-2.16	0.07	15.02	-3.29	0.08	9.68	-1.64	0.02	14.12	-4.56	0.07
Intensity	(2.09)	(3.12)		(3.73)	(4.75)		(2.73)	(4.08)		(4.02)	(4.86)	
ECBI	1.04	0.70	0.02	0.88	0.08	0.03	2.30	0.70	0.004	2.10	-1.06	0.02
Problem	(0.66)	(0.99)		(0.87)	(1.11)		(0.70)	(1.05)		(1.00)	(1.21)	
Conners	1.60	-0.52	0.004	2.56	-0.94	0.05	1.68	0.45	0.01	2.19	-1.27	0.02
CD	(0.71)	(1.06)		(0.88)	(1.13)		(0.80)	(1.20)		(1.15)	(1.39)	
Conners	0.65	-0.20	0.01	0.84	-0.90	0.02	0.34	-0.39	0.01	0.22	-1.19	0.004
Anxiety	(0.39)	(0.58)		(0.53)	(0.68)		(0.40)	(0.59)		(0.56)	(0.68)	
SDQ	0.53	0.55	0.02	0.45	0.38	0.03	0.51	0.27	0.01	0.29	-0.13	0.02
Emotional	(0.22)	(0.32)		(0.24)	(0.31)		(0.23)	(0.34)		(0.29)	(0.35)	
SDQ	0.46	0.22	0.01	-0.10	-0.15	0.03	0.40	0.20	0.01	-0.21	-0.24	0.03
Prosocial	(0.20)	(0.31)		(0.28)	(0.36)		(0.23)	(0.34)		(0.37)	(0.46)	
SDQ	0.30	0.14	0.01	0.29	0.05	0.11	0.62	0.17	0.004	0.39	-0.10	0.004
Impact	(0.18)	(0.26)		(0.21)	(0.25)		(0.15)	(0.23)		(0.20)	(0.24)	

Impact of difficulties.

Regarding the effect of difficulties in areas such as emotions, concentration, behaviour or being able to get on with other people on a child's quality of life, their functioning, family, school and social life, the analysis of SDQ Impact scores at baseline demonstrated that: (1) there was a lower percentage of children reported having no difficulties in the intervention group (39%) than in control group (49%); (2) there was roughly an equal percentage of children reported to have minor difficulties in the intervention group (48%) and control group (44%) and; (3) there was twice as many children reported to have definite or severe difficulties in the intervention group (13%) than in the control group (7%). From the children who were reported to have difficulties, 40% of the children in the intervention group and 30% of the children in the control group had these problems for more than a year. It also seems that these difficulties remained at post-intervention as shown in Table 10a.

The characteristics of the children according to the impact of their difficulties are presented in Table 10b. There were more boys than girls across severity levels (minor, definite, severe) for difficulties in areas such as emotions, concentration, behaviour or being able to get on with other people on a child's quality of life, functioning, family, school and social life over time. Also, there were more young children (2-5 years old) having minor difficulties and more old ones (6-12 years old) having definite or severe difficulties over time.

The exact level of impact of child problems on the child's quality of life, functioning, family, school and social life according to parental pre-, post- and 6-month follow-up assessment reports in the whole sample and by randomised group is presented in Table 11a and Table 11b. It seems that regardless of the severity of

these difficulties or allocation group, according to parental perceptions children's difficulties associated with emotions, concentration, behaviour or being able to get on with other people greatly disrupted the child's and family's life, as well as areas such as life at home, school life, entertainment and friendship. Specifically, there was: (1) a great impact of these difficulties on the children's life (on average 87%) and their family (on average 88%); (2) a noticeable impact on everyday home life (on average 75%) and children's friendships (on average 70%) and; (3) quite an impact on school life (on average 56%) and entertainment (on average 55%) than in other areas over the different assessment periods.

In addition, it can be observed that there were more intervention parents who reported that their child's minor, definite or severe difficulties had an impact on the child's life and functioning, except from the entertainment area, at post-intervention. At follow-up, this percentage increased in two areas, friendship and entertainment, and decreased in all other areas. However, it was not lower than baseline percentages (Table 11a). Also, as it was expected, the lower the level of child's difficulties, the lower their impact on the child's life and functioning. In almost all the different areas, children's minor difficulties had mainly only a little impact, while children's definite difficulties had quite a lot of impact on the different areas of a child's everyday life and functioning (Table 11b).

Table 10a. *Severity and impact of child problems on the child's quality of life, functioning, family, school and social life based on SDQ parental reports in the whole sample over time (No (%) of children)*

Severity of difficulties	WHOLE SAMPLE (n=124)			SEMINARS (n=83)			CONTROL (n=41)		
	PRE-assessment	POST-assessment	FU-assessment	PRE-assessment	POST-assessment	FU-assessment	PRE-assessment	POST-assessment	FU-assessment
Clinical Categories									
Normal	84 (68%)	79 (64%)	101 (81%)	55 (66%)	50 (60%)	67 (81%)	29 (71%)	29 (71%)	34 (82%)
Borderline	10 (8%)	16 (13%)	10 (8%)	5 (6%)	10 (12%)	6 (7%)	5 (12%)	6 (15%)	4 (10%)
Abnormal	30 (24%)	29 (23%)	13 (11%)	23 (28%)	23 (28%)	10 (12%)	7 (17%)	6 (15%)	3 (8%)
Severity									
<i>No</i>	52 (42%)	53 (43%)	54 (43%)	32 (39%)	32 (39%)	32 (38%)	20 (49%)	21 (51%)	22 (52%)
<i>Minor</i>	58 (47%)	55 (44%)	58 (47%)	40 (48%)	39 (47%)	43 (52%)	18 (44%)	16 (39%)	15 (38%)
<i>Definite</i>	12 (10%)	14 (11%)	12 (10%)	10 (12%)	10 (12%)	8 (10%)	2 (5%)	4 (10%)	4 (10%)
<i>Severe</i>	2 (2%)	2 (2%)	-	1 (1%)	2 (2%)	-	1 (2%)	-	-
Chronicity									
<i>n/a</i>	52 (42%)	53 (43%)	54 (43%)	32 (39%)	32 (39%)	32 (39%)	20 (49%)	21 (51%)	22 (54%)
<i>< a month</i>	3 (2%)	1 (1%)	2 (2%)	2 (2%)	1 (1%)	2 (2%)	1 (2%)	-	-
<i>1-5 months</i>	6 (5%)	6 (5%)	12 (10%)	4 (5%)	5 (6%)	9 (11%)	2 (5%)	1 (2%)	3 (8%)
<i>6-12 months</i>	18 (15%)	15 (12%)	14 (11%)	12 (14%)	7 (8%)	8 (10%)	6 (15%)	8 (20%)	6 (15%)
<i>> a year</i>	45 (36%)	49 (40%)	42 (34%)	33 (40%)	38 (46%)	32 (38%)	12 (29%)	11 (27%)	10 (24%)

Table 10b. *Characteristics of children according to the impact of their difficulties as reported by their parents (No (%) of children)*

	NO			MINOR			DEFINITE			SEVERE		
	PRE (n=51)	POST (n=52)	FU (n=54)	PRE (n=59)	POST (n=56)	FU (n=58)	PRE (n=12)	POST (n=14)	FU (n=12)	PRE (n=2)	POST (n=2)	FU -
Sex												
<i>Boys</i>	25 (49%)	25 (48%)	29 (55%)	32 (57%)	31 (55%)	28 (48%)	7 (58%)	10 (71%)	9 (75%)	2 (100%)	2 (100%)	-
<i>Girls</i>	26 (51%)	27 (52%)	26 (48%)	26 (43%)	25 (44%)	30 (52%)	5 (42%)	4 (29%)	3 (25%)	-	-	-
Age of child												
<i>2-5</i>	35 (69%)	34 (65%)	38 (70%)	34 (59%)	34 (61%)	31 (53%)	4 (33%)	6 (43%)	5 (42%)	-	-	-
<i>6-12</i>	16 (31%)	18 (35%)	16 (30%)	24 (41%)	22 (39%)	27 (47%)	8 (67%)	8 (57%)	7 (58%)	2 (100%)	2 (100%)	-
Chronicity												
<i>< a month</i>				3 (5%)	1 (2%)	2 (3%)	-	-	-	-	-	-
<i>1-5 months</i>				6 (10%)	6 (11%)	11 (19%)	-	-	1 (8%)	-	-	-
<i>6-12 months</i>				16 (28%)	14 (25%)	13 (23%)	2 (17%)	1 (7%)	1 (8%)	-	-	-
<i>> a year</i>				33 (57%)	35 (62%)	32 (55%)	10 (83%)	13 (93%)	10 (84%)	2 (100%)	2 (100%)	-

Table 11a. *The impact of minor to severe difficulties in areas of the child's life and functioning (No (%) of children)*

Impact on...	WHOLE SAMPLE			SEMINAR GROUP			CONTROL GROUP		
	PRE (n=72)	POST (n=71)	FU (n=70)	PRE (n=51)	POST (n=51)	FU (n=51)	PRE (n=21)	POST (n=20)	FU (n=19)
Child									
<i>No impact</i>	14 (19%)	7 (10%)	8 (11%)	10 (20%)	4 (8%)	7 (14%)	4 (19%)	4 (20%)	1 (5%)
<i>Impact</i>	58 (81%)	64 (90%)	62 (89%)	41 (80%)	47 (92%)	44 (86%)	17 (81%)	16 (80%)	18 (95%)
Life at home									
<i>No impact</i>	24 (34%)	13 (18%)	19 (27%)	15 (29%)	7 (14%)	12 (24%)	9 (43%)	11 (55%)	7 (37%)
<i>Impact</i>	48 (66%)	58 (82%)	51 (78%)	36 (71%)	44 (86%)	39 (76%)	12 (57%)	9 (45%)	12 (63%)
Friendship									
<i>No impact</i>	26 (36%)	21 (31%)	19 (27%)	21 (41%)	17 (33%)	15 (29%)	5 (24%)	4 (20%)	4 (21%)
<i>Impact</i>	46 (64%)	50 (69%)	51 (78%)	30 (59%)	34 (67%)	36 (71%)	16 (76%)	16 (80%)	15 (79%)
School									
<i>No impact</i>	30 (42%)	30 (42%)	34 (49%)	23 (45%)	19 (37%)	26 (51%)	9 (43%)	11 (55%)	8 (42%)
<i>Impact</i>	42 (58%)	41 (58%)	36 (51%)	28 (55%)	32 (63%)	25 (49%)	12 (57%)	9 (45%)	11 (58%)
Entertainment									
<i>No impact</i>	34 (47%)	33 (46%)	29 (41%)	23 (45%)	24 (47%)	21 (41%)	11 (50%)	9 (45%)	8 (42%)
<i>Impact</i>	38 (53%)	38 (54%)	41 (59%)	28 (55%)	27 (53%)	30 (59%)	10 (50%)	11 (55%)	11 (58%)
Family									
<i>No impact</i>	9 (13%)	7 (10%)	9 (13%)	5 (10%)	2 (4%)	5 (10%)	4 (19%)	5 (25%)	4 (21%)
<i>Impact</i>	63 (87%)	64 (90%)	61 (87%)	46 (90%)	49 (96%)	46 (90%)	17 (81%)	15 (75%)	15 (79%)

Table 11b. *Impact of difficulties on each category of the child's quality of life, functioning, family, school and social life according to the child's overall difficulties level (No (%) of children).*

Impact on...	MINOR			DEFINITE			SEVERE		
	PRE (n=58)	POST (n=56)	FU (n=58)	PRE (n=12)	POST (n=14)	FU (n=12)	PRE (n=2)	POST (n=2)	FU (n=0)
Child									
<i>Not at all</i>	13 (22%)	7 (13%)	7 (12%)	1 (8%)	1 (7%)	1 (8%)	-	-	-
<i>Only a little</i>	31 (54%)	36 (64%)	38 (66%)	1 (8%)	4 (29%)	3 (25%)	1 (50%)	1 (50%)	-
<i>Quite a lot</i>	14 (24%)	13 (23%)	13 (22%)	7 (59%)	6 (43%)	6 (50%)	-	-	-
<i>A great deal</i>	-	-	-	3 (25%)	3 (21%)	2 (17%)	1 (50%)	1 (50%)	-
Life at home									
<i>Not at all</i>	23 (40%)	14 (41%)	19 (33%)	1 (8%)	4 (29%)	-	-	-	-
<i>Only a little</i>	24 (42%)	28 (41%)	24 (41%)	2 (17%)	8 (57%)	4 (34%)	1 (50%)	-	-
<i>Quite a lot</i>	11 (18%)	14 (18%)	15 (26%)	9 (75%)	2 (14%)	7 (58%)	-	1 (50%)	-
<i>A great deal</i>	-	-	-	-	-	1 (8%)	1 (50%)	1 (50%)	-
Friendship									
<i>Not at all</i>	25 (43%)	18 (32%)	16 (28%)	1 (8%)	4 (29%)	3 (25%)	-	-	-
<i>Only a little</i>	28 (48%)	29 (52%)	33 (57%)	3 (25%)	3 (21%)	1 (8%)	1 (50%)	-	-
<i>Quite a lot</i>	4 (7%)	8 (14%)	7 (12%)	7 (59%)	6 (43%)	5 (42%)	-	-	-
<i>A great deal</i>	1 (2%)	1 (2%)	2 (3%)	1 (8%)	1 (7%)	3 (25%)	1 (50%)	2 (100%)	-
School									
<i>Not at all</i>	26 (45%)	28 (50%)	32 (55%)	3 (25%)	3 (21%)	2 (17%)	1 (50%)	-	-
<i>Only a little</i>	21 (36%)	17 (30%)	19 (33%)	2 (17%)	4 (29%)	4 (33%)	-	-	-
<i>Quite a lot</i>	11 (19%)	10 (18%)	5 (9%)	5 (41%)	5 (36%)	5 (42%)	-	1 (50%)	-
<i>A great deal</i>	-	1 (2%)	2 (3%)	2 (17%)	2 (14%)	1 (8%)	1 (50%)	1 (50%)	-
Entertainment									
<i>Not at all</i>	32 (55%)	30 (54%)	26 (45%)	2 (17%)	4 (28%)	3 (25%)	-	-	-
<i>Only a little</i>	19 (33%)	18 (32%)	25 (43%)	2 (17%)	5 (36%)	3 (25%)	1 (50%)	-	-
<i>Quite a lot</i>	6 (10%)	7 (12%)	6 (10%)	7 (58%)	4 (28%)	4 (33%)	-	-	-
<i>A great deal</i>	1 (2%)	1 (2%)	1 (2%)	1 (8%)	1 (7%)	2 (17%)	1 (50%)	2 (100%)	-
Family									
<i>Not at all</i>	8 (14%)	7 (13%)	9 (16%)	-	-	-	1 (50%)	-	-
<i>Only a little</i>	35 (59%)	33 (59%)	32 (55%)	-	1 (7%)	1 (8)	-	-	-
<i>Quite a lot</i>	16 (27%)	16 (28%)	15 (26%)	9 (75%)	9 (79%)	10 (84%)	-	1 (50%)	-
<i>A great deal</i>	-	-	2 (3%)	3 (25%)	3 (14%)	1 (8%)	1 (50%)	1 (50%)	-

Clinical change.

Although there was a significant difference in the primary outcome, not all children scored below the clinical cut-off scores on the primary outcome, which is 132 on the ECBI Intensity scale, at post-assessment or follow-up period. At baseline, 31% (n=26) of intervention children and 22% of control children (n=9) were above the clinical range on ECBI intensity scale. At post-intervention, 54% (n=14) of intervention children and 44% of control children (n=4) moved from the clinical to non-clinical range. At 6-month follow-up, 65% (n=17) of intervention children and 11% of control children (n=1) moved from the clinical to the non-clinical range (Table 12).

Table 12. *Clinical change based on ECBI scales. Figures present No (%) of children*

	Above clinical cut-off on ECBI intensity scale (132)			Above clinical cut-off on ECBI problem scale (15)		
	Baseline	Post-intervention	6-month follow-up	Baseline	Post-intervention	6-month follow-up
Control (n=40)	9 (22%)	4 (44%)	1 (20%)	9 (22%)	3 (33%)	1 (11%)
Seminars (n=83)	26 (31%)	14 (54%)	17 (65%)	18 (22%)	6 (33%)	10 (56%)
3 Seminars (n=42)	16	8	10	10	2	5
2 Seminars (n=20)	6	5	5	5	4	4
1 Seminar (n=19)	4	1	2	3	-	1
0 Seminar (n=2)	-	-	-	-	-	-

Chi-square analyses were used to examine the number of participants moving from the clinical range at baseline to the non-clinical range at post-intervention and six months later based on their primary outcome scores. There was no significant difference on the number of children who moved from the clinical range to the normal range and those children who remained at the clinical range between the allocation groups at post-intervention (exact $p=.771$, 50% of the cells had an

expected frequency of less than 5, $n=35$). The relative risk was 1.21 (95% C.I. 0.61 to 3.01) and the relative difference was 0.09 (95% C.I. -0.27 to 0.42).

At 6-month follow-up this difference was significant (exact $p=.007$ for a two-tailed hypothesis, $V=0.48$, 50% of the cells had an expected frequency of less than 5). More children moved from the clinical range to the normal range in the Seminar group ($n=17$, 65%), and more children remained at the clinical range in the Control group ($n=8$, 89%). The relative risk was 5.88 (95% C.I. 1.43 to 33.33), and the relative difference was 0.54 (95% C.I. 0.17 to 0.75).

4.4.4.2 Secondary Analyses: Parent Outcomes

Parental reports of parenting skills at pre- and post-intervention and at 6-month follow-up were measured by the four PS scales, two PTC scales and GHQ. MANCOVAs and ANCOVAs were used to assess differences between groups on dysfunctional parenting, parental confidence and parental distress, controlling for parental education and number of children within the family at post-intervention and at 6-month follow-up (Table 13a,b,c).

Dysfunctional parenting practices.

PS: Total scale

At post-intervention in an ITT analysis, a significant effect for the allocation group was found in the change score of dysfunctional parenting practices on PS total scale, $F(1,120)= 5.51$, $p= .021$. There was a reduction in dysfunctional parenting practices in both groups. The mean group difference in the change scores was of 0.26 points (95% C.I. 0.04 to 0.49, $p= .021$, $ES= 0.49$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as

0.28 (0.06) for the intervention group and 0.02 (0.09) for the control group. The allocation group accounted for approximately 3% of the total variance in parents' PS total change scores, controlling for the socio-demographic factors ($\omega^2 = 0.03$).

The significant effect did not remain at 6-month follow-up, $F(1,120) = 3.48$, $p = .065$; the mean group difference in the change scores was of 0.22 points (95% C.I. -0.01 to 0.46, $p = .065$, ES = 0.39). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.22 (0.06) for the intervention group and -0.01 (0.10) for the control group. The allocation group accounted for approximately 4% of the total variance in parents' PS total change scores, controlling for the socio-demographic factors ($\omega^2 = 0.04$).

In the PP analysis, a significant effect for the allocation group was found in the change score of dysfunctional parenting practices on this scale, $F(1,62) = 6.37$, $p = .014$. There was a reduction in dysfunctional parenting practices in both the intervention group and the control group. The mean group difference in the change scores was of 0.29 points (95% C.I. 0.06 to 0.52, $p = .014$, ES = 0.72). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.32 (0.07) for the intervention group and 0.03 (0.08) for the control group. The allocation group accounted for approximately 6% of the total variance in parents' PS total change scores, controlling for the socio-demographic factors ($\omega^2 = 0.06$).

The significant effect did not remain at 6-month follow-up, $F(1,56) = 0.81$, $p = .371$; the mean group difference in the change scores was of 0.13 points (95% C.I. -0.16 to 0.43, $p = .371$, ES = 0.27). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.25 (0.09) for the intervention group and 0.12 (0.11) for the control group. The allocation group

accounted for approximately 2% of the total variance in parents' PS total change scores, controlling for the socio-demographic factors ($\omega^2 = 0.02$).

PS: Overreactivity scale

At post-intervention in an ITT analysis, a significant effect for the allocation group was found in the change score of overreactivity on PS scale, $F(1,120) = 4.26$, $p = .041$. There remained no significant effect at 6-month follow-up, $F(1,120) = 1.18$, $p = .279$.

In the PP analysis, a significant effect for the allocation group was found in the change score of overreactivity on this scale, $F(1,62) = 4.14$, $p = .046$. The significant effect did not remain at 6-month follow-up, $F(1,56) = 0.96$, $p = .330$.

PS: Laxness

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of laxness on PS scale, $F(1,120) = 1.91$, $p = .170$. There remained no effect at 6-month follow-up, $F(1,120) = 0.24$, $p = .623$.

In the PP analysis, no significant effect for the allocation group in the change score of laxness on this scale, $F(1,62) = 0.12$, $p = .736$. There remained no effect at 6-month follow-up, $F(1,56) = 0.39$, $p = .534$.

PS: Hostility

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score of hostility on PS scale, $F(1,120) = 0.57$, $p = .450$.

In the PP analysis, no significant effect for the allocation group was found in the change score of hostility on this scale, $F(1,62)= 0.05, p= .829$. There remained no effect at 6-month follow-up, $F(1,56)= 0.38, p= .538$.

Parenting confidence.

PTC: Setting scale

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score on PTC setting scale, $F(1,120)= 0.58, p= .450$. There remained no effect at 6-month follow-up, $F(1,120)= 1.29, p= .258$.

In the PP analysis, no significant effect for the allocation group was found in the change score on this subscale, $F(1,63)= 3.21, p= .078$. There remained no effect at 6-month follow-up, $F(1,57)= 3.26, p= .076$.

PTC: Behavioural scale

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score on PTC behavioural scale, $F(1,120)= 2.64, p= .107$. There remained no effect at 6-month follow-up, $F(1,120)= 1.50, p= .224$.

In the PP analysis, a significant effect for the allocation group was found in the change score on this subscale, $F(1,63)= 6.49, p= .013$. There remained no effect at 6-month follow-up, $F(1,57)= 2.44, p= .124$.

Parenting distress.

GHQ

At post-intervention in an ITT analysis, no significant effect for the allocation group was found in the change score on GHQ scale, $F(1,120)= 0.16, p= .686$. There remained no effect at 6-month follow-up, $F(1,120)= 0.003, p= .959$.

In the PP analysis, no significant effect for the allocation group was found in the change score on this scale, $F(1,62)= 0.04, p= .844$. There remained no effect at 6-month follow-up, $F(1,56)= 1.30, p= .259$.

Table 13a. *Summary of measures in parents' measures at baseline and post-intervention*

	Intention to treat				Per protocol (40 intervention, 26 control)	
	Estimated Mean Change (SD) scores		Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)	Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)
	Intervention (n=83)	Control (n=41)				
<i>Parenting measures</i>						
PS	0.28	0.02	0.26 (0.04 to 0.49)	0.49	0.29 (0.06 to 0.52)	0.72
Total	(0.06)	(0.09)	<i>p</i> =.021*	(0.08 to 0.92)	<i>p</i> =.014*	(0.15 to 1.30)
PS	0.20	-0.26	0.46 (0.02 to 0.90)	0.44	0.56 (-0.01 to 1.11)	0.58
overreactivity	(0.12)	(0.18)	<i>p</i> =.041*	(0.02 to 0.87)	<i>p</i> =.046*	(0.01 to 1.14)
PS	0.29	0.01	0.28 (-0.12 to 0.68)	0.28	-0.07 (-0.47 to 0.33)	-0.10
Laxness	(0.11)	(0.16)	<i>p</i> =.170	(-0.12 to 0.68)	<i>p</i> =.736	(-0.47 to 0.33)
PS	0.07	0.03	0.04 (-0.33 to 0.40)	0.05	0.18 (-0.35 to 0.70)	0.20
Hostility	(0.01)	(0.15)	<i>p</i> =.450	(-0.38 to 0.13)	<i>p</i> =.829	(-0.35 to 0.70)
PTC	6.76	4.63	2.12 (-3.42 to 7.67)	0.16	6.58 (-0.76 to 13.93)	0.51
setting	(1.49)	(2.23)	<i>p</i> =.450	(-0.26 to 0.59)	<i>p</i> =.078	(-0.06 to 1.08)
PTC	7.02	2.93	4.09 (-0.90 to 9.08)	0.35	7.15 (1.54 to 12.76)	0.73
behavioural	(1.34)	(2.00)	<i>p</i> =.107	(-0.08 to 0.77)	<i>p</i> =.013*	(0.16 to 1.30)
GHQ	3.18	3.66	-0.48 (-2.84 to 1.88)	-0.09	0.33 (-3.00 to 3.66)	0.06
	(0.63)	(0.95)	<i>p</i> =.686	(-0.51 to 0.34)	<i>p</i> =.844	(-0.51 to 0.63)

* Significant at $p < .05$, **Significant at $p < .01$, ***Significant at $p < .001$

Table 13b. *Summary of measures in parents' measures at baseline and 6-month follow-up*

	Intention to treat				Per protocol (35 intervention, 25 control)	
	Estimated Mean Change (SD) scores		Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)	Estimated mean group difference in change scores† (95% CI), P value	Effect size† (95% CI)
	Intervention (n=83)	Control (n=41)				
<i>Parenting measures</i>						
PS	0.22	-0.01	0.22 (-0.01 to 0.46)	0.39	0.13 (-0.16 to 0.43)	0.27
Total	(0.06)	(0.10)	<i>p</i> =.065	(-0.02 to 0.82)	<i>p</i> =.371	(-0.32 to 0.88)
PS	0.12	-0.12	0.24 (-0.19 to 0.66)	0.24	0.25 (-0.26 to 0.77)	0.29
overreactivity	(0.12)	(0.17)	<i>p</i> =.279	(-0.19 to 0.65)	<i>p</i> =.330	(-0.30 to 0.89)
PS	0.15	0.05	0.10 (-0.31 to 0.51)	0.10	-0.16 (-0.69 to 0.36)	-0.18
Laxness	(0.11)	(0.16)	<i>p</i> =.623	(-0.32 to 0.53)	<i>p</i> =.534	(-0.79 to 0.41)
PS	-0.04	-0.10	0.06 (-0.36 to 0.48)	0.06	0.18 (-0.41 to 0.78)	0.18
Hostility	(0.11)	(0.17)	<i>p</i> =.840	(-0.17 to 0.13)	<i>p</i> =.538	(-0.41 to 0.78)
PTC	5.68	2.49	3.19 (-2.37 to 8.74)	0.24	6.81 (-0.74 to 14.36)	0.54
setting	(1.49)	(2.23)	<i>p</i> =.258	(-0.18 to 0.67)	<i>p</i> =.076	(-0.06 to 1.14)
PTC	6.58	3.20	3.38 (-2.09 to 8.86)	0.26	5.34 (-1.50 to 12.18)	0.47
behavioural	(1.47)	(2.20)	<i>p</i> =.224	(-0.16 to 0.69)	<i>p</i> =.124	(-0.13 to 1.07)
GHQ	1.40	1.34	0.07 (-2.56 to 2.69)	0.01	1.93 (-1.46 to 5.31)	0.36
	(0.70)	(1.05)	<i>p</i> =.959	(-0.41 to 0.43)	<i>p</i> =.259	(-0.27 to 0.99)

* Significant at $p < .05$, **Significant at $p < .01$, ***Significant at $p < .001$

Table 13c. *Summary of measures in parents' measures over time*

	At post-intervention						At 6-month follow-up					
	ITT analysis			Per Protocol analysis			ITT analysis			Per Protocol analysis		
	Estimated Marginal Means (SD)			Estimated Marginal Means (SD)			Estimated Marginal Means (SD)			Estimated Marginal Means (SD)		
	Seminars (n=83)	Control (n=41)	Ω^2	Seminars (n=40)	Control (n=26)	Ω^2	Seminars (n=83)	Control (n=41)	Ω^2	Seminars (n=35)	Control (n=25)	Ω^2
PS Total	0.28 (0.06)	0.02 (0.09)	0.03	0.32 (0.07)	0.03 (0.08)	0.06	0.22 (0.06)	-0.01 (0.10)	0.04	0.25 (0.09)	0.12 (0.11)	0.02
PS Over-reactivity	0.20 (0.12)	-0.26 (0.18)	0.02	0.44 (0.16)	-0.12 (0.20)	0.03	0.12 (0.12)	-0.12 (0.17)	0.007	0.35 (0.16)	0.09 (0.19)	0.02
PS Laxness	0.29 (0.11)	0.01 (0.16)	0.001	0.03 (0.12)	0.10 (0.15)	0.03	0.15 (0.11)	0.05 (0.16)	0.01	0.04 (0.16)	0.21 (0.19)	0.03
PS Hostility	0.07 (0.01)	0.03 (0.15)	0.01	0.13 (0.15)	-0.05 (0.20)	0.03	-0.04 (0.11)	-0.10 (0.17)	0.02	-0.04 (0.18)	-0.22 (0.22)	0.03
PTC Setting	6.76 (1.49)	4.63 (2.23)	0.01	8.30 (2.15)	1.72 (2.74)	0.02	5.68 (1.49)	2.49 (2.23)	0.006	6.66 (2.26)	-0.15 (2.73)	0.02
PTC Behavioural	7.02 (1.34)	2.93 (2.00)	0.005	8.09 (1.64)	0.94 (2.09)	0.06	6.58 (1.47)	3.20 (2.20)	0.004	5.83 (2.05)	0.49 (2.48)	0.007
GHQ	3.18 (0.63)	3.66 (0.95)	0.01	3.75 (0.97)	3.42 (1.24)	0.03	1.40 (0.70)	1.34 (1.05)	0.02	1.34 (1.12)	-0.58 (1.26)	0.03

4.4.5 Exploratory Analyses

The aim of these analyses was to explore the treatment effects within subgroups of parents enrolled on this pilot RCT. The main focus of these analyses was: (1) to investigate the intervention effects within each allocation group; (2) to assess to what extent this prevention intervention was helpful for children having average or more severe behavioural difficulties; (3) to explore the effect of attending a different number of seminars on child and parenting measures and; (4) to examine whether attending a focus group session, which took place after the post-assessment, was associated with stronger intervention effects. The first three subgroup-hypotheses were tested in unplanned analyses, while the last one was tested in a pre-planned analysis.

Unlike pre-planned analyses where subgroup hypotheses are specified in advance and error rates can be, in principle, controlled, unplanned analyses are suggested by the data, require a thorough search for differential treatment effects by subgroups, and the error rates, if known, are more likely to be inflated. This is because first of all, there is an increased probability of type I error when the null hypothesis (H_0) is true. Secondly, there is decreased power due to small sample sizes, and in turn an increased type II error in individual subgroups when the experimental hypothesis (H_1) is true (Sun *et al.*, 2009). The only way to reduce both error rates for any given test is to increase the sample size. For all the reasons above, exploratory analyses do not commonly provide an adequate basis for reliable conclusions; this is why they should be interpreted cautiously and any conclusion is unlikely to be accepted. Despite the limitations, exploratory analyses are generally of secondary interest and effective solely for hypothesis generating.

To conclude, no causal inferences can be drawn from exploratory analyses because subgroups of the randomly allocated groups are included in these analyses. In addition, even if significant results are obtained, conclusions from statistical tests cannot be regarded as scientifically sound because of their low power. To validate any significant outcomes, larger studies are required for proper subgroup analyses or the subgroup hypotheses need to be tested separately in future studies.

4.4.5.1 Between Group Effects of the Intervention based on Clinical Categories

Initially the extent to which this preventive intervention could possibly be helpful for children who had average vs. more severe behavioural difficulties based on the primary outcome and for their parents was investigated (14a,b). ANCOVAs and MANCOVAs were run in an ITT analysis to assess the difference between allocation groups but separately for children who scored above the clinical cut-off scores in ECBI intensity scale at baseline, and for children who scored below it, controlling for demographic differences. After testing the assumption of homogeneity of regression slopes, it was found that the clinical status of child behavioural difficulties did not interact with group allocation, thereby minimising the possibility of detecting a moderation effect. No causal inferences can be drawn from these data though, because subgroups of the randomly allocated groups were included in these analyses.

After checking for differences between the two subgroups on demographic variables, it was found that parents' education was the only difference in all socio-demographic variables. Since 25% of the cells had an expected frequency of less than 5, the appropriate statistical test was Fisher's Exact Probability. This gave *exact* $p=.015$ for a two-tailed hypothesis. The value of Cramer's V was 0.46, showing that

the relationship between the subgroups and parents' education was moderate. It would seem that there were more parents with at least a university degree in the Seminar groups having children at a clinical range (85.2%) and more parents who did not have at least a university degree in the control (62.5%). After adjusting for parents' education, there were no significant differences in child and parenting measures between the two subgroups at post-intervention or at 6-month follow-up.

The same analysis was conducted to determine whether the intervention was beneficial for children whose score on the ECBI Intensity scale was below the clinical cut-off. Using an ITT analysis, children who scored below the clinical cut-off scores in ECBI intensity scale at baseline according to reports of parents in the intervention group were compared to children who were below the clinical range in the control group. After checking for differences between the two subgroups on demographic variables, it was found that the subgroups differed in terms of three variables: parents's education, child's sex and number of children within the family; (i) regarding parents' education, the relationship between the subgroups and parents' education was significant: $\chi^2(1, N=89)=11.51, p=.001$. The association was of small to moderate strength: $\phi=.36$ and thus parents' education accounted for 13% of the variance between the subgroups. It would seem that there were more parents with at least a university degree in the intervention group having children below the clinical range (72.6%) and more parents who did not have at least a university degree in the control (73.3%); (ii) regarding child' sex, the relationship between the subgroups and child's sex was significant: $\chi^2(1, N=89)=4.59, p=.032$. The association was of small to moderate strength: $\phi=.23$ and thus child's sex accounted for 6% of the variance between the subgroups. It would seem that there were more boys in the intervention group (76.2%) and more girls in the control (45.7%); (iii) the family of children in

the intervention subgroup had significantly less children within the intervention ($M=1.39$, $SD=0.59$) than the control subgroup ($M=1.87$, $SD=0.85$). The mean difference between allocation groups was -0.49 and the 95% confidence interval for the estimated population mean difference was between -0.83 and -0.14 . The effect size was medium ($d= 0.68$). An independent t -test showed that the differences between allocation groups were significant ($t= -2.84$, $df=48.80$, $p= .007$, two-tailed).

After adjusting for parents' education, child's sex and the number of children within the family, there were significant differences only in child measures between the two subgroups. At post-intervention in an ITT analysis, a significant effect for the allocation subgroup was found in the change score of child behaviour on ECBI intensity scale for children who scored below the clinical cut-off, $F(1,86)= 5.54$, $p= .021$. There was a reduction in disruptive behaviours in the intervention subgroup, but an increase in the control group. The difference did not remain significant at 6-month follow-up ($p= .344$).

Regarding the children who scored above the clinical cut-off, no significant effect for the allocation subgroup was found in the change score of child behaviour on ECBI intensity scale at post-intervention ($p= .062$) or at 6-month follow-up ($p= .145$). By looking at the effect sizes of the primary outcome at post-intervention, the effect size of the subgroup above the cut-off was greater ($d= 0.84$) than the effect size of the subgroup below cut-off ($d= 0.61$) where a significant effect was also found. For the children who scored above the clinical cut-off, as the adjusted means indicated, there was a difference on the change scores in child disruptive behaviour between the allocation groups: 19.44 (4.12) for the intervention group and 2.37 (7.41) for the control group; yet, this difference was not big enough to show a statistical significance. This might have been occurred due to the small sample sizes

of the subgroups, and in turn the low power to detect difference in the groups; had they been more children in these groups, the difference might have been significant.

Table 14a. *Effects of the Seminar Series on clinical and non-clinical subgroups at post-intervention*

	Below Clinical cut-off							Above Clinical cut-off						
	Mean (SD)		F- test	Sig.	ES	Ω^2	95% CI.	Mean (SD)		F- test	Sig.	ES	Ω^2	95% CI.
	Seminars (n=57)	Control (n=32)						Seminars (n=26)	Control (n=9)					
ECBI	7.31	-2.96	5.54	.021	0.61	0.03	1.59 to	19.44	2.37	3.73	.062	0.84	0.08	-0.93 to
Intensity	(2.36)	(3.35)					18.94	(4.12)	(7.41)					37.07
ECBI	0.03	-0.61	0.20	.658	0.11	-0.03	-2.23 to	3.18	5.38	0.79	.382	-0.39	-0.01	-7.28 to
Problem	(0.78)	(1.11)					3.51	(1.16)	(2.09)					2.87
Conners	-0.14	-1.13	0.52	.474	0.19	-0.03	-1.73 to	4.92	3.02	0.36	.551	0.26	-0.02	-4.53 to
CD	(0.74)	(1.05)					3.71	(1.47)	(2.64)					8.33
Conners	0.21	-0.35	0.35	.554	0.15	-0.03	-1.32 to	1.32	1.78	0.02	.896	0.06	-0.03	-2.12 to
Anxiety	(0.51)	(0.73)					2.44	(0.52)	(0.93)					2.42
SDQ	0.29	0.50	0.20	.655	-0.12	-0.03	-1.19 to	0.87	1.28	0.25	.624	-0.22	0.04	-2.13 to
Emotional	(0.26)	(0.37)					0.75	(0.39)	(0.70)					1.30
SDQ	0.46	0.12	0.60	.439	0.20	-0.03	-0.53 to	0.41	0.71	0.12	.730	-0.15	-0.03	-2.10 to
Prosocial	(0.24)	(0.34)					1.21	(0.41)	(0.74)					1.49
SDQ	0.35	0.001	0.94	.335	0.25	-0.02	-0.37 to	0.12	0.88	0.83	.370	-0.39	-0.03	-2.47 to
Impact	(0.20)	(0.28)					1.07	(0.39)	(0.70)					0.95
PS	0.20	0.04	1.51	.223	0.31	-0.02	-0.10 to	0.46	-0.004	2.73	.108	0.72	0.05	-0.11 to
Total	(0.07)	(0.10)					0.40	(0.13)	(0.23)					1.02
PSOver-	-0.001	-0.23	0.89	.348	0.24	-0.02	-0.26 to	0.60	-0.28	2.65	.113	0.71	0.05	-0.22 to
reactivity	(0.13)	(0.19)					0.72	(0.25)	(0.45)					1.96
PS	0.22	-0.03	1.18	.281	0.28	-0.02	-0.20 to	0.40	0.28	0.06	.814	0.11	-0.03	-0.87 to
Laxness	(0.12)	(0.17)					0.69	(0.23)	(0.41)					1.10
PS	-0.16	0.02	0.68	.411	-0.21	-0.03	-0.62 to	0.55	0.28	0.52	.476	-0.60	-0.01	-0.49 to
Hostility	(0.12)	(0.17)					0.26	(0.18)	(0.32)					1.04
PTC	2.98	4.93	0.46	.502	-0.17	-0.03	-7.73 to	13.84	7.06	1.01	.323	0.44	<0.001	-6.97 to
Setting	(1.57)	(2.23)					3.82	(3.15)	(5.66)					20.53
PTC	3.56	2.60	0.18	.674	0.11	-0.03	-3.55 to	13.79	6.43	1.21	.279	0.48	0.01	-6.26 to
Behavioural	(1.23)	(1.74)					5.46	(3.12)	(5.61)					20.99
GHQ	2.69	3.35	0.24	.629	-0.12	-0.03	-3.38 to	3.94	5.61	0.37	.550	-0.26	-0.02	-7.30 to
	(0.74)	(1.05)					2.06	(1.29)	(2.32)					3.96

Table 14b. *Effects of the Seminar Series on clinical and non-clinical subgroups at 6-month follow-up*

	Below Clinical cut-off							Above Clinical cut-off						
	Mean (SD)		F- test	Sig.	ES	Ω^2	95% CI.	Mean (SD)		F- test	Sig.	ES	Ω^2	95% CI.
	Seminars (n=57)	Control (n=32)						Seminars (n=26)	Control (n=9)					
ECBI Intensity	-0.04 (2.91)	-5.15 (4.12)	0.90	.344	0.25	-0.02	-5.57 to 15.78	29.06 (4.08)	15.99 (7.34)	2.23	.145	0.65	0.03	-4.78 to 30.92
ECBI Problem	1.28 (0.78)	-0.39 (1.11)	1.33	.252	0.30	-0.01	-1.21 to 4.54	4.53 (1.42)	4.47 (2.56)	0.00	.984	0.01	-0.03	-6.16 to 6.28
Conners CD	-0.16 (0.86)	-0.32 (1.22)	0.01	.917	0.03	-0.03	-2.99 to 3.32	5.46 (1.60)	3.79 (2.88)	0.23	.631	0.21	-0.02	-5.33 to 8.65
Conners Anxiety	-0.23 (0.51)	-0.32 (0.73)	0.01	.925	0.02	-0.03	-1.80 to 1.98	1.42 (0.57)	-0.10 (1.02)	1.55	.223	0.54	0.02	-0.97 to 4.00
SDQ Emotional	0.30 (0.26)	0.35 (0.36)	0.01	.911	-0.03	-0.04	-0.99 to 0.89	0.89 (0.50)	0.22 (0.90)	0.39	.538	0.27	-0.02	-1.52 to 2.85
SDQ Prosocial	0.20 (0.28)	-0.20 (0.40)	0.61	.435	0.20	-0.03	-0.62 to 1.43	0.72 (0.39)	1.92 (0.70)	2.10	.157	-0.63	0.03	-0.07 to 1.51
SDQ Impact	0.50 (0.17)	-0.01 (0.24)	2.58	.112	0.41	-0.01	-0.12 to 1.13	0.75 (0.33)	1.17 (0.60)	0.35	.559	-0.07	-0.02	-1.87 to 1.03
PS Total	0.10 (0.08)	0.03 (0.11)	0.25	.620	0.13	-0.03	-0.21 to 0.35	0.41 (0.12)	-0.03 (0.21)	3.16	.085	0.79	0.06	-0.07 to 0.96
PS Over-reactivity	-0.04 (0.14)	-0.06 (0.20)	0.01	.939	0.02	-0.03	-0.51 to 0.55	0.41 (0.19)	-0.19 (0.35)	2.09	.158	0.63	0.03	-0.24 to 1.44
PS Laxness	-0.03 (0.13)	-0.03 (0.18)	0.00	.991	0.003	-0.04	-0.47 to 0.47	0.51 (0.21)	0.38 (0.39)	0.08	.775	0.12	-0.03	-0.80 to 1.07
PS Hostility	-0.28 (0.12)	-0.10 (0.18)	0.63	.429	-0.20	-0.03	-0.64 to 0.27	0.42 (0.24)	0.22 (0.43)	0.15	.703	0.17	-0.03	-0.86 to 1.25
PTC Setting	1.73 (1.58)	2.75 (2.23)	0.12	.728	-0.09	-0.03	-6.80 to 4.71	13.00 (3.07)	5.41 (5.52)	1.33	.258	0.50	0.01	-5.82 to 21.00
PTC Behavioural	2.97 (1.51)	3.21 (2.14)	0.01	.930	0.02	-0.03	-5.78 to 5.29	13.53 (3.10)	5.97 (5.59)	1.29	.265	0.49	0.01	-6.01 to 21.13
GHQ	1.33 (0.87)	0.75 (1.24)	0.13	.723	0.09	-0.01	-2.63 to 3.78	1.47 (1.28)	3.64 (2.31)	0.62	.437	0.34	-0.01	-7.78 to 3.44

4.4.5.2 Association between Number of Seminars and Outcomes

All three seminars.

First of all, it is important to investigate the associations between attending the entire Seminar Series as a prevention option. For this reason, all parents who attended all three Seminars were compared to those parents in the control group. ANCOVAs and MANCOVAs were initially used to assess change differences between the groups (3 Seminars vs. Control) on all outcome measures, controlling for parents' education, child's sex and number of children in the family. No causal inferences can be drawn from these data though, as parents were not randomly allocated to attend the whole series.

Child measures.

ECBI Intensity scale

At post-intervention in an ITT analysis, a significant effect for these groups was found in the change score of child behaviour on ECBI intensity scale $F(2,77)=10.48$, $p=.002$. For the primary outcome, there was a reduction in disruptive behaviours in those who attended all three seminars, but an increase in the control group. The mean group difference in the change scores was 16.55 points (95% C.I. 6.37 to 26.73, $p=.002$, ES= 0.82). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 14.35 (3.34) for those who attended all three seminars and -2.20 (3.44) for the control group. The group accounted for approximately 8% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2=0.08$).

The significant effect remained at 6-month follow-up, $F(2,77)=5.66$, $p=.020$; the mean group difference in the change scores was 14.48 points (95% C.I.

2.36 to 26.61, $p = .020$, $ES = 0.60$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 14.03 (3.98) for those who attended all three seminars and -0.46 (4.08) for the control group. The group accounted for approximately 3% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2 = 0.03$).

Conners Conduct Disorder

At post-intervention in an ITT analysis, a significant effect for these groups was found in the change score of child behaviour on the Conners Conduct Problem scale, $F(2,77) = 5.41$, $p = .023$. There remained no effect at 6-month follow-up ($p = .307$).

Parenting measures.

PS: Total scale

At post-intervention in an ITT analysis, a significant effect for these groups was found in the change score of dysfunctional parenting practices on PS total scale, $F(2,77) = 7.83$, $p = .006$. There was a reduction in dysfunctional parenting practices in both those who attended all three seminars and the control group. The mean group difference in the change scores was 0.30 points (95% C.I. 0.09 to 0.51, $p = .006$, $ES = 0.42$). The adjusted means of change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.28 (0.06) for those who attended all three seminars and 0.02 (0.09) for the control group. The significant effect remained at 6-month follow-up, $F(2,77) = 4.05$, $p = .048$.

PS: Overreactivity scale

At post-intervention in an ITT analysis, a significant effect for these groups was found in the change score of overreactivity on PS scale, $F(2,77)= 5.88, p= .018$. There was a reduction in overreactivity in those who attended all three seminars, but an increase in the control group. The mean group difference in the change scores was of 0.60 points (95% C.I. 0.11 to 1.10, $p= .018$, $ES= 0.61$). The adjusted means change for the two groups on this scale were reported in the Estimated Marginal Means box as 0.40 (0.16) for those who attended all three seminars and -0.20 (0.17) for the control group. There remained no effect at 6-month follow-up ($p= .098$).

There were no significant change differences on Conners Anxiety, SDQ emotional, prosocial and impact scale, PS laxness and hostility scale, PTC setting and behaviour scale, and GHQ at post-intervention or at 6-month follow-up.

Dosage effects.

Compliance with treatment was also tested as a variable in order to determine whether the amount of seminars that parents received was related to efficacy of the Seminar Series. It may be that larger effects will be seen in families that attended more seminars, but it is also possible that the necessary or adequate dosage will vary from family to family, resulting in no clear relationship.

Pearson's correlations were used for initial exploration of the relationship between the number of seminars that parents in the intervention group attended and change in the primary child outcome. To calculate the confidence intervals of the correlations, the z-scores of the three variables were initially calculated, and then a linear regression analysis was run to find the upper and lower bound for the standardised coefficient, Beta. However, as SPSS provides approximate lower and upper bound confidence intervals for the standardised coefficients, a webpage

calculator ('Confidence Intervals for Correlations,' n. d.) was used for more accurate estimations.

Table 15 presents the results of the association between the number of seminars and the change in disruptive scores. The results showed that there was no significant relationship between the number of seminars and the amount of change in child disruptive behaviours at post-intervention ($r_{number\ of\ seminars} = .188, p = .088, C.I.: -.029\ to\ .405$) (webpage calculator 95% C.I.: -.029 to .388). Yet, there was a significant positive weak correlation between the number of seminars and the amount of change in child disruptive behaviours at 6-month follow-up ($r_{number\ of\ seminars} = .274, p = .012, C.I.: .062\ to\ .487$) (webpage calculator 95% C.I.: .062 to .462). This means that the higher the number of seminars that parents attended, the higher the change in child's disruptive behaviour at 6-month follow-up.

Table 15. *Inter-correlations between predictor and outcome*

		No of seminars	ECBI_intensity T1T2	ECBI_intensity T1T3
No of	Pearson Cor.	1	.188	.274*
seminars	Sig. (2-tailed)		.088	.012
	N	83	83	83

Specific number of seminars.

ANCOVAs and MANCOVAs were also used to assess change differences in all outcome measures between conditions (3 Seminars, 2 Seminars, 1 Seminar, Control), controlling for parents' education and number of children in the family (Table 16a,b). No causal inferences can be drawn from these data though, as parents were not randomly allocated to attend a specific number of seminars.

*Child measures.**ECBI Intensity scale*

At post-intervention in an ITT analysis, a significant effect for the number of seminars was found in the change score of child behaviour on ECBI intensity scale $F(3,116)= 5.21, p= .002$. For the primary outcome, there was a reduction in disruptive behaviours in those who attended one, two or three seminars, but an increase in the control group. The adjusted means of change for the groups on this scale were reported in the Estimated Marginal Means box as 14.77 (2.89) 3 Seminars, 10.00 (4.10) 2 Seminars, 4.20 (4.26) 1 Seminar, and 2.04 (3.12) Control group. The number of seminars accounted for approximately 8% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2= 0.08$).

To check whether the difference between the condition groups was significant, pairwise comparisons were conducted. The significance p value could not be compared to the *a priori* alpha level without making any adjustments to protect against inflating the Type I error rate. As there were six different comparisons the adjusted α' was now ($.05/6=0.0083$). There was a significant difference between those who attended all three seminars and the control group as the obtained α' (.001) was smaller than the adjusted α' (.0083). The mean group difference in the change scores was of 16.81 points (95% C.I. 4.92 to 28.71, $p= .001$, ES= 5.60). The probability that the observed difference between the adjusted means would have occurred by chance, if the null hypothesis was true, was less than 1%. The effect size was large ($d= 5.60$). So, after controlling for socio-demographic variables, children whose parents attended all three seminars were reported to have significantly lower behavioural difficulties than children in the control group.

The significant effect remained at 6-month follow-up, $F(3,116)= 4.33$, $p=.006$. The adjusted means of change for the groups on this scale were reported in the Estimated Marginal Means box as 15.21 (3.72) 3 Seminars, 9.68 (5.28) 2 Seminars, -3.51 (5.48) 1 Seminar, and -1.41 (4.03) Control group. The number of seminars accounted for approximately 7% of the total variance in children's ECBI Intensity change scores, controlling for the socio-demographic factors ($\omega^2= 0.07$). However, after adjusting the *a priori* alpha level ($.05/6=0.0083$), there were no significant differences in the change scores at the six different comparisons.

Conners Conduct Disorders

At post-intervention in an ITT analysis, a significant effect for the number of seminars was found in the change score of child behaviour on Conners CD scale $F(3,116)= 3.61$, $p=.016$. There was a reduction in disruptive behaviours in those who attended two or three seminars, but an increase in those who attended one seminar or were in the control group. After adjusting the *a priori* alpha level ($.05/6=0.0083$), there were no significant differences in the change scores at the six different comparisons. The significant effect remained at 6-month follow-up, $F(3,116)= 4.53$, $p=.005$. After adjusting the *a priori* alpha level ($.05/6=0.0083$), there were no significant differences in the change scores at the six different comparisons.

SDQ Prosocial scale

At post-intervention in an ITT analysis, a significant effect for the number of seminars was found in the change score in child behaviour on SDQ prosocial scale $F(3,116)= 3.58$, $p=.016$. After adjusting the *a priori* alpha level ($.05/6=0.0083$),

there were no significant differences in the change scores at the six different comparisons. There remained no effect at 6-month follow-up ($p = .113$).

SDQ Impact scale

At post-intervention in an ITT analysis, a significant effect for the number of seminars was found in the change score of child behaviour on SDQ impact scale $F(3,116) = 4.56$, $p = .013$. After adjusting the *a priori* alpha level ($.05/6 = 0.0083$), there were no significant differences in the change scores at the six different comparisons. There remained no effect at 6-month follow-up ($p = .460$).

Parenting measures.

PS: Overreactivity scale

At post-intervention in an ITT analysis, a significant effect for the number of seminars was found in the change score of dysfunctional parenting practices on PS overreactivity scale, $F(3,116) = 2.61$, $p = .055$. After adjusting the *a priori* alpha level ($.05/6 = 0.0083$), there were no significant differences in the change scores at the six different comparisons. A significant effect for the number of seminars remained in the change score of dysfunctional parenting practices on PS overreactivity scale at 6-month follow-up, $F(3,116) = 3.86$, $p = .011$. After adjusting the *a priori* alpha level ($.05/6 = 0.0083$), there were no significant differences in the change scores at the six different comparisons.

There were no significant change differences on Conners Anxiety, SDQ emotional, PS total, laxness and hostility scale, PTC setting and behavioural scale, and GHQ at post-intervention or at 6-month follow-up.

Table 16a. *Estimated change scores in children and parents at post-intervention based on the number of seminars that parents attended*

	Estimated Mean (SE) scores				F	Sign.
	3 Seminars (n=42)	2 Seminars (n=20)	1 Seminar (n=19)	Control (n=41)		
Child measures						
ECBI intensity	14.77(2.89)	10.00 (4.10)	4.20 (4.26)	-2.04 (3.12)	5.21	.002**
ECBI problem	1.01 (0.92)	1.50 (1.31)	-0.12 (1.36)	0.79 (1.00)	0.27	.849
Conners CD	2.61 (0.95)	2.24 (1.35)	-2.12 (1.40)	-0.45 (1.03)	3.61	.016*
Conners Anxiety	1.11 (0.54)	0.97 (0.76)	-0.85 (0.79)	-0.18 (0.58)	1.96	.124
SDQ Emotional	0.53 (0.30)	0.44 (0.42)	0.20 (0.44)	1.56 (0.39)	0.20	.899
SDQ Prosocial	0.10 (0.28)	1.56 (0.39)	0.13 (0.41)	0.23 (0.30)	3.58	.016*
SDQ Impact	0.33 (0.27)	0.37 (0.35)	-	0.22 (0.28)	4.56	.013*
Parenting measures						
PS total	0.32 (0.08)	0.28 (0.12)	0.14 (0.12)	0.03 (0.09)	2.07	.108
PS overreactivity	0.41 (0.16)	-0.05 (0.23)	-0.06 (0.24)	-0.25 (0.18)	2.61	.05*
PS laxness	0.08 (0.15)	0.66 (0.21)	0.28 (0.22)	0.03 (0.16)	2.25	.087
PS hostility	0.10 (0.14)	0.13 (0.20)	-0.05 (0.20)	0.04 (0.15)	0.97	.411
PTC setting	4.68 (2.27)	3.98 (3.09)	8.61 (2.97)	7.03 (2.09)	0.59	.620
PTC behavioural	3.01 (2.04)	4.51 (2.77)	8.20 (2.67)	7.29 (1.88)	1.12	.344
GHQ	4.09 (0.88)	3.09 (1.25)	1.61 (1.30)	3.63 (0.95)	0.90	.445

*p<.05, **p<.01, ***p<.001

Table 16b. *Estimated change scores in children and parents at 6-month follow-up based on the number of seminars that parents attended*

	Estimated Mean scores (SE)				F	Sign.
	3 Seminars (n=42)	2 Seminars (n=20)	1 Seminar (n=19)	Control (n=41)		
Child measures						
ECBI intensity	15.21(3.72)	9.68 (5.28)	-3.51 (5.48)	-1.41 (4.03)	4.33	.006**
ECBI problem	2.48 (0.98)	2.98 (1.39)	0.44 (1.44)	0.82 (1.06)	0.98	.407
Conners CD	2.54 (1.05)	3.57 (1.50)	-3.39 (1.55)	0.58 (1.03)	1.14	.005**
Conners Anxiety	0.65 (0.55)	0.92 (0.78)	-1.26 (0.80)	0.35 (0.59)	1.19	.132
SDQ Emotional	0.30 (0.31)	0.88 (0.44)	0.13 (0.46)	0.33 (0.34)	0.56	.644
SDQ Prosocial	0.18 (0.32)	1.34 (0.45)	-0.04 (0.47)	0.21 (0.34)	2.03	.113
SDQ Impact	0.57 (0.21)	0.73 (0.30)	0.27 (0.31)	0.21 (0.23)	0.87	.460
Parenting measures						
PS total	0.30 (0.09)	0.18 (0.12)	-0.01 (0.13)	0.01 (0.09)	2.32	.079
PS overreactivity	0.41 (0.16)	-0.19 (0.22)	-0.38 (0.22)	-0.11 (0.16)	3.86	.011*
PS laxness	0.11 (0.15)	0.45 (0.22)	-0.12 (0.22)	0.07 (0.16)	1.24	.299
PS hostility	0.06 (0.16)	-0.02 (0.23)	-0.29 (0.24)	-0.08 (0.17)	0.53	.664
PTC setting	6.16 (2.09)	7.72 (2.97)	1.88 (3.08)	2.60 (2.26)	1.08	.362
PTC behavioural	6.11 (2.06)	9.37 (2.92)	3.77 (3.03)	3.37 (2.23)	1.02	.388
GHQ	2.71 (0.98)	0.92 (1.38)	-0.83 (1.44)	1.29 (1.06)	1.50	.217

*p<.05, **p<.01, ***p<.001

4.4.5.3 Association between Focus Group Session and Outcomes

As the focus group seminar was organised after the post-assessment, it might have boosted the effects of the Seminar Series, thereby having a potentially therapeutic impact. Focus groups could have been organised to run after the 6-month follow-up assessment period in order to determine the separate effect of the Seminar Series. Yet, there would be the risk of an increased drop out rate of participants in the experimental condition as it would be almost nine months after they started the brief intervention programme. Besides, it was unknown whether this intervention would be effective in the Greek context, and so it seemed more important to first establish the short-term effect of the Seminar Series as well as to investigate parental perceptions about positive parenting than examining long-term effects of the intervention.

To examine the impact of the focus group session on parenting, the differences in parenting measures between the participants who attended the focus group session ($n=47$) and those who did not ($n=37$) were analysed. In this analysis one control parent who jumped to the intervention group and attended the focus group session was included too. No causal inferences can be drawn from these data though, as parents were not randomly allocated to attend the focus group session. A series of chi-squares were conducted on categorical variables, and independent sample t -tests on continuous variables to test for differences in socio-demographic variables between the two groups of intervention parents. There were no significant differences on any demographic variables between those who attended the focus group session and those who did not.

A series of independent t -tests were conducted to examine whether there were significant differences in parenting measures between the two groups of intervention

parents. The differences in PS total scale between the two groups were not significant ($t = -0.01$, $df=82$, $p=.994$, two-tailed). The differences in PS overreactivity scale between the two groups were not significant ($t = 1.66$, $df=59.14$, $p=.102$, two-tailed). The differences in PS laxness scale between the two groups were not significant ($t = -0.01$, $df=82$, $p=.996$, two-tailed). The differences in PS hostility scale between the two groups were not significant ($t = -0.58$, $df=82$, $p=.561$, two-tailed). The differences in PTC setting scale between the two groups were not significant ($t = 1.27$, $df=82$, $p=.208$, two-tailed). The differences in PTC behavioural scale between the two groups were not significant ($t = 0.03$, $df=82$, $p=.973$, two-tailed). The differences in GHQ between the two groups were not significant ($t = 1.46$, $df=82$, $p=.255$, two-tailed). The results showed that there were no significant differences in the amount of change in any parenting measure between those who attended the focus group session and those who did not. No significant differences on any parenting measures were observed, and so it seems that change scores in parenting measures at 6-month follow-up were not associated with attendance of the focus group session.

4.4.6 Client Satisfaction

Analyses were also run on parents' responses on their level of satisfaction with the intervention they received as measured by the Client Satisfaction Questionnaire at post-intervention. All intervention parents were asked to complete the questionnaire online or it was sent to them if they had no internet access. 57% of parents ($n=47$) completed or returned this questionnaire. The mean and standard deviations of Greek parents' scores on each of the thirteen items in comparison with the scores of Australian parents' (Sanders *et al.*, 2008) are provided in Table 17.

Parents scored above the mean on all items on a 7-point rating scale. Parents scored above 5 on 12 of 13 items. The items with the highest scores were parents' overall satisfaction with the programme they received ($M=6.21$, $SD=0.86$) and the quality of the service provided ($M=6.13$, $SD=0.85$). There was also a high score on re-contacting Triple P in case they needed help ($M=5.96$, $SD=1.16$), which indicates an overall high level of parental satisfaction with the Seminar Series. Parents seemed to receive the type of help they wanted from the programme and be satisfied with the amount of help they received. Parents perceived the Seminar Series was helpful to deal effectively with child difficulties as well as family problems and to help them develop skills that could be applied to other members of the family. Of all items, the lowest mean score was given on the item "*Do you think your relationship with your partner has been improved by the programme?*" which was not the main aim of the intervention ($M=3.87$, $SD=1.33$).

In comparison with the results from the Australian study, Greek parents seemed to be more satisfied with the Seminar Series than the Australian parents. Australian parents were recruited the same way as Greek parents, were also living in urban areas but were randomised differently to parents of this study. Australian parents were randomly allocated to either an introductory seminar exposure that included only the first seminar, or full seminar exposure that included all three seminars, while a non-randomised sample was also added to these conditions. Parents who attended either one seminar or the full seminar series completed the client satisfaction questionnaire in the Australian study, whereas in our study all parents, regardless of the number of seminars they attended, received the form. Although the number of Australian parents who completed the questionnaire was not specified, based on the note made in the article that "*only parents in condition 1 and*

2 completed CSQ”, 47 parents filled in the form; 26 parents in condition 1 (introductory seminar exposure) (n=26, 55%) and 21 parents in condition 2 (full seminar exposure) (n=21, 45%). In the present study, from the parents who returned the questionnaire, 34 (73%) had attended all three seminars, 10 (21%) had attended two seminars and 3 (6%) had attended one seminar.

In addition, parents rated their level of satisfaction relating to particular features of each seminar including its quality and usefulness, participants’ interest on the topics covered, the clarity of explanations and examples provided by the presenter, the usefulness of the Triple P tip sheet provided and the likelihood of implementing the parenting advice received. Parents completed the Parent Satisfaction Form at the end of each seminar. The mean and standard deviations of parents’ scores on each of the ten items for each of the three seminars in comparison with the scores of Australian parents’ (Sanders *et al.*, 2008) are provided in Table 18 and 20.

Parents scored above the mean on all items on a 7-point rating scale. Parents scored above 5 on average in 29 out of 30 items of all seminars. The mean score of each of the 10 items for the whole Seminar Series was above 5, and above 6 in 7 out of 10 items, indicating high levels of satisfaction with each seminar and with the Seminar Series as a whole. The lowest score was given on the Seminar 2 on the item “*Did the seminar provide sufficient opportunities for questions?*” ($M=4.21$, $SD=1.72$). As previously mentioned, time delays caused by other seminars, which took place before the Triple P seminar, left no time for questions due to closing time of the bookshop. For this reason, further questions on the seminar were answered mainly outside the bookshop, which was inconvenient for the majority of the parents.

In the Australian study, 1,156 parents’ perceptions of the quality and

usefulness of the Seminar Series were explored. Apart from the demographic characteristics of the participants, there was no other information on recruitment or the seminar logistics including the location, setting, time or presenters. Greek parents scored Seminar 1 and 3 higher than Australian parents, whereas Australian parents scored Seminar 2 higher than Greek parents. As previously mentioned, low scores on Seminar 2 by Greek parents might have been due to external burdens.

Table 17. *Greek and Australian parents' satisfaction scores with Seminar Series as an intervention*

Client Satisfaction Questionnaire (items)	Mean scores (SD) (1-7 scale)	
	Greek parents (n=47)	Australian parents (n=47)
<i>"How would you rate the quality of the service you and your child received?"</i>	6.13 (0.85)	4.87 (1.25)
<i>"Did you receive the type of help you wanted from the programme?"</i>	5.57 (1.16)	4.82 (1.12)
<i>"To what extent has the programme met your child's needs?"</i>	5.32 (0.91)	4.56 (1.41)
<i>"To what extent has the programme met your needs?"</i>	5.38 (0.85)	4.65 (1.32)
<i>"How satisfied were you with the amount of help you and your child received?"</i>	5.62 (0.90)	4.69 (1.24)
<i>"Has the programme helped you to deal more effectively with your child's behaviour?"</i>	5.47 (0.95)	5.18 (1.21)
<i>"Has the programme helped you to deal more effectively with problems that arise in your family?"</i>	5.19 (1.19)	5.11 (1.28)
<i>"Do you think your relationship with your partner has been improved by the programme?"</i>	3.87 (1.33)	4.17 (1.32)
<i>"In an overall sense, how satisfied are you with the programme you and your child received?"</i>	6.21 (0.86)	4.94 (1.12)
<i>"If you needed help again, would you come back to Triple P?"</i>	5.96 (1.16)	5.14 (1.41)
<i>"Has the programme helped you to develop skills that can be applied to other family members?"</i>	5.30 (1.18)	5.05 (1.25)
<i>"In your opinion, how is your child's behaviour at this point?"</i>	5.57 (0.62)	5.14 (1.00)
<i>"How would you describe your feelings at this point about your child's progress?"</i>	5.72 (0.74)	5.42 (1.14)

Table 18. *Greek and Australian parents' satisfaction scores with each seminar of the Seminar Series*

Parent Satisfaction Form (items) (1-7 scale)		Mean scores (SD)		
		Seminar 1	Seminar 2	Seminar 3
	Greek parents (G) Australian parents (A)	n=77 n=841	n=63 n=438	n=48 n=274
<i>How would you rate the quality of the seminar presentation?</i>	G A	6.02 (0.77) 5.59 (1.07)	5.75 (0.99) 5.86 (0.94)	6.22 (0.64) 5.86 (0.84)
<i>Did the seminar provide sufficient opportunities for questions?</i>	G A	6.12 (1.09) 5.82 (1.17)	4.21 (1.72) 6.12 (1.04)	6.49 (0.59) 6.19 (0.91)
<i>Was the seminar interesting to you?</i>	G A	6.36 (0.95) 5.92 (1.08)	6.33 (0.76) 6.07 (0.99)	6.56 (0.62) 6.13 (0.84)
<i>Did the presenter use clear examples to illustrate parenting issues?</i>	G A	6.23 (0.73) 5.92 (1.03)	5.85 (0.92) 6.13 (0.98)	6.22 (0.88) 6.06 (1.00)
<i>Did the presenter provide clear explanations?</i>	G A	6.11 (0.84) 5.92 (1.03)	5.81 (0.95) 6.13 (0.95)	6.22 (0.82) 6.06 (0.88)
<i>Did you gain sufficient knowledge or information to be able to implement the parenting advice you heard about?</i>	G A	5.72 (1.00) 5.71 (1.10)	5.60 (0.89) 6.03 (0.92)	5.98 (0.75) 6.04 (0.85)
<i>Overall, how would you rate the content of the seminar?</i>	G A	6.03 (0.71) 5.83 (1.01)	6.06 (0.85) 6.10 (0.89)	6.33 (0.60) 6.10 (0.82)
<i>Was the seminar helpful in gaining an understanding of what you can do to help your child learn new skills and behaviour?</i>	G A	5.70 (1.08) 5.80 (1.09)	5.75 (0.91) 6.09 (0.91)	6.04 (0.71) 6.12 (0.81)
<i>Was the parenting tip sheet you received useful?</i>	G A	6.22 (0.86) 6.07 (0.95)	6.31 (0.67) 6.31 (0.78)	6.47 (0.63) 6.31 (0.76)
<i>Do you intend to implement the parenting advice you received?</i>	G A	6.03 (0.91) 6.36 (0.87)	6.23 (0.70) 6.46 (0.82)	6.20 (0.73) 6.43 (0.75)

4.4.7 Harms

No adverse effects were found at this study.

4.5 Discussion

In this RCT, the Triple P Seminar Series appears to help prevent behavioural difficulties in pre- and school-aged children in a general sample of parents in Greece. Using an ITT analysis and after controlling for demographic and baseline differences between the allocation groups, the results of medium effect sizes, medium population effect sizes and significant differences at post-intervention indicated that this brief parenting intervention had a positive effect on child behavioural difficulties in the intervention group. These differences remained at the 6-month follow-up. Similar results were obtained in the per protocol analysis. The Seminar Series also affected parenting as dysfunctional parenting practices and overreactivity were reduced more in the intervention parents at post-intervention; however, these differences were not sustained six months later. Similar results were found in the per protocol analysis. These findings suggest that changes in child behaviour may be mediated through improving dysfunctional parenting practices at least in the short term.

4.5.1. Meaning and Implications of the Study

There were significant changes on the primary outcome, and on some parenting scales. Despite baseline imbalances on the primary outcome, non-significant changes on some measures, and a slight decrease in power from 80% to 75% due to unequal randomisation, medium effects were produced on both child and parenting measures at post-intervention. Changes in child disruptive behaviour were also maintained over a period of six months. These findings suggest that the Triple P Seminar Series can be delivered as a primary prevention strategy for child behavioural difficulties.

There are several possible reasons to explain the non-significant child and

parent outcomes at post-intervention and follow-up. Interestingly, there were significant changes in children's behaviour as measured by ECBI intensity scale, while there were no significant differences in the amount of disruptive behaviours that were perceived as a problem by the parents as rated by the ECBI problem scale. This is surprising because generally the two ECBI subscales are highly correlated ($r = .75$) with each other as shown in both the original standardisation and the re-standardisation data for children (Colvin, Eyberg, & Adams, 1999; Robinson, Eyberg, & Ross, 1980). Parents' scores at these scales were also strongly correlated at the different time points; $r_{T1}(124) = .63, p < .001$, $r_{T2}(124) = .72, p < .001$, $r_{T3}(123) = .72, p < .001$. The ECBI intensity scale is rated in a 7-point scale, while problem scale utilises a 2-point scale (Yes, No) making the intensity scale more sensitive to change. What is more, the problem scale uses the items 'Yes' and 'No', which may detect problems that the parents see as more permanent, whereas the intensity scale explores how often behaviours occur, which may be seen to change more easily over time. So, a disruptive behaviour may occur less often but it may still remain as an issue for the child's functioning, the family or the child's social environment. This is supported by the fact that the impact of the child's difficulties, as measured by the SDQ, remained quite stable in areas such as emotions, concentration, behaviour or being able to get on with other people on the child's quality of life, functioning, family, school and social life over time.

Despite the fact that one of the three seminars was based on the development of resilience in children, the Seminar Series does not appear to prevent child emotional difficulties. Parents may find it difficult to notice a change in their child's emotions because of the rapid changes in the development of emotions, especially in the early years as well as the inability for young children to clearly communicate

about emotions. It may also be hard for parents to differentiate developmentally normal emotions, such as fear, crying, shyness, from more severe and prolonged anxiety that might be seen as a disorder, and recognise them as problematic (Gardner & Shaw, 2008). To establish these difficulties as clinical problems, factors such as persistence, and their impact on the child's and family's well-being, should be taken into account (Campbell, 2002).

Regarding parenting practices, the Seminar Series promotes positive parenting and its practices and it seemed that dysfunctional practices reduced significantly more in intervention parents; yet, this effect did not remain six months later. Having no further contact with the practitioner, parents could rely on the tip sheets to review the strategies. Parents received one tip sheet containing the material from the presentation at the end of each seminar, but may forget or discard what they learned, may not review the material, or may start being less consistent when applying the strategies. There is speculation that the Seminar Series modifies parental cognitions temporarily, but parents may revert to preconceptions in the long term or be inconsistent with their practices. It could also be that parents needed more time to assimilate the practices as it was the first time that positive parenting was introduced in the Greek context. For this reason, it might be useful to provide additional, brief, booster sessions at least six months after the parents have completed the Seminar Series.

The hypothesis that parents attending the seminars would report a significant increase in parental confidence in dealing with difficult behaviours and in different settings was not supported. Parents who attended the seminars showed a positive change in both parental self-confidence scales at post-intervention and 6-month follow-up; yet, there were no significant differences between the two allocation

groups. This may be due to ceiling effects, as the mean scores of parents' levels of confidence at both scales were within the normal range at baseline.

Regarding parental distress, it was hypothesised that parents attending the seminars would report a significant decrease in common distress than control parents. This hypothesis was not supported as both groups showed a similar positive change at post-intervention; specifically, control parents showed a slightly higher increase than intervention parents. However, both groups showed a significant decrease in common distress at 6-month follow-up. Therefore, the Seminar Series does not seem to have any impact on parents' level of distress. This could be explained by the fact that the main scope of the Seminar Series is not managing parental distress, this is why it does not provide explicit strategies to assist parents in coping with daily life stress. Using the median as a cut-off point for common distress, it was found that in the entire sample half of the parents (49%) scored above the median score on common distress (score of 12 on GHQ) at baseline (Altman & Royston, 2006). Daily life stress seems to have been constantly present in Greece over the last couple of years due to the austerity measures followed by the recession (Kentikelenis, Karanikolos, Reeves, McKee, & Stuckler, 2014). For this reason, it may be difficult for parents to moderate their stress at the moment, as recession has been constantly affecting all aspects of their life.

It may also be helpful for parents to attend all seminars so that they themselves as well as their children benefit most from the intervention. It seems that the more seminars parents attended, the higher the change in child behaviour outcomes at post-intervention and at 6-month follow-up. The same pattern was noticed on parenting practices; the more seminars parents attended the higher the change in parenting outcomes at post-intervention and at 6-month follow-up.

In addition, the children of parents who attended all three seminars were more likely to display fewer behavioural difficulties, and at the same time parents who attended the whole series were more likely to reduce dysfunctional parenting practices over time. This was also evident in the per protocol analyses where the effect sizes of almost all measures were stronger than in the ITT analyses over time. These findings suggest the importance of attending the whole series for improving child and parent behaviour. The seminars were linked together as the first one presented all the basic principles of positive parenting and some of the basic strategies they can apply to their children to reduce behavioural difficulties, the second seminar focused on the development and management of child emotions, and the last one discussed the development of both social skills and confidence in children. This means that parents who attended the whole series may have gained a better understanding of positive parenting principles and how to apply them in their everyday life. They also may have learnt more about how to implement the strategies, the different occasions where they could apply them and may have had their questions answered than those who attended less seminars. As these were subgroup or per protocol analyses, no causal inferences can be drawn from these data though, as parents were not randomly allocated to attend a specific number of seminars, or to attend the whole series. Any improvement in child or parenting outcomes could be because of full attendance but equally could be due to higher commitment to their children, better organisational skills, better response to the intervention or other factors linked to their baseline characteristics.

Overall, compliance with treatment was not associated with child's change in behavioural difficulties in the short term. This may be because different families have a different level of needs, and may require more or less help than others to see a

change. Also, as each seminar of the series focused on a different aspect of a child's development such as behavioural, emotional and social development, parents may have decided to attend one or more seminars based on their child's level or type of difficulties. Therefore, the optimal number of seminars for brief interventions may vary between families. However, compliance with treatment was associated with the child's change in behavioural difficulties in the long term, meaning that parents who attended more seminars reported a higher change in the child's disruptive behaviour. So, the number of seminars attended is an intervention characteristic that may predict long-term changes in child behaviour. The significance of the results should be interpreted with caution, as in studies of small samples moderate correlations may misleadingly not turn out to be significant, while in studies with large samples small correlations may misleadingly reach significance (Guyatt *et al.*, 1995). Since *p* values may be misleading in correlations, the magnitude and the confidence intervals seem to be more important in interpreting the association between the variables. Lastly, we used the number of seminars that parents attended as a measure of compliance with treatment; yet, an assessment of parents' knowledge of the material would have been a more reliable measure of compliance.

The Seminar Series may be also beneficial to parents who have children in the clinical range for disruptive behaviours. The difference in the number of children who moved from the clinical to normal range on the primary outcome between the intervention and control group was not significant at post-intervention. However, there were a significantly higher number of intervention children who moved from the clinical to normal range on ECBI intensity scale at 6-month follow-up. This may mean that it takes longer than two months for children at a clinical range to show a clinical response. Further analysis on parent outcomes suggested that there was no

significant difference on the total dysfunctional practices of parents who had children at the clinical range between the two allocation groups at post-intervention ($t= 1.91$, $df=33$, $p= .066$, two-tailed). However, this difference was significant at 6-month follow-up. Parents in the seminar group improved significantly more ($M=0.43$, $SD=0.60$) than control parents ($M=-0.06$, $SD=0.45$): $t= 2.22$, $df=33$, $p= .034$, two-tailed. The mean difference between allocation groups was 0.49 and the 95% confidence interval for the estimated population mean difference was between 0.04 and 0.94. The effect size was small ($d= 0.39$). This may suggest that it also takes longer for parents who have children at a clinical range for behavioural difficulties to change. Causal inferences cannot be drawn from these data though, as parents were not randomly allocated to conditions based on the children's clinical status on behavioural problems. Also, the sample is small ($n=35$), thereby yielding small power.

The Seminar Series provided information relevant to the needs of a greater number of parents, rather than being restricted to those with concerns or existing problems. Moreover, such intervention is less time-consuming as it requires a low time commitment from parents, and may be more cost-effective as it uses minimal therapist contact and minimal parenting resources. For these reasons, much bigger effects are expected to be found across a wide population, using such a scalable and deliverable intervention. Triple P could be applied as an evidence-based prevention and intervention strategy by other professionals and organisations in both the private and public sectors and could potentially have an impact on population levels of behavioural and emotional problems.

4.5.2 Comparisons with Other Studies

The results found in this study are broadly in line with the findings reported in studies on the Seminar Series conducted in Australia (Sanders, Prior, Ralph, 2009) and preliminary results from Indonesia (Sumargi, Sofronoff, & Morawska, 2014). In all studies, parents reported significantly fewer behavioural difficulties in their children after attending the Seminar Series than those in the control group. In both the Australian and this study, 50% of the children who were above the clinical range pre-intervention moved to non-clinical range post-intervention on child behaviour scales provided that their parents attended at least one seminar. No significant effect was found on child emotional difficulties in all three studies. Parents reported significant improvement in their parenting skills at post-intervention in all studies. There were significant differences in parental confidence and parental adjustment only in the Indonesian study.

Other universal brief parenting programmes have been investigated in RCTs, where short-term and long-term child and parenting effects reported by parents with toddlers were examined (Bayer, Hiscock, Ukoumunne, Scalzo, & Wake, 2010; Bradley *et al.*, 2003, Hiscock *et al.*, 2008). Although some studies demonstrated either no difference in child behaviour measures (Hiscock *et al.*, 2008) or a significant decrease in the short term (Bradley *et al.*, 2003), this study was the only one to demonstrate improvement at both time points. In addition, it seems that in other studies positive effects on parenting are maintained over time (Bayer, 2010; Bradley *et al.*, 2003; Hiscock *et al.*, 2008) in contrast with findings of this study. This could be because the intervention was delivered in small groups of 7-8 parents in one of the studies (Bradley *et al.*, 2003) where parents might have discussed in more details the specific difficulties of their children and might have received more explicit feedback from the therapist than parents who attended a large group. Also,

these interventions were offered to parents of toddlers whereas the Seminar Series was offered to parents having school-age children as well.

Greek parents were more satisfied than Australian parents with the intervention they and their child received. The mean scores of Greek parents in 12 out of 13 items of the Client Satisfaction Questionnaire were higher than the mean scores of Australian parents. Of all items, the mean score of Greek parents ($M=3.87$, $SD=1.33$) was lower than the score of Australian parents ($M=4.17$, $SD=1.32$) only on the item “*Do you think your relationship with your partner has been improved by the programme?*” which was not the main scope of the intervention. There are several reasons why Greek parents might have been more satisfied than Australian parents. First of all, there were more Greek (73%) than Australian (45%) parents who attended the whole Seminar Series and completed the client satisfaction form, and so Greek parents might have had a more complete understanding of what the service could offer them. Also, Greek parents might have been too positive in their evaluations as it was the first time that Triple P was delivered in Greece, and so it might have been perceived as an innovative way of parenting. Since satisfaction measures were based on parents’ self-reports, excitement might have been reflected in their scores. Lastly, Triple P is very popular in Australia, as it was developed there and has been implemented all around Australia. If parents knew about it, or looked it up, they might have been disappointed knowing that they only received one seminar, or a low-intensity intervention, especially if they had severe difficulties with their children or their parenting, and in turn, this might have been reflected in their ratings.

4.5.3 Strengths and Weaknesses

This study investigated the efficacy of Triple P Seminar Series, a brief and

replicable universal prevention parenting programme using a RCT design. This is the first time the Seminar Series was explored in a full RCT, and to my knowledge, this is also the first evaluation of an evidence-based parenting programme in an RCT in Greece. This is the first study to investigate the maintenance of the effects of the Seminar Series on child behaviour and parenting 6 months after the intervention and the first Greek study to examine the impact of child difficulties in different domains of their everyday life. Specific procedures during recruitment and before randomisation were followed to reduce attrition rates. Attrition would have been reduced if technological barriers had been fully overcome. Parents who completed the baseline assessment booklet online had to follow two separate links; had it been one link, it would be easier for parents to complete all measures at once. Eligibility criteria were clearly set to enhance external validity. Although the seminar provider was also the outcome assessor due to feasibility and cost barriers, blinding was followed to avoid assessment bias. The standardised and scripted materials facilitated the delivery of the intervention and helped to ensure high levels of fidelity. Finally, in some parent training interventions attrition rates may be as high as 50% at follow-up (Cohen, Mannarino, & Knudsen, 2005; Gallagher, 2003); in this study there was an overall 29% attrition rate at post-intervention, and 35% attrition rate at 6-month follow-up. Lastly, this study was independent of the developer, no Triple P staff or licence holders contributed at any methodological or evaluation stage (Eisner, 2009).

The study has some limitations. Initially, in any psychosocial trial, blinding of the participants to allocation is hard to achieve (Wood *et al.*, 2008), and so intervention parents may have responded more favourably (Macpherson, 2004). Secondly, although specific processes were followed during randomisation to avoid selection bias, there were substantial baseline differences in the primary outcome. To

control these differences and estimate the effect of the treatment on the outcome, specific statistical analyses were run and change scores were used instead of including baseline scores as a separate covariate to avoid any additional power reduction (Austin, Manca, Zwarenstein, Juurlink, & Stanbrook, 2010b). Moreover, selection bias might have occurred because of the nature of the sample; as parents were volunteers, they may have differed systematically from those who did not participate. In addition, fathers and parents without a university degree were not adequately represented, and parents from rural areas were not included at all in this trial. For this reason, hasty generalisations about the entire Greek population should be avoided. Also, as non-ITT analyses lose the balance of randomisation and are based on small sample sizes, any results derived from non-ITT analyses should be interpreted with caution. Finally, measures were based on parental reports due to feasibility and cost barriers, and were not triangulated with reports from other sources, such as teachers or independent behavioural observations. However, different child measures were used to check for possible inconsistencies in the primary outcome. The psychometric properties of the most of the measures used have not yet been standardized in Greece. Therefore, no normative range has been established for Greek children and no cut-offs have been indicated. For this reason, cut-offs from other countries were applied increasing uncertainty in the findings. However, as findings on the impact of child difficulties suggest these problems affect all different aspects of a child's life, functioning, family, school and social life, thereby ruling out the possibility that Greek parents completed measures in a certain way due to cultural or other differences or because the meaning may be different in translation.

4.5.4 Future Research and Questions

Future studies should examine parenting skills using independent behavioural observations or reports from other sources to eliminate bias on self-report measures. It would also be useful to determine the exact number of seminars necessary for child and parent improvements to reduce time and cost barriers. Lastly, the effects of brief, group parenting interventions on clinical samples need to be investigated.

In the next chapters an attempt to unravel what bridges the causal relationship between the intervention and improvements in child outcomes is described, and the direction and/or magnitude of the intervention effects through moderator and mediator analyses are further explored. Based on previous studies, it would be predicted that positive parenting and parent-child interactions (Gardner, Burton, & Klimes, 2006; Gardner, Shaw, Dishion, Burton, & Supplee, 2007; Gardner, Hutchings, Bywater, & Whitaker, 2010), or reduction in dysfunctional parenting (Beauchaine, Webster-Stratton, & Reid, 2005) would contribute to change in child problem behaviour. In addition, qualitative research exploring parental perceptions on the acceptability, feasibility and cultural relevance of the programme would improve our understanding of the mechanisms of change in parenting and child measures, and so possible improvements on different aspects of the programme could be implemented.

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APPENDIX A. PARTICIPANT INFORMATION SHEET & CONSENTS

Appendix A1. Information Sheet & Informed Consent

University of Oxford LOGO	Study on the efficacy of a positive parenting programme in Greece Informed Consent
----------------------------------------------------	-------------------------------------------------------------------------------------------------------------

Dear Parent,

Thank you for your interest in participating in the Seminar Series.

The aim of my research is to investigate the effectiveness of a positive parenting programme in Greece. My thesis is supervised by Professor Frances Gardner from University of Oxford. My study is ethically approved by the University of Oxford Central Research Ethics Committee. I also have the Criminal Records Bureau clearance, as required and I am a registered psychologist with the British Psychological Society.

As we are uncertain about which method is more helpful for parents you, as the experts on your children, are the best people to ask about whether it is more beneficial for you to receive information regarding parenting and child development through a Seminar Series or Tip Sheets at home. For this reason we are going to follow a fair process where everyone has an equal chance to receive the Seminar Series or the Tip Sheets at home.

You will be asked to complete a few questionnaires regarding your experiences as a parent and your child's development. No real names will appear in any transcription, publication or conference, in order to insure strict confidentiality. All your personal information will be coded to insure anonymity.

In this envelope you will find 2 **Parent Consent Forms** and a baseline assessment booklet. Please read the Parent Consent Form (next page) and return only ONE to me with your signature. You may keep the other form for your records. This is important so you can participate in this study. For any questions, please do not hesitate to contact me via phone (00447541005093) or email (konstantinos.foskolos@gtc.ox.ac.uk).

Thank you in advance for your time.

I look forward to a successful research collaboration.

Yours faithfully,

KONSTANTINOS FOSKOLOS

DPhil (cand.) in Social Intervention, University of Oxford, Green Templeton College

MSc in Child Development, University of London

MA in Psychology, University of London

MSc in Evidence-Based Social Work, University of Oxford, Green College

BA in Communication and Mass Media, University of Athens

PARTICIPANT INFORMATION SHEET

RESEARCH PROCEDURES

This research is being conducted in order to assess the effectiveness of a positive parenting programme in Greece. If you agree to participate, (1) you will be asked to fill out a few questionnaires regarding your experiences as a parent and your child's development at 3 different time periods (now, after 3 and 6 months); (2) a fair process where everyone has an equal chance to receive a Seminar Series or Tip Sheets at home will be followed; (3) all 4 seminars will be video and audio recorded strictly for academic and training purposes.

RISKS

There are no foreseeable risks.

BENEFITS

If you receive the Seminar Series you will be informed about the parenting strategies which have been proven effective to help parents enhance their parenting skills, build positive relationships with their children, promote their children's development and manage misbehaviour. The Tip Sheets cover useful information about parenting and child development in key areas such as vaccinations and common childhood disorders.

CONFIDENTIALITY

Your personal contact details will be shared with my research assistant. The questionnaires are not anonymous. However, the confidentiality of your personal data will be guaranteed through specific procedures: (a) all information provided will remain strictly confidential; (b) participants' names and other identifiers will not be written on any transcripts or other research data; (c) unique, non-personally identifying ID numbers instead of names on research materials will be used. This code will be placed on the survey and other collected data. Through an identification key, the researcher's assistant will be able to link records to participants' identity; and (d) data will be maintained in locked computer databases, and participants study files, video- and audiotapes of the Seminars in locked filing cabinets in locked rooms; (e) only the researcher, his assistant and the researcher's supervisor will have access to the data; (f) at the end of the project all information, including the video- and audiotapes of the first 3 Seminars will be in locked cabinets at the researcher's office and all databases, audio and video files will be stored on his computer for future academic research and/or training of other health professionals; a password will be required for access to the databases.

PARTICIPATION

Your participation is voluntary. There are no costs to you or any other party. The Seminar Series will be audio and video recorded. At Seminar 1, 2, 3 the cameras will be set at the back of the room, behind you, so that your face will not be recorded. These tapes will only be used for training purposes. For Seminar 4 your voice and face will also be audio and video recorded. Video files will only be used if the sound of the audio recorder is unclear to distinguish what it is being said, as parents may speak simultaneously or softly. After the focus group's transcription of the video- and audiotapes, the tapes will be destroyed by the researcher. By signing this form you are giving your consent for audio and video recordings.

You may withdraw your consent at anytime in the future. If you withdraw your consent, all video and audio recordings of you that are still present can be destroyed.

CONTACT

This research is being conducted by Konstantinos Foskolos, Doctorate student in the Department of Social Policy and Social Intervention, University of Oxford. For any questions, related research problems or comments regarding your rights as a participant you could call: 00447541005093 or email: konstantinos.foskolos@gtc.ox.ac.uk. If you remain unhappy and wish to make a formal complaint, please contact the Research Ethics Committee at the University of Oxford (ethics@socsci.ox.ac.uk; 00441865614871; Social Sciences & Humanities Inter-Divisional Research Ethics Committee, Oxford University, Hayes House, 75 George Street, Oxford, OX1 2BQ, UK).

Title: “Study on the efficacy of a positive parenting programme in Greece”

CONSENT (Tick ✓ the boxes if you agree)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1.I confirm that I have read and understood the information sheet for the above study. | <input type="checkbox"/> |
| 2.I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. | <input type="checkbox"/> |
| 3.I understand that the research has been given ethics clearance from the University of Oxford’s Research Ethics Committee | <input type="checkbox"/> |
| 4. I understand that my voice and face will be recorded during the Seminar Series. | <input type="checkbox"/> |
| 5. I understand that any personal data will be anonymised and will be stored in a safe place, used only by the research team and stored in a safe place after the research is finished. | <input type="checkbox"/> |
| 6. I understand that relevant sections of any of my data collected during the study may be looked at by responsible individuals of the research team, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records. | <input type="checkbox"/> |
| 7. I understand that if I have any concerns about the research, I can contact the researcher using the contact details provided on the information sheet. | <input type="checkbox"/> |
| 8. I agree to participate in the study and provide assessments at 3 different time periods. | <input type="checkbox"/> |
| 9. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected. | <input type="checkbox"/> |

Signature

Date of Signature

Printed Name of Participant
(CAPITAL LETTERS)

Signature

Date of Signature

Printed Name of Researcher
(CAPITAL LETTERS)

Appendix A2. Phone Informed Consent

Dear Parent,

Thank you for your interest in participating in the Seminar Series.

The aim of my research is to investigate the effectiveness of a positive parenting programme in Greece. My thesis is supervised by Professor Frances Gardner from the University of Oxford. My study is ethically approved by the University of Oxford Central Research Ethics Committee. I also have the Criminal Records Bureau clearance, as required, and I am a registered psychologist with the British Psychological Society.

As we are uncertain about which method is more helpful for parents you, as the experts on your children, are the best people to ask about whether it is more beneficial for you to receive information regarding parenting and child development through a Seminar Series or Tip Sheets at home. For this reason we are going to follow a fair process where everyone has an equal chance to receive the Seminar Series or the Tip Sheets at home.

You will be asked to complete a few questionnaires regarding your experiences as a parent and your child's development. No real names will appear in any transcription, publication or conference, in order to insure strict confidentiality. All your personal information will be coded to insure anonymity.

In order to participate you need to return the baseline assessment booklet and give phone consent. I will read the Parent Consent Form to you and at the end you have to say whether you agree to give consent or not. In the next correspondence you will receive 2 **Parent Consent Forms** and you will have to return only ONE to me with your signature. You may keep the other form for your records. For any questions, please do not hesitate to contact me via phone (00447541005093); email (konstantinos.foskolos@gtc.ox.ac.uk).

Thank you in advance for your time.

I look forward to a successful research collaboration.

Yours faithfully,

KONSTANTINOS FOSKOLOS

DPhil (cand) in Social Intervention, University of Oxford, Green Templeton College

MSc in Child Development, University of London

MA in Psychology, University of London

MSc in Evidence-Based Social Work, University of Oxford, Green College

BA in Communication and Mass Media, University of Athens

PARTICIPANT INFORMATION SHEET

RESEARCH PROCEDURES

This research is being conducted in order to assess the effectiveness of a positive parenting programme in Greece. If you agree to participate, (1) you will be asked to fill out a few questionnaires regarding your experiences as a parent and your child's development at 3 different time periods (now, after 3 and 6 months); (2) a fair process where everyone has an equal chance to receive a Seminar Series or Tip Sheets at home will be followed; (3) all 4 seminars will be video and audio recorded strictly for academic and training purposes.

RISKS

There are no foreseeable risks.

BENEFITS

If you receive the Seminar Series you will be informed about the parenting strategies which have been proven effective to help parents enhance their parenting skills, build positive relationships with their children, promote their children's development and manage misbehaviour. The Tip Sheets cover useful information about parenting and child development in key areas such as vaccinations and common childhood disorders.

CONFIDENTIALITY

Your personal contact details will be shared with my research assistant. The questionnaires are not anonymous. However, the confidentiality of your personal data will be guaranteed through specific procedures: (a) all information provided will remain strictly confidential; (b) participants' names and other identifiers will not be written on any transcriptions or other research data; (c) unique, non-personally identifying ID numbers instead of names will be used on research materials. This code will be placed on the survey and other collected data. Through an identification key, the researcher's assistant will be able to link records to participants' identity; and (d) data will be kept in locked computer databases, and participants' study files, video- and audiotapes of the Seminars in locked filing cabinets in locked rooms; (e) only the researcher, his assistant and the researcher's supervisor will have access to the data; (f) at the end of the project all information, including the video- and audiotapes of the first 3 Seminars will be in locked cabinets at the researcher's office and all databases, audio and video files will be stored on his computer for future academic research and/or training of other health professionals; a password will be required for access to the databases.

PARTICIPATION

Your participation is voluntary. There are no costs to you or any other party. The Seminar Series will be audio and video recorded. At Seminar 1, 2, 3 the cameras will be set at the back of the room, behind you, so that your face will not be recorded. These tapes will only be used for training purposes. For Seminar 4 your voice and face will also be audio and video recorded. Video files will only be used if the sound of the audio recorder is unclear to distinguish what it is being said, as parents may speak simultaneously or softly. After the focus group's transcription of the video- and audiotapes, the tapes will be destroyed by the researcher. By signing this form you are giving your consent for audio and video recordings. You may withdraw your consent at anytime in the future. If you withdraw your consent, all video and audio recordings of you that are still present can be destroyed.

CONTACT

This research is being conducted by Konstantinos Foskolos, Doctorate student in the Department of Social Policy and Social Intervention, University of Oxford. For any questions, related research problems or comments regarding your rights as a participant you could call: 00447541005093 or email: konstantinos.foskolos@gtc.ox.ac.uk. If you remain unhappy and wish to make a formal complaint, please contact the Research Ethics Committee at the University of Oxford (ethics@socsci.ox.ac.uk; 00441865614871; Social Sciences & Humanities Inter-Divisional Research Ethics Committee, Oxford University, Hayes House, 75 George Street, Oxford, OX1 2BQ, UK)

PHONE CONSENT

1. I confirm that I have read and understood the information given by phone for the above study.

2. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

3. I understand that the research has been given ethics clearance from the University of Oxford's Research Ethics Committee

4. I understand that my voice and face will be recorded during the Seminar Series.

5. I understand that any personal data will be anonymised and will be stored in a safe place, used only by the research team and stored in a safe place after the research is finished.

6. I understand that relevant sections of any of my data collected during the study, may be looked at by responsible individuals of the research team, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my records.

7. I understand that if I have any concerns about the research, I can contact the researcher using the contact details provided on the information sheet.

8. I agree to participate in the study and provide assessments at 3 different time periods.

9. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my legal rights being affected.

Signature

Date of Signature

Printed Name of Participant
(CAPITAL LETTERS)

Signature

Date of Signature

Printed Name of Researcher
(CAPITAL LETTERS)

APPENDIX B. STUDY PROTOCOL

RCT of Brief Universal Parenting Program to Prevent Child Behavioural Difficulties in Greece - Full Text View - ClinicalTrials.gov 07/03/2015 22:00

ClinicalTrials.gov

A service of the U.S. National Institutes of Health

Comment Period Extended to 3/23/2015 for Notice of Proposed Rulemaking (NPRM) for FDAAA 801 and NIH Draft Reporting Policy for NIH-Funded Trials

RCT of Brief Universal Parenting Program to Prevent Child Behavioural and Emotional Difficulties in Greece**This study has been completed.****Sponsor:**

University of Oxford

Information provided by (Responsible Party):

University of Oxford

ClinicalTrials.gov Identifier:

NCT02030730

First received: January 7, 2014

Last updated: NA

Last verified: March 2012

History: No changes posted

[Full Text View](#)[Tabular View](#)[No Study Results Posted](#)[Disclaimer](#)[How to Read a Study Record](#)**Purpose**

This study investigates the impact of a Triple P Seminar Series on positive parenting for universal prevention of behavioural and emotional difficulties in a general Greek sample of parents with children aged 2 to 12. It is predicted that, compared to an attention control condition, parents randomised to the Seminar Series will report lower levels of children's disruptive and emotional difficulties at post-intervention. At the same time, it is postulated that parents will show a decrease in dysfunctional discipline styles, greater feelings of self-efficacy as well as lower levels of distress. Lastly, it is hypothesized that the effects observed at post-intervention will remain at the 6-month follow-up.

Condition	Intervention
Child Behavior Disorders Parenting	Behavioral: Triple P Seminar Series

Study Type: Interventional

Study Design: Allocation: Randomized

Endpoint Classification: Efficacy Study

Intervention Model: Parallel Assignment

Masking: Open Label

Primary Purpose: Prevention

Official Title: A Randomised Controlled Trial of the Efficacy of Triple P (Positive Parenting Program) Seminar Series as a Universal Parenting Intervention for the Prevention of Emotional and Behavioural Difficulties in Greek Children Aged 2 to 12.

Resource links provided by NLM:[MedlinePlus](#) related topics: [Parenting](#)[U.S. FDA Resources](#)**Further study details as provided by University of Oxford:****Primary Outcome Measures:**

- Eyberg Child Behaviour Inventory- Intensity scale (ECBI; Eyberg & Pincus, 1999) [Time Frame: April 2012, July-September 2012, March 2013] [Designated as safety issue: No]

It was used to investigate the intensity of behavioural difficulties.

Secondary Outcome Measures:

- Eyberg Child Behaviour Inventory- Problem scale (ECBI; Eyberg & Pincus, 1999) [Time Frame: April 2012, July-September 2012, March 2013] [Designated as safety issue: No]

It was used to estimate the number of behavioural difficulties.

- The Conners Parent Rating Scale (CPRS; Goyette, Conners, & Ulrich, 1978) [Time Frame: April 2012, July-September 2012, March 2013]
[Designated as safety issue: No]
It was used to assess anxiety and conduct problems.
- Parenting Scale (PS; Arnold, O'Leary, Wolff, & Acker, 1993) [Time Frame: April 2012, July-September 2012, March 2013]
[Designated as safety issue: No]
It was used to assess dysfunctional discipline styles.
- Parenting Tasks Checklist (PTC; Sanders & Wooley, 2005) [Time Frame: April 2012, July-September 2012, March 2013]
[Designated as safety issue: No]
It was used to measure parental confidence in dealing with specific child behaviours and in different settings.
- General Health Questionnaire (GHQ; Goldberg & Williams, 1988) [Time Frame: April 2012, July-September 2012, March 2013]
[Designated as safety issue: No]
It was used to assess parents' distress.

Other Outcome Measures:

- Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) [Time Frame: April 2012, July-September 2012, March 2013]
[Designated as safety issue: No]
It was used to assess emotional difficulties and prosocial skills. The impact supplement for the parents was also distributed to assess whether the informant considered the child to have a problem and to what extent this problem impacted on various aspects of the child's life.
- Client Satisfaction Questionnaire (CSQ; Turner, Markie-Dadds, & Sanders, 1998) [Time Frame: July-September 2012]
[Designated as safety issue: No]
It was used to assess consumer satisfaction with parent training programs.
- Parent Satisfaction Form (PSF; Sanders et al., 2008) [Time Frame: April, 2012, May 2012, June 2012] [Designated as safety issue: No]
It was used to measure parental satisfaction regarding several aspects of each seminar, such as the clarity of explanations provided, the usefulness of the Triple P tip sheet provided and likelihood of implementing the parenting advice received.

Enrollment: 124
 Study Start Date: March 2012
 Study Completion Date: April 2013
 Primary Completion Date: March 2013 (Final data collection date for primary outcome measure)

Arms	Assigned Interventions
<p>Experimental: Triple P Seminar Series</p> <p>Intervention parents received the Seminar Series (Selected TripleP); three 90-minute seminars ('The Power of Positive Parenting', 'Raising Confident, Competent Children', and 'Raising Resilient Children'), including 60 minutes of scripted presentation material and 30 minutes question time for discussion. Parents received tip sheets with the material presented at the end of each seminar. The seminars were free of charge. The delivery of each seminar was 2 to 4 weeks apart.</p>	<p>Behavioral: Triple P Seminar Series</p> <p>The intervention was delivered by the researcher and an accredited TripleP practitioner. The seminars took place in a conference room located within a bookshop. The seminars were re-offered for parents who could not attend the scheduled day.</p> <p>Other Name: Level 2: Selected TripleP-Positive Parenting Program</p>
<p>No Intervention: Leaflets on child health and development</p> <p>An attention control group received leaflet information on child health and development provided by the Greek National Health Services of the Ministry of Health. They cover topics such as vaccinations, common childhood illnesses, first aid guide on severe injuries and cuts, and nutrition. The topics did not overlap with the topics of the Seminar Series or the general purpose of the study. Control families received the seminar tip sheets after 6-month follow-up.</p>	

 [Hide Detailed Description](#)

Detailed Description:

Phase 1: Recruitment Child and family organisations will invite the general public by advertising the study through the organisations' member lists, contacts with schools and other health institutions, social networks, and mass media. Parents who have at least a child between 2 to 12 years old, living in the general area of Attica and being available to attend three Seminars (once per month) will be eligible. The researcher will receive from the organisations the list of all parents who contacted them and were interested in taking part in the study; the list will then be shared with his assistant. The assistant will sign a subcontract. All parents will receive an envelope which includes: (1) a thank you letter; (2) participant information sheet and two informed consents; (3) the pre-assessment baseline booklet including background information, parenting and child measures; (4) a pre-paid envelope so they could easily return them.

Written-informed consent: Eligible adult participants will provide informed consent. The adult informed consent process involves presenting a detailed written description of the study as it is described on the printed information and consent forms. Participants will be informed of the procedures for ensuring their protection, including:

1. participation is voluntary and free of charge;
2. participants will be informed that they will have an equal chance to get the Seminar Series through a fair process;
3. participants will be informed that their personal contact details will be shared with the researcher and his assistant;
4. the questionnaires which will be distributed are not anonymous. This is because all questionnaires will be distributed by mail;
5. the confidentiality of participants' personal data will be guaranteed though specific procedures to protect their anonymity: (a) all information provided will remain strictly confidential; (b) participants' names and other identifiers will not be written on any transcriptions or other research data; (c) unique non-personally identifying ID numbers instead of names on research materials will be used. This code will be placed on the survey and other collected data. Through an identification key, the researcher's assistant will be able to link records to participants' identity; and (d) data will be maintained in locked computer databases, and participants study files, video and audio tapes of the Seminars in locked filing cabinets in locked rooms; (e) only the researcher, his assistant and the researcher's supervisor will have access to the data; (f) at the end of the project all information, including the video and audio tapes of the first 3 Seminars will be in locked cabinets at the researcher's office and all databases, audio and video files will be stored to his computer for future academic research and/or training of other health professionals; a password will be required for access to the databases. After focus group transcription the video and audio tapes of focus groups will be destroyed by the researcher;
6. participants will be informed that the Seminar Series will be audio and video recorded and the tapes will only be used for academic and training reasons. At Seminar 1, 2, 3 the cameras will be set at the back of the room, behind the participants so that their face will not be recorded. For focus groups video will only be used if the sound of the audio recorder is unclear to distinguish what it is said, as parents may speak simultaneously or soft. After focus group transcription the video and audio tapes will be destroyed by the researcher.
7. participants can refuse to participate in either the intervention or research and/or can discontinue participation without penalty at any time by advising the researchers of this decision. By withdrawing from the study, they also have the right to withdraw all their data collected until that point.
8. in case of further questions participants can directly ask the researcher by phone or email who will do his best to answer their query. If they remain unhappy and wish to make a formal complaint, they can contact the Research Ethics Committee at the University of Oxford (ethics@soosci.ox.ac.uk; +44 (0)1865 614871; Social Sciences & Humanities Inter-Divisional Research Ethics Committee, Oxford University, Hayes House, 75 George Street, Oxford, OX1 2BQ, UK).

For parents who request additional professional help, a list with psychological health services will be provided. Participants may participate only after having read the information sheet and had signed it. All consenting and assenting participants will be offered a copy of the informed consent form. Parents who do not respond to their invitation for the Seminars will be asked to give phone-consent.

Regarding the consent form, the information sheet and the rest of the questionnaires which were in English, first they were translated by the researcher into Greek. All translations were reviewed by two Greek parents and a Greek Lecturer in Linguistics at University of Cambridge for understanding and relevance of the translated terms. All translations were adjusted according to the reviewers' comments. At the end, a Greek-American Health Professional checked if the final Greek translations matched the original English ones. The Conners and the SQD have officially been translated in Greek.

The parents who return the forms will move to the next part of the recruitment which is the 'Eligibility Criteria Phase'. Parents who do not respond will be recontacted by the researcher and his assistant through emails and phone calls. They will be asked to give phone-consent and return the baseline measures. Further eligibility and exclusion criteria will be applied as specified in the following section.

Phase 2: Randomisation The assistant will code the participants so that the researcher who will run all the statistical analyses cannot identify the participants. After the participants are coded, the researcher will randomise the coded participants into two allocation groups. A blocked randomisation process will stratify the participants according to three child factors (sex, age and child behaviour difficulties). A computerised random integer generator will be used to generate the random allocation sequence for the separate randomisation lists. A sample size calculator formula for statistical superiority design indicated that 130 participants would be required to achieve an effect size of 0.8 for the primary outcome measure at the 5% significance level with a ratio of 2:1 intervention to control. After we allowed for expected drop out of 40% based on similar studies (Sanders, Prior, & Ralph, 2009) the target population was 182 parents. After initial randomisation, the same process will be followed for every additional person who is interested in participating in the study. The assistant will include these participants in the appropriate group.

Phase 3: Intervention Parents in the experimental group will be invited to attend the brief prevention Seminar Series on positive parenting which included three Seminars. As the Seminar Series is not a well-evidence intervention, it has never been delivered in Greece before, and there are no other studies that prove its effectiveness outside Australia, a wait-list controlled design could not be justified. Parents in the control group will only receive three leaflets on child health and development, Child Health Information Linked to Development Sheets (CHILDS).

Phase 4: Post-assessment After the completion of the Seminar Series, in post-assessment period the assistant will send to all parents the post-assessment booklets via mail. Pre-paid envelopes will be provided for the participants' convenience. Those who do not respond will be chased by the researcher and his assistant through emails and phone calls. If the study will be run as a pre-post study with no control groups, post-

assessment measures can be distributed and returned during the last seminar.

Phase 5: Focus Groups Focus groups will be organised to investigate whether parents applied the strategies they learned during the Seminars as well as how easy or difficult it was for parents to apply them in their everyday life. Participants in the experimental group will be divided into small groups of 10. Each focus group will last 1 hour and 30 minutes. A questionnaire rating the acceptability, feasibility and cultural relevance of the strategies presented in the Seminar Series will also be distributed to get a general view on the programme characteristics. For parents who request additional professional help, a list with psychological health services provided in the general area of Attica will be offered. The Treatment Evaluation Inventory (Kazdin, 1981) and the Parent Satisfaction Form (Sanders et al., 2008) will also be distributed.

Phase 6: 6-month Follow-up Three months after the completion of the intervention, a further evaluation will be conducted to examine the long-term effects of the brief prevention programme. The assistant will send to all parents the 6-month follow-up assessment booklets via mail. Pre-paid envelopes will be provided for the participants' convenience. Those who do not respond will be chased by the researcher and his assistant through emails and phone calls.

Data Analysis: All families will be included in an intention-to-treat (ITT) analysis irrespective of uptake of intervention using the group median score for those lost to follow-up to eliminate the effects of a severe outlier presented in the data (High, 2005). These results will be compared to those who adhered strictly to the protocol in a per protocol (PP) analysis. To check for demographic differences, we will run baseline and attrition analyses.

Differences between groups on all outcomes will be assessed by ANCOVAs for uni-dimensional questionnaires, and MANCOVAs for multi-dimensional questionnaires. To control for baseline differences in the primary outcome, results will present the treatment effect as the estimated mean group difference in change scores from baseline to post-intervention controlling for baseline demographic differences on parental education and number of children in the family, at a conventional p value of .05, the effect sizes using Cohen's d, and the estimated effect at 95% confidence intervals (Altman, 2005). Change scores will be calculated by simple subtraction, such as that a positive change score represents greater improvement in the desired therapeutic direction. The estimated marginal means will be reported as means scores adjusted for the covariates used (Austin, Manca, Zwarrenstein, Juurlink, & Stanbrook, 2010). Significant effects will be further explored using ANCOVAs, and pairwise comparisons determined any significant differences between conditions. Bonferroni adjustments will be made based on the number of pairwise comparisons conducted.

Phase 7: End of Research At the end of the study and after parents have returned the 6-month follow-up assessment booklets the researcher will send them an envelope with the following material. Parents in the experimental group will receive: (i) a thank you letter; (ii) the CHILDS sent to parents at the control group and; (iii) a certificate of attendance. On the other hand, parents in the control group will receive: (i) a thank you letter and; (ii) the Seminar information material given to parents at the experimental group.

► Eligibility

Genders Eligible for Study: Both
Accepts Healthy Volunteers: Yes

Criteria

Inclusion Criteria:

In this study participants are parents who:

1. have at least one child aged between 2-12 years old
2. live in the general area of Attica
3. have returned a signed informed consent
4. have completed baseline measures

Exclusion Criteria:

-

► Contacts and Locations

Choosing to participate in a study is an important personal decision. Talk with your doctor and family members or friends about deciding to join a study. To learn more about this study, you or your doctor may contact the study research staff using the Contacts provided below. For general information, see [Learn About Clinical Studies](#).

Please refer to this study by its ClinicalTrials.gov identifier: NCT02030730

Locations

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► **More Information**

Publications:

[Austin PC, Manca A, Zwarenstein M, Juurlink DN, Stanbrook MB. A substantial and confusing variation exists in handling of baseline covariates in randomized controlled trials: a review of trials published in leading medical journals. J Clin Epidemiol. 2010 Feb;63\(2\):142-53. doi: 10.1016/j.jclinepi.2009.06.002. Epub 2009 Aug 27. Review.](#)

[Goodman R. The Strengths and Difficulties Questionnaire: a research note. J Child Psychol Psychiatry. 1997 Jul;38\(5\):581-6.](#)

[Goyette CH, Conners CK, Ulrich RF. Normative data on revised Conners Parent and Teacher Rating Scales. J Abnorm Child Psychol. 1978 Jun;6\(2\):221-36.](#)

[Sanders MR, Ralph A, Sofronoff K, Gardiner P, Thompson R, Dwyer S, Bidwell K. Every family: a population approach to reducing behavioral and emotional problems in children making the transition to school. J Prim Prev. 2008 May;29\(3\):197-222. doi: 10.1007/s10935-008-0139-7.](#)

[Sanders MR, Woolley ML. The relationship between maternal self-efficacy and parenting practices: implications for parent training. Child Care Health Dev. 2005 Jan;31\(1\):65-73.](#)

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CHAPTER 5

Chapter 5: Moderator and Mediator Analyses

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5.1 Overview

In the previous chapter, it was found that children whose parents attended the Seminar Series showed a significant improvement in their behaviour, as behavioural difficulties reduced more for children of the intervention group than the control group at post-intervention and 6-month follow-up. There were no significant differences in child emotional difficulties between the two groups over time. Furthermore, parents who attended the Seminar Series on positive parenting showed a significant improvement in their parenting skills through reduction in dysfunctional parenting practices. There were no significant differences in parental confidence or distress between the two groups over time. In this chapter, the focus is on what bridges the causal relationship between the intervention and the resulting improvements in child behavioural difficulties, exploring the direction and/or magnitude of the intervention effects through moderator and mediator analyses. Based on literature, it would be predicted that reduction in dysfunctional parenting would contribute to change in child problem behaviour.

5.2 Introduction

Knowing how different characteristics of the populations, settings and providers may differentially influence treatment response and outcomes is fundamental before implementing the results of intervention trials into policy and practice. In the present study, understanding which families brief interventions are most likely to help may provide useful information for improving intervention efficacy before the transferability of these interventions. Some brief parenting interventions have mainly targeted the most marginalised families (Dishion, Nelson, & Kavanagh, 2003; Shaw, Dishion, Supplee, Gardner, & Arnds, 2006). This is the

case because high risk families are those most likely to have children displaying an early onset and persistent behaviour difficulties, which might escalate to more severe problem behaviours by adolescence (Farrington, 1994; Gardner & Shaw, 2008; Moffitt, 1993; Patterson & Yoerger, 1993). Recent meta-analytic reviews synthesising parenting trials across a range of intervention and sample types, including low-risk prevention, indicated prevention and clinical treatment, suggest that children of parents who face high levels of adversity such as having low income, being a single parent and/or suffering from depression displayed poorer intervention outcomes compared to families who are at advantage (Lundahl, Risser, & Lovejoy, 2006; Reyno & McGrath, 2006). These reviews concluded that parenting interventions might not be as helpful for the most troubled or hard-to-reach families as for the more advantaged families. Yet, some more recent small-scale (Gardner, Hutchings, Bywater, & Whitaker, 2010) and large-scale (Gardner *et al.*, 2009) randomised trials have shown that parenting programmes may produce positive outcomes for all parents, regardless of socio-economic status. A recent meta-analysis also supported the absence of a direct effect of socio-economic status immediately post-intervention, at least for high levels of initial disruptive behaviour (Leijten, Raaijmakers, Orobio de Castro, & Matthys, 2013).

To identify the key characteristics of parents and children that predict improvements in child disruptive behaviours in brief parenting interventions it is essential to investigate the impact of intervention moderator and mediators (Kraemer, Wilson, Fairburn, & Agras, 2002).

Moderators of treatment outcomes are pre-randomisation variables of the sample that may reduce or enhance, or even change, the direction between a predictor variable (independent variable) and a dependent variable. This requires a significant

baseline characteristic by treatment interaction effect (Hinshaw, 2002). Moderators are particularly important because they look for differential effects between subgroups, and so may identify groups for whom intervention is more or less suitable (Driessen, Cuijpers, Hollon, & Dekker, 2010; Hinshaw, 2007). Although the Seminar Series was delivered as a universal prevention programme, the wide variation in individual-level factors linked with child difficulties makes it highly unlikely that any single preventive parenting programme implemented at a universal level will produce uniform effects. As a result, moderator analyses would be helpful to examine whether a variety of child and parental factors moderates the effects of universal parenting programmes across sub-groups.

Moderators are distinct from non-specific predictors; non-specific predictors are baseline variables that are associated with outcome regardless of treatment assignment or with response in the treatment group alone (Aiken & West, 1991; Beauchaine, Webster-Stratton, & Reid, 2005; Dumas & Wahler, 1983; Frazier, Tix, & Barron, 2004; Hinshaw, 2002; Turner, Holtzman, & Mancl, 2007). Moderator variables seem to have more significant clinical implications in policy and treatment decision making than non-specific predictors because they may determine the suitability of client groups for interventions compared to how they fare with no intervention or a different one (Ollendick, Jarrett, Grills-Taquechel, Hovey, & Wolff, 2008; Simon & Perlis, 2010).

Meta-analytic reviews and randomised trials in parenting interventions as well as predictor studies have suggested specific risk factors for poor treatment outcomes. A systematic review found that socio-economic status, child baseline difficulties and parent marital status predicted poor treatment outcome (Shelleby & Shaw, 2014). It was found that: (i) although families of low socio-economic status may not show the

same level of reductions in child outcomes as families of higher socio-economic status, they can still benefit from parenting interventions; (ii) children with higher baseline difficulties may benefit more from parenting interventions; and (iii) the conduct problem outcomes were poorer for children of single families than partnered families. Another factor that may predict treatment outcomes is maternal age (Lundahl, Risser, & Lovejoy, 2006). In another study, children with mothers with median age above 35 improved less in conduct problems in comparison with children with younger mothers (Beauchaine, Webster-Stratton, & Reid, 2005). Another factor influencing treatment outcomes is the age of the child. In a meta-analysis of Triple P studies Novak and Heinrichs (2008) found that Triple P works better for parents of younger than older children.

Another review demonstrated that factors such as family income, parent education/occupation, and maternal psychopathology significantly moderated treatment effects (Reyno & McGrath, 2006). It seems that in socioeconomically disadvantaged families there is an increase in maternal depression, which in turns deteriorates the quality of the child-parent interaction, maternal perceptions of child behaviour and the use of discipline, supporting the family stress model of economic hardship (Conger *et al.*, 1992). Family income, in particular, might not be the cause of failure in parenting training programmes but could be a contributory factor to parental stress or depression, which might, in turn, limit a family's ability to successfully engage with the programme. In contrast, in an intervention study with low-income families in the UK (Hutchings *et al.*, 2007), stronger effects were found on child outcomes when mothers were more depressed, whereas low income did not affect the responsiveness to the intervention or outcomes in another trial (Gardner, Hutchings, Bywater, & Whitaker, 2010). Parental stress and the sex of the child may also predict

treatment outcome, as parental levels of stress have been found significantly higher among the parents of girls (Fossum, Mørch, Handegård, & Drugli, 2007).

On the other hand, mediators are variables that are measured after randomisation and are intermediate outcomes on the causal pathway between receipt of treatment and final outcome (Kraemer, Wilson, Fairburn, & Agras, 2002). Mediation refers to the hypothesised covariance relationships among three variables; a predictor variable (independent variable) first has an effect on the potentially mediating variable (mediator), and in turn this influences the outcome variable (dependent variable). Therefore, a mediator accounts for the relationship between a predictor and the outcome variable (MacKinnon, 2000). Mediators are particularly important because they identify possible mechanisms through which an intervention produces its effects. The study of mediators has important implications in theoretical and clinical work of mental health disorders (Kraemer, Wilson, Fairburn, & Agras, 2002). Identifying potential therapeutic components of a treatment may result in the development of new, innovative treatments where these elements will be intensified and refined to produce larger effect sizes or the same effect sizes at lower cost or risk. At the same time, specifying the processes through which treatments alter the maintenance of disorders increases our understanding of the nature of clinical disorders.

For mediation analysis, change in parenting practices is suggested to be a possible mediator in parent training and may be associated with changes in child outcomes. This is good evidence to show that positive parenting and parent-child interactions contribute to change in child problem behaviour in high-risk groups where parents attended intense parenting programmes (Gardner, Burton, & Klimes, 2006; Gardner, Hutchings, Bywater, & Whitaker, 2010), or even after a brief and

multifaceted preventive intervention (Dishion *et al.*, 2008). Yet, there is also evidence that reduction in dysfunctional parenting mediated treatment outcome in a study synthesising data from six clinical trials of ‘Incredible Years’ (Beauchaine, Webster-Stratton, & Reid, 2005). Based on the findings of the various trials, the effects of specific variables on treatment outcome were tested as moderation and mediation factors in the present trial.

5.3 Moderator Analyses

5.3.1 Methods

The variables selected for this analysis were mainly based on previous literature where the moderator effects of parental income, marital status, education and occupation, level of depression, age, and the child’s difficulties level at baseline, sex and age, had been tested in parenting studies and produced mixed outcomes (Beauchaine *et al.*, 2005; Fossum *et al.*, 2007; Leijten *et al.*, 2013; Lundahl *et al.*, 2006; Reyno & McGrath, 2006). Exploratory variables such as family size, dysfunctional parenting and low levels of confidence in parenting, were also entered in the analysis as they have been identified as risk factors for the development of child conduct disorder (Henry, Caspi, Moffitt, & Silva, 1996; Murray & Farrington, 2010; Vitaro, Gendreau, Tremblay, & Oligny, 1998). Due to the large number of variables included in this analysis potential moderators need to be seen as exploratory without any intention for hypothesis testing.

Intention-to-treat methods were used for moderation analyses with missing post-treatment scores imputed by using the group median scores. This means that all available families were included in the analysis of change, irrespective of level of uptake of intervention, including those who received no sessions (Altman *et al.*,

2001). Change scores were calculated by simple subtraction, such as that a positive change score represents greater improvement in the desired therapeutic direction. Demographic variables, baseline child behavioural difficulties scores, baseline parental distress and sense of competence in parenting were examined to determine whether the intervention might be more effective for some families than others. The primary outcome, the ECBI Intensity scale was selected for the moderator analyses because there was a significant treatment effect from baseline to post-intervention on this scale in the treatment group, but not in the control group.

Different statistical tests were used to investigate the differential effects depending on the level of measurement of the moderator variables (Kim, Kaye, & Wright, 2001). Multiple regression analyses are used for predictors that are interval or continuous variables, and 2x2 ANCOVAs for those that are dichotomous. In this study, there were continuous and categorical variables and so both statistical analyses were run. 2x2 ANCOVAs provide more statistical power but less information on the predictors.

Initially, following the Baron & Kenny (1986) approach of moderation analysis, prior to running a moderated multiple regression analysis all predictor variables were centered. Centering is essential to standardise the variables so that a multiplicative function is calculated, thereby preventing multicollinearity among the predictors and the interaction terms in the equation, especially when there is an interaction with continuous independent variables (Smith & Sasaki, 1979). If two continuous independent variables that are both measured on a positive scale are multiplied the interaction will be highly correlated with the main effects, even if there is no correlation between the two variables. On the other hand, when variables are centered in a way that half the values are negative, multicollinearity would not occur,

even if the variables were slightly correlated. Centering also allows for proper testing of simple slopes and for having more interpretable betas, especially when there are interaction effects (Aiken & West, 1991).

All categorical predictor variables were recoded so that they have meaningful zero points and only two levels using the median split. In cases where there was an unequal n in the two levels, weighted effect coding was applied (Aiken & West, 1991). For example, as 68% of the participants were allocated to the intervention group and 32% to the control group, the dummy variable for the group status was coded as +0.32 for the intervention group and -.68 for the control group. The following multi-level categorical variables were used as potential moderators and were recoded as binary variables: (i) marital status was examined as a moderator, using a binary variable of married vs. other status (single, separated, divorced de facto); (ii) parental education using a binary variable of low (up to tertiary education) vs. high education; (iii) occupation using a binary variable of full-time work vs. not full-time (part-time, home duties, unemployed, student); (iv) family monthly income using a binary variable of low vs. high; (v) the final binary variable was the child's sex.

All continuous variables, such as child disruptive behaviour at baseline, child's age, parent's age, number of children in the family, parents' initial dysfunctional practices, overreactivity, laxness and hostility, parents' initial level of confidence in dealing with the child's behaviour and with the child's behaviour in different settings, and parents' distress at baseline, were centered around zero by subtracting not the group mean but rather the grand mean. Contrary to group mean centering where the slope coefficient is estimated solely by using within-group variation thereby essentially changing the analysis, grand mean centering has only

minor implications as it just changes the interpretation of the intercept (Raudenbush & Bryk, 2002).

Multiple linear regression analyses were conducted where change scores in child behaviour (ECBI Intensity scale) were used as the dependent variable. All predictor variables were entered in the first step of the regression equation to test for main effects (Block 1), while the interaction term was entered in the second step (Block 2).

Secondly, for the purposes of the 2x2 ANCOVAs, all continuous demographic variables were recoded as binary variables based on specific categories: (1) child's age: young (2-5) vs. old (6-12); (2) parent's age: young (less than 40) vs. old (more than 40) and; (3) number of children in the family: one vs. more than one. All other continuous variables were based on the grand mean (eg. below or above the mean of ECBI Intensity scale at baseline).

5.3.2 Results

5.3.2.1 Assumptions

Before running multiple regression analyses, it was essential to check for violations of the assumptions that need to be met. There are different opinions as to the number of participants required for using multiple regression analysis. According to Tabachnick and Fidell (2001) the following formula is suggested to determine the sample size when looking at the significance of each variable separately: $N \geq 104 + m$, where (m) is the number of explanatory variables. In this trial 16 explanatory variables were investigated, and therefore the sample required was 120 participants. Thus the current study has enough participants ($N=124$) to test each explanatory variable separately.

The second assumption that was important to look at was the distribution of the dependent variable. Although the explanatory variables (moderators) do not need to be normally distributed, the dependent variable (criterion variable), which is conditional on the independent variables, should be drawn from a normally distributed population of scores. The criterion variable was the change score on ECBI Intensity scale, and it was determined by subtracting the post-assessment scores from the baseline scores. The distributions of both the ECBI Intensity scores at baseline and post-assessment seemed to be normally distributed as shown in Figure 1. This was confirmed by tests on skewness and kurtosis. The z -scores of skewness and kurtosis were within the limits for normality ($1.95 < z_{\text{score}} < -1.95$) for both ECBI Intensity scale at baseline ($z_{\text{skewness}}=0.30$, $z_{\text{kurtosis}}=0.08$, significant at $p < .05$) and at post-assessment ($z_{\text{skewness}}=1.76$, $z_{\text{kurtosis}}=0.54$, significant at $p < .05$).

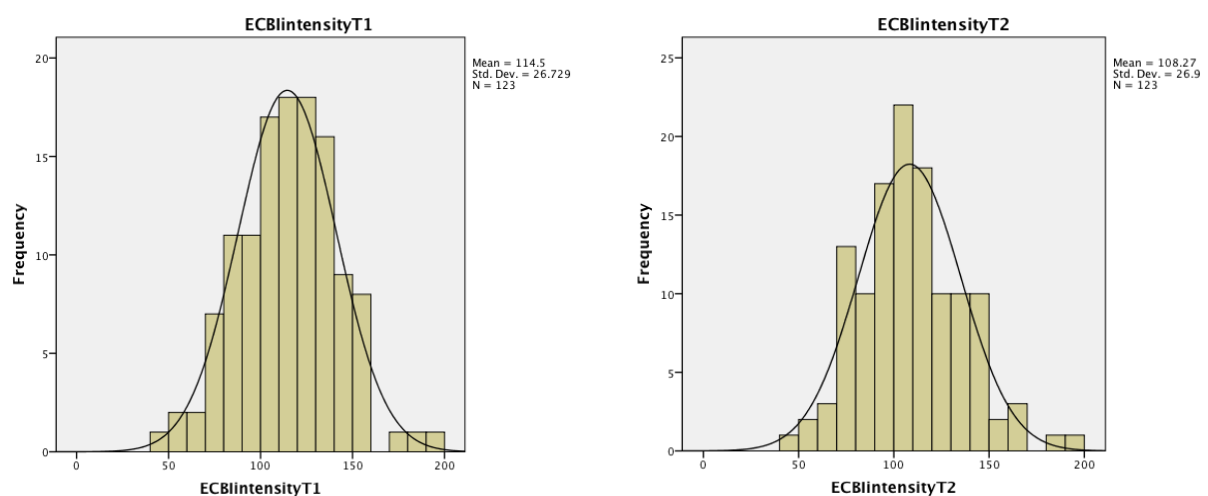


Figure 1. Histograms representing the distributions of the criterion variable at baseline and post-assessment.

According to the third criterion, outliers may need to be eliminated because they might have a great influence on the regression analysis. Also, in trials with a small sample size, it is recommended that only extreme outliers need to be deleted from the analysis (Dancey & Reidy, 2004). Although univariate outliers are easy to spot,

multivariate outliers are more difficult to detect. To determine any potential multivariate outliers in the dataset, Mahalanobis D-Squared test was applied (Schinka, Velicer, & Weiner, 2003). Use of Mahalanobis D-squared leaving out one case at a time detected and removed case 28 of the dataset, since it yielded a Mahalanobis D-squared value that was higher (42.68) than the chi-square critical value for alpha of .001 (40.79) (Tabachnick & Fidell, 2007). After removing the outlier, the z-scores of skewness and kurtosis did not change much.

The last criterion to check before performing a multiple regression analysis was that there was no multicollinearity between the explanatory variables, meaning that the variables were not highly inter-correlated. By inspecting the correlation matrix it was found that the variables were low inter-correlated, as shown in Table 1 (below 0.7). This means that the independent variables did not measure the same thing (Tabachnick & Fidell, 1996). Multicollinearity tests where all explanatory variables were tested as dependent and independent variables on SPSS were also conducted to check the results from the correlation matrix. The scores on variance inflation factors (VIF) were below 3 in all different analyses ($VIF < 3$), confirming that there was no multicollinearity between the variables.

Table 1. *Inter-correlations between predictors and criterion variable in the whole sample (N=124)*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1.Group	Pearson Cor.	1	-.362	.045	-.142	-.378	.105	-.084	.128	.151	.069	-.199	-.140	-.110	-.018	-.169	.149	.165	.105	
	Sig. (2-tailed)		.000	.621	.119	.000	.252	.359	.162	.097	.451	.028	.124	.230	.846	.062	.102	.069	.249	
2.ECBIint	Pearson Cor.		1	-.074	.106	.223	-.045	.002	-.042	-.160	-.062	.367	.133	.151	-.014	.179	.020	-.088	.126	
	Sig. (2-tailed)			.417	.244	.014	.625	.987	.650	.079	.496	.000	.145	.096	.877	.048	.828	.336	.167	
3.ageP	Pearson Cor.			1	.118	-.312	.040	-.009	-.148	-.022	.427	.067	.165	.196	.084	.081	-.144	-.169	.209	
	Sig. (2-tailed)				.195	.000	.663	.925	.103	.814	.000	.466	.070	.031	.359	.375	.114	.063	.021	
4.marital	Pearson Cor.				1	.042	-.033	-.212	-.177	.024	.072	.029	-.021	.025	-.079	.070	-.046	.011	.157	
	Sig. (2-tailed)					.646	.721	.019	.051	.796	.429	.753	.818	.787	.386	.443	.614	.905	.084	
5.education	Pearson Cor.					1	-.161	.042	.065	-.053	-.246	-.035	-.104	-.058	-.150	.006	.073	.070	-.209	
	Sig. (2-tailed)						.077	.647	.474	.564	.006	.700	.255	.523	.099	.951	.427	.445	.021	
6.occupation	Pearson Cor.						1	-.178	.051	-.063	-.091	-.114	-.095	.022	-.122	.010	.102	.075	.050	
	Sig. (2-tailed)							.049	.580	.487	.317	.210	.299	.809	.180	.916	.264	.411	.582	
7.SES	Pearson Cor.							1	-.144	.174	-.010	-.073	-.127	-.200	.008	-.245	.029	.112	-.071	
	Sig. (2-tailed)								.155	.056	.916	.426	.162	.027	.930	.007	.753	.218	.436	
8.numberof	Pearson Cor.								1	-.005	.017	.122	.168	.239	.029	.151	-.025	-.135	.066	
	Sig. (2-tailed)									.953	.852	.181	.064	.008	.750	.097	.786	.139	.471	
9.sex	Pearson Cor.									1	.037	-.259	-.016	-.196	.090	-.106	.098	.135	-.078	
	Sig. (2-tailed)										.685	.004	.860	.030	.326	.246	.283	.137	.391	
10. AgeChid	Pearson Cor.										1	-.083	.128	.221	.016	.183	-.040	-.079	.062	
	Sig. (2-tailed)											.361	.161	.015	.860	.043	.658	.384	.499	
11. ECBIint	Pearson Cor.											1	.415	.420	.203	.389	-.482	-.535	.245	
	Sig. (2-tailed)												.000	.000	.025	.000	.000	.000	.006	
12. PStotal	Pearson Cor.												1	.640	.719	.649	-.535	-.642	.245	
	Sig. (2-tailed)													.000	.000	.000	.000	.000	.006	
13. PSover	Pearson Cor.													1	.134	.594	-.428	-.484	.269	
	Sig. (2-tailed)														.141	.000	.000	.000	.003	
14. PSlax	Pearson Cor.														1	.235	-.412	-.511	.154	
	Sig. (2-tailed)															.009	.000	.000	.091	
15. PShost	Pearson Cor.															1	-.325	-.447	-.218	
	Sig. (2-tailed)																.000	.000	.016	
16. PTC	Pearson Cor.																1	.903	-.239	
	Sig. (2-tailed)																	.000	.008	
17. PTC	Pearson Cor.																	1	-.305	
	Sig. (2-tailed)																		.001	
18. GHQ	Pearson Cor.																		1	
	Sig. (2-tailed)																			.001

d= dichotomized

5.3.2.2 Moderators

According to the results of the multiple regression analyses (Table 2), none of the interactions between group allocation and potential moderators had a significant effect on the change in ECBI Intensity scale at post-intervention. So, the effect of each of the baseline characteristics, which were independently used, was consistent across the two allocation groups of the intervention. Thus, it is concluded that none of the predictors had a moderation effect on the child difficulties change score.

The same statistical tests were rerun, but this time the outlier was included in the analysis in order to check whether it would affect the results. The results were not influenced by the presence of the outlier and the effects of the non-specific predictors remained significant.

The results from the 2x2 ANCOVAs for categorical variables also confirmed that there were no significant interactions between group allocation and potential moderators (Table 3).

Table 2. *Multiple linear regression analysis of predictor variables for moderation effects (interactions)*

Moderator	Block 2	B	SE B	Beta	T	p (two-tailed)
Parental Age	Group status	14.78	3.54	.359	4.18	.000
	Moderator	2.34	3.49	.058	0.67	.503
	Interaction	-1.22	7.36	-.014	-0.17	.868
Parental Education	Group status	13.28	3.80	.322	3.49	.001
	Moderator	4.15	5.21	.084	0.80	.426
	Interaction	-3.02	9.31	-.033	-0.32	.746
Monthly Income	Group status	14.81	3.54	.359	4.19	.000
	Moderator	1.02	3.35	.026	0.30	.762
	Interaction	7.60	7.20	.090	1.05	.293
Parental Marital	Group status	14.03	12.31	.340	1.14	.257
	Moderator	3.52	5.82	.058	0.60	.547
	Interaction	-0.68	14.46	-.014	-0.05	.962
Parental Occupation	Group status	15.02	3.56	.365	4.22	.000
	Moderator	0.33	3.40	.008	0.10	.924
	Interaction	3.76	7.16	.045	0.52	.600
Number of children in the family	Group status	14.71	3.57	.357	4.12	.000
	Moderator	-0.19	3.35	-.005	-0.06	.954
	Interaction	-5.12	7.12	-.062	-0.72	.473
Child sex	Group status	14.54	3.56	.353	4.08	.000
	Moderator	4.17	3.33	.108	1.25	.213
	Interaction	5.70	7.10	.069	0.80	.424
Child age	Group status	14.65	3.54	.355	.000	.000
	Moderator	1.42	3.38	.036	.675	.675
	Interaction	-6.11	7.14	-.073	.394	.394
ECBI Intensity T1	Group status	12.87	3.43	.312	3.75	.000
	Moderator	0.23	0.06	.309	3.75	.000
	Interaction	0.12	0.13	.083	1.01	.313
PS Total T1	Group status	14.66	3.59	.356	4.08	.000
	Moderator	2.26	2.63	.076	0.86	.391
	Interaction	2.67	6.01	.039	0.44	.657
PS Overreactivity T1	Group status	14.95	3.51	.363	4.26	.000
	Moderator	1.53	1.40	.093	1.09	.278
	Interaction	5.18	3.14	.141	1.65	.102
PS Laxness T1	Group status	14.93	3.54	.363	4.22	.000
	Moderator	-0.43	1.59	-.023	-0.27	.789
	Interaction	0.63	3.61	.015	0.17	.863
PS Hostility T1	Group status	13.86	3.63	.336	3.82	.000
	Moderator	2.18	1.53	.130	1.43	.157
	Interaction	-1.10	3.64	-.027	-0.29	.768
PTC Setting T1	Group status	15.90	3.55	.386	4.48	.000
	Moderator	0.09	0.11	.069	0.80	.423
	Interaction	-0.34	0.23	-.127	-1.49	.138
PTC Behavioural T1	Group status	15.58	3.57	.378	4.37	.000
	Moderator	-0.02	0.11	-.018	-0.21	.832
	Interaction	-0.42	0.23	-.154	-1.81	.073
GHQ T1	Group status	15.40	3.47	.374	4.43	.000
	Moderator	0.65	0.29	.196	2.26	.026
	Interaction	0.81	0.56	.125	1.44	.152

Table 3. *2x2 ANCOVAs Inter-correlations for categorical variables and group allocation*

Variable* group allocation	F	Sig.
Parental age * group	$F(1,118)= 0.01$	$p= .994$
education * group	$F(1,119)= 0.08$	$p= .778$
monthly income * group	$F(1,118)= 0.75$	$p= .388$
marital status * group	$F(1,118)= 0.01$	$p= .910$
occupation * group	$F(1,118)= 0.41$	$p= .522$
number of children in the family * group	$F(1,119)= 0.86$	$p= .355$
child's sex * group	$F(1,118)= 0.78$	$p= .378$
child's age * group	$F(1,118)= 0.70$	$p= .405$
child difficulties at baseline * group	$F(1,118)= 0.20$	$p= .656$
parents' initial dysfunctional practices * group	$F(1,118)= 0.22$	$p= .656$
parents' initial overreactivity * group	$F(1,118)= 0.56$	$p= .454$
parents' initial laxness * group	$F(1,118)= 0.02$	$p= .884$
parents' initial hostility * group	$F(1,118)= 0.38$	$p= .538$
parental initial level of confidence in dealing with the child's behaviour in different settings * group	$F(1,118)= 0.06$	$p= .800$
parental initial level of confidence in dealing with the child's behaviour * group	$F(1,118)= 0.12$	$p= .736$
parental distress at baseline * group	$F(1,118)= 1.24$	$p= .268$

5.4 Mediator Analyses

Mediator analyses were applied to identify potential mechanisms by which the parenting intervention reduced children's difficulties. The variables tested in mediation analysis were based on the findings of the randomised trial and previous literature. In the RCT, there was a significant improvement in dysfunctional practices in intervention parents than in the control group. Parents who attended the seminars showed an increase in their confidence level and a decrease in their levels of distress.

Triple P, as other PMT interventions, aims to alter parents' dysfunctional parenting style and improve parents' confidence in their skills to prevent child behavioural and emotional difficulties. Significant differences have been suggested in similar studies on these variables (Sumargi, Sofronoff, & Morawska, 2014) but results are inconsistent between studies. Furthermore, findings from qualitative research suggest that, according to parents' perspective, increased confidence gained from groups is an important element of parenting interventions (Stewart-Brown *et al.*, 2004).

On this basis, two models were suggested: in mediation model I, potential mediators measured at post-intervention (Time 2) were tested for their mediation effect on the outcome variable measured at post-intervention (Time 2). The first factor under investigation was the change in dysfunctional parenting tested by the sub-scales of the PS. The second factor was parental confidence measured by the PTC scales, and the third factor was parental distress measured by the GHQ at post-intervention. The mediation effects of two these variables were explored given that there was an improvement in these measures in the treatment group.

In mediation model II, the same potential mediators as mediation model I measured at post-intervention (Time 2) were tested for their possible mediation

effects on the outcome variable measured at 6-month follow-up (Time 3).

5.4.1 Methods

According to Baron & Kenny (1986), a mediational model is supported when four statistical criteria are met: (1) the predictor variable is significantly associated with the criterion outcome variable; (2) the predictor variable is significantly associated with the mediator; (3) the mediator is significantly associated with the outcome variable, after controlling for the predictor; and (4) the previously significant predictor \rightarrow outcome relationship is significantly diminished when effects of the mediator are controlled. In complex models where numerous potential mediators are incorporated, Baron and Kenny's procedure can be time-consuming due to its implications that a high number of separate regression analyses have to be conducted. For this reason, a simplified approach was followed as recommended by Miles and Shevlin (2011), including two steps: (1) a correlation analysis of all variables that shows all inter-correlations. The correlation matrix reveals the extent to which the first and the second of Baron and Kenny are satisfied and; (2) a hierarchical regression analysis with potential mediators (Block 1) and potential predictors (Block 2) to demonstrate whether the third and fourth step of Baron and Kenny are satisfied.

5.4.1.1 Analysis

Intervention and control parents were compared on a conservative intention-to-treat basis, where missing post-treatment scores were imputed by using the group median scores. This means that all available families were included in the analysis of change, irrespective of level of uptake of intervention, including those who received no sessions (Altman *et al.*, 2001). Change scores were used to control for baseline

levels of parenting and child outcome in this analysis. Change scores were calculated by simple subtraction, such as that a positive change score represents greater improvement in the desired therapeutic direction.

For the first step of the simplified approach, Pearson's correlations were used for initial exploration of relationships between the predictor (coding for group status: Seminar group =1, Control= 2), change in the potential mediator variables and change in child outcome. For the second step, hierarchical regression analysis was conducted to test the contribution of potential mediators that significantly correlated with both the predictor and the outcome. The predictor was recoded to a dummy variable (Seminar group= 1, Control=0) because it may have affected the regression constant (Stockburger, 1998). Bootstrapping analyses were used to investigate the mediational model of potential variables as mediators of the relationship between group status and change in child difficulties. Bootstrapping produces an empirical representation of the sampling distribution of the indirect effect by treating the obtained sample of size n as a representation of the population in miniature, one that is repeatedly resampled during analysis as a means of replicating the original sampling process (Efron & Tibshirani, 1993; Hayes, 2009). Bootstrapping is considered to be more powerful than the Sobel test and the causal steps approach when it comes to testing mediator variable effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002; Williams & MacKinnon, 2008).

5.4.2 Results

5.4.2.1 Assumptions

Before running regression analysis, violations of the assumptions that need to be met were checked. The assumptions regarding the number of participants required

and the normal distribution of the criterion variable were met as previously shown in moderation analyses; yet, outliers were re-checked since new variables were entered as potential mediator factors. To determine any potential multivariate outliers in the dataset, the Mahalanobis D-Squared test was applied (Schinka, Velicer, & Weiner, 2003). No extreme outliers were detected since no case yielded a Mahalanobis D-squared value higher than the chi-square critical value for alpha of .001 (20.09), thus no cases were deleted.

5.4.2.1 Mediation Model I

Step 1: Correlations (Potential mediators X Outcome).

For the first step of the simplified approach for complex models, bivariate correlations showed that:

(i) an increase in the different subscales of dysfunctional parenting change scores predicted improvement in ECBI Intensity scale scores across the same period ($r_{PS_{total}} = .46, p < .001$; $r_{PS_{overreactivity}} = .30, p = .001$; $r_{PS_{laxness}} = .21, p = .001$; $r_{PS_{hostility}} = .42, p < .001$);

(ii) an increase in parental confidence in dealing with specific child behaviours change scores (PTC behavioural subscale) predicted improvement in ECBI Intensity scale scores across the same period ($r_{PTC_{behavioural}} = .31, p < .001$), but there was no significant correlation between the parental confidence in dealing with difficult behaviour in different settings (PTC setting subscale) change scores and child difficulties change scores ($r_{PTC_{setting}} = .03, p = .768$);

(iii) an increase in parental distress change scores predicted improvement in ECBI Intensity scale scores across the same period ($r_{GHQ} = .26, p = .003$) (Table 4).

Correlations (Potential mediators X Predictor).

Next, it was explored whether these variables were specifically associated with the intervention, or they simply were general predictors, irrespective of intervention status. As shown in Table 4, there was only one of the potential mediators significantly correlated with the intervention status: an increase in dysfunctional parenting change scores was associated with group status ($r_{PStotal} = -.19$, $p = .037$).

Correlations (Predictor X Outcome).

Then, it was explored whether the predictor was associated with the outcome. As shown in Table 4, there was a significant correlation between group status and change in ECBI Intensity scale ($r_{PStotal} = -.31$, $p = .001$).

Inter-Correlations.

Lastly, intercorrelations were examined between potential mediators, predictor and outcome. It was found that treatment status was related to change in dysfunctional parenting ($r = -.31$, $p < .001$) and change in ECBI Intensity scale ($r = -.19$, $p = .037$).

Table 4. *Correlations between potential mediators, predictor and criterion variable across both groups at post-intervention*

Potential mediators	Predictor	Outcome: ECBI Intensity scale change TIT2
	Group status	
		-.31(.001)**
<i>PStotal change_TIT2</i>	-.19 (.037)*	.46 (.001)**
<i>PSoverreactivity change_TIT2</i>	-.15 (.104)	.30 (.001)**
<i>PSlaxness change_TIT2</i>	-.08 (.397)	.21 (.001)**
<i>PShostility change_TIT2</i>	-.04 (.700)	.42 (.001)**
<i>PTCbehaviouralchange_TIT2</i>	-.12 (.188)	.31 (.001)**
<i>PTCsetting change_TIT2</i>	-.04 (.621)	.03 (.768)
<i>GHQ change_TIT2</i>	.003(.972)	.26 (.003)**

*Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.001 level (2-tailed)

Step 2: Hierarchical Regression Analysis.

A separate mediation model was developed for the only potential mediator that significantly correlated with both the predictor and the outcome. In this mediation model group status was the predictor, ECBI Intensity scale change score (T1T2) was the outcome and PS Total scale change score (T1T2) was added as a mediator.

Mediation Model.

After having established that group status was associated with change in dysfunctional parenting as well as with an improvement in child difficulties, and that the potential mediator was associated with the outcome, hierarchical multiple regressions were conducted to test for mediation. To test the strength of the relationship between mediator and outcome, change in dysfunctional parenting was entered in Block 1 and group status in Block 2. To test the strength of the relationship between predictor and outcome, group status was entered in Block 1 and change in dysfunctional parenting in Block 2. This analysis thus showed that (1) the strength of change in dysfunctional parenting on child difficulties change scores controlling the effects of group status and; (2) the strength of group status on child difficulties change scores controlling the effects of change in dysfunctional parenting.

Mediator X Outcome.

The results of the analyses provided the information necessary to confirm the mediational effect. Initially, it was observed that the mediator (change in PS Total subscale) was a significant predictor of change in child behavioural difficulties, with group status controlled. Consequently, an increase in change in dysfunctional parenting predicted improvement in ECBI Intensity scale scores across the same

period ($B_{PStotalT1T2} = 18.87$, $SE_{PStotalT1T2} = 3.65$, $b_{PStotalT1T2} = 0.41$, $t_{PStotalT1T2} = 5.17$, $p < .001$), controlling for group status (Table 5a).

Predictor X Outcome.

Second, it was shown that the relationship between group status and change in child difficulties dropped significantly when change in dysfunctional parenting was controlled ($B_{seminars} = 9.55$, $SE_{seminars} = 3.22$, $b_{seminars} = 0.24$, $t_{seminars} = 2.96$, $p = .004$), when compared to the strength of the relationship observed in the model when change in dysfunctional parenting was not controlled ($B_{seminars} = 12.69$, $SE_{seminars} = 3.48$, $b_{seminars} = 0.31$, $t_{seminars} = 3.64$, $p < .001$) (Table 5a,b).

Table 5a. *Summary of hierarchical regressions for Mediation Model I*

Model 1	Unstandardised Coefficients		Standardised Coefficients	T	Sig.	95% C.I. for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	3.72	1.56		2.38	.019	0.62	6.82
Seminars	9.55	3.22	.236	2.96	.004	3.17	15.93
PStotalchangeT1T2	18.87	3.65	.413	5.17	.000	11.64	26.09

a. Dependent Variable: ECBIintensitychangeT1T2

Table 5b. *Summary of hierarchical regressions for Mediation Model I*

Model 1	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	95% C.I. for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	6.30	1.63		3.86	.000	3.07	9.53
seminars	12.69	3.48	.314	3.64	.000	5.88	19.59

a. Dependent Variable: ECBIintensitychangeT1T2

Bootstrapping analysis.

To assess the strength and significance of the indirect effect, bootstrapping, a non-parametric method was used (Preacher & Hayes, 2004; Preacher, Rucker, & Hayes, 2007). As exact normal distributions may only be found in large samples, the bootstrapping strategy has the advantage of overcoming problems with non-normally distributed variables such as power problems. Thus, the indirect effect was estimated by first regressing change in dysfunctional parenting on treatment status ($X \rightarrow M$), and subsequently regressing change in ECBI Intensity scale on dysfunctional parenting ($M \rightarrow Y$) and treatment status ($X \rightarrow Y$). The indirect effect was then quantified as the product of the mean bootstrapped sample estimates of the regression coefficients ($X \rightarrow M * M \rightarrow Y$ controlling for $X \rightarrow Y$). The standard deviation of the estimate of the indirect effect obtained over 5000 bootstrapped resamples was the estimated standard error of the mean indirect effect (Preacher & Hayes, 2004). Bootstrap confidence intervals were generated for the indirect effect based on this information.

In bootstrapping analysis, mediation is significant if the 95% 'bias corrected and accelerated' (BCa) confidence intervals for the indirect effect do not include zero. As shown on Table 6, results based on 5000 bootstrapped samples indicated that the total effect of XY was significant ($TE = -12.69$, $SE = 3.48$, $p < .001$), the direct effect of XY controlling for M was also significant ($DE = -9.55$, $SE = 3.22$, $p < .001$). Since the direct effect remained significant after controlling for the mediator, this means that the mediator (change in dysfunctional parenting) only partially mediated the relationship between treatment status and change in ECBI Intensity scale. The indirect effect was also significantly different from zero at significant level of .05 because zero was not included in the 95% confidence intervals (IE, lower 95% CI = -6.38, upper 95% CI = -.66). To conclude, participants who were in the treatment group were more likely to show an improvement in dysfunctional parenting over time, and this

way dysfunctional parenting was more likely to indicate an improvement in child difficulties over time. The mediational model is graphically illustrated in Figure 2.

Table 6. Summary of testing mediation using bootstrapping

```

Run MATRIX procedure:
VARIABLES IN SIMPLE MEDIATION MODEL
Y      ECBIintensityT1T2
X      group
M      PStotalT1T2

DESCRIPTIVES STATISTICS AND PEARSON CORRELATIONS
              Mean      SD      ECBIintensityT1T2  group  PStotalT1T2
ECBIintensityT1T2  6.2358  18.9923      1.0000      -.3142      .4572
group              1.3252   .4704      -.3142      1.0000      -.1884
PStotalT1T2        .1360   .4154      .4572      -.1884      1.0000

SAMPLE SIZE 124

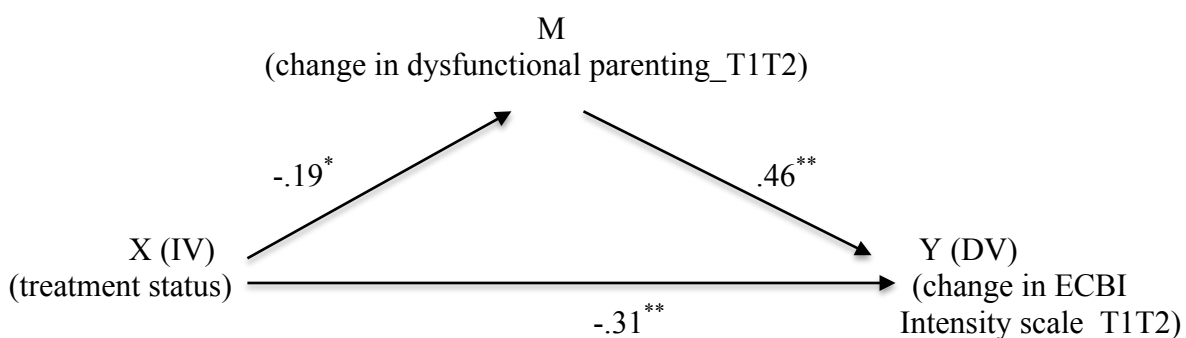
DIRECT AND TOTAL EFFECTS
              Coeff      s.e.      t      Sig(two)
b(YX)       -12.6864    3.4848    -3.6405    .0004
b(MX)        -.1664     .0788    -2.1101    .0369
b(YM.X)     18.8673    3.6487    5.1710    .0000
b(YX.M)     -9.5475    3.2221    -2.9631    .0037

INDIRECT EFFECT AND SIGNIFICANCE USING NORMAL DISTRIBUTION
              Value      s.e.      LL95CI      UL95CI      Z      Sig(two)
Effect      -3.1390    1.6322    -6.3381     .0602     -1.9231    .0545

BOOTSTRAP RESULTS FOR INDIRECT EFFECT
              Data      Mean      s.e.      LL99 CI      LL95CI      UL95CI      UL99CI
Effect      -3.1390    -3.1667    1.4631     -7.8096     -6.3778     -.6574     -.0811

NUMBER OF BOOTSTRAP RESAMPLES 5000
----- END MATRIX -----

```



* Association is significant at 0.05 level

** Association is significant at 0.001 level

Figure 2. Associations between treatment status, change in dysfunctional parenting and change in child difficulties (Mediation Model I).

5.4.2.2 Mediation Model II

Following the same steps of mediation model I, it was found that that treatment status was significantly associated with change in dysfunctional parenting at post-intervention ($r = -.20, p = .025$) as well as change in ECBI Intensity scale at 6-month follow-up ($r = -.23, p = .012$) (Table 7).

Table 7. Correlations between potential mediators, predictor and criterion variable over time

	Predictor	Outcome: ECBI Intensity scale change T1T3
Potential mediators	<i>Group status</i>	-.23 (.012)*
<i>PS total change_T1T2</i>	-.20 (.025)*	.26 (.003)**
<i>PS overreactivity change_T1T2</i>	-.14 (.116)	.19 (.038)*
<i>PS laxness change_T1T2</i>	-.14 (.126)	.11 (.226)
<i>PS hostility change_T1T2</i>	-.03 (.718)	.24 (.008)**
<i>PTC behavioural change_T2T1</i>	-.01 (.897)	.17 (.067)*
<i>PTC setting change_T2T1</i>	-.12 (.175)	.35 (.001)**
<i>GHQ change_T1T2</i>	-.02 (.642)	.21 (.042)*

*Correlation is significant at the 0.05 level (2-tailed)
 ** Correlation is significant at the 0.001 level (2-tailed)

Step 2: Hierarchical Regression Analysis.

A separate mediation model was developed for the only potential mediator that significantly correlated with both the predictor and the outcome. In this mediation model group status was the predictor, ECBI Intensity scale change score at 6-month follow-up was the outcome and PS Total scale change score at post-intervention was added as a mediator. Hierarchical multiple regressions were conducted to test for mediation.

Mediator X Outcome.

An increase in change in dysfunctional parenting at post-intervention predicted improvement in ECBI Intensity scale scores at 6-month follow-up

($B_{PStotalT1T2} = 11.61$, $SE_{PStotalT1T2} = 4.55$, $b_{PStotalT1T2} = 0.23$, $t_{PStotalT1T2} = 2.56$, $p = .012$), controlling for group status (Table 8a).

Predictor X Outcome.

The relationship between group status and change in child difficulties dropped significantly when change in dysfunctional parenting was controlled ($B_{seminars} = 9.27$, $SE_{seminars} = 4.54$, $b_{seminars} = 0.18$, $t_{seminars} = 2.04$, $p = .043$), when compared to the strength of the relationship observed in the model when change in dysfunctional parenting was not controlled ($B_{seminars} = 11.61$, $SE_{seminars} = 4.55$, $b_{seminars} = 0.23$, $t_{seminars} = 2.55$, $p = .012$) (Table 8a,b).

Table 8a. *Summary of hierarchical regressions for Mediation Model II*

Model 1	Coefficients ^a						
	Unstandardised Coefficients B	Std. Error	Standardised Coefficients Beta	T	Sig.	95% C.I. for B Lower Bound Upper Bound	
(Constant)	-2.21	3.64		-0.61	.546	-9.42	5.01
Seminars	9.27	4.54	.180	2.04	.043	0.28	18.26
PStotalchange	10.21	3.95	.226	2.56	.012	2.32	18.10

a. Dependent Variable: ECBIintensitychangeT1T3

Table 8b. *Summary of hierarchical regressions for Mediation Model II*

Model 1	Coefficients ^a						
	Unstandardised Coefficients B	Std. Error	Standardised Coefficients Beta	t	Sig.	95% C.I. for B Lower Bound Upper Bound	
(Constant)	-1.83	3.72		-0.49	.624	-9.20	5.54
seminars	11.61	4.55	.225	2.55	.012	2.60	20.61

a. Dependent Variable: ECBIintensitychangeT1T3

Bootstrapping analysis.

Results based on 5000 bootstrapped samples indicated that the total effect of XY was significant (TE=-11.61, SE=4.55, $p < .05$), the direct effect of XY controlling for M was also significant (DE=-9.27, SE=4.54, $p < .05$) (Table 9). Since the direct effect remained significant after controlling for the mediator, the mediator (change in dysfunctional parenting at post-intervention) only partially mediated the relationship between treatment status and change in ECBI Intensity scale at 6-month follow-up. The indirect effect was also significantly different from zero at significant level of .05 (IE, lower 95% CI=-5.19, upper 95% CI= -.30). To conclude participants who were in the treatment group were more likely to show an improvement in reducing dysfunctional parenting at post-intervention, and this way dysfunctional parenting was more likely to indicate an improvement in child difficulties at 6-month follow-up. The mediational model is graphically illustrated in Figure 3.

Table 9. Summary of testing mediation using bootstrapping.

```

Run MATRIX procedure:

VARIABLES IN SIMPLE MEDIATION MODEL
Y      ECBIintensityT13
X      group
M      PS_totalT1T3

DESCRIPTIVES STATISTICS AND PEARSON CORRELATIONS
              Mean      SD      ECBIintensityT1T3  group  PS_totalT1T2
ECBIintensityT1T3  5.9395  24.3568      1.0000      -.2251      .2618
group              1.3306   .4724      -.2251      1.0000      -.2008
PS_totalT1T2       .1900   .5383      .2618      -.2008      1.0000

SAMPLE SIZE 124

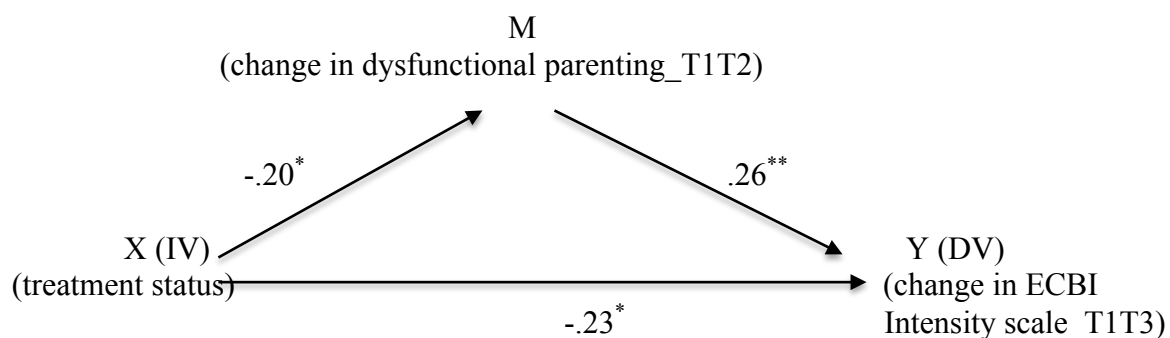
DIRECT AND TOTAL EFFECTS
              Coeff      s.e.      t      Sig(two)
b(YX)       -11.6064    4.5487    -2.5516    .0120
b(MX)        -.2288     .1011    -2.2640    .0253
b(YM.X)     10.2133    3.9845     2.5633    .0116
b(YX.M)     -9.2692    4.5407    -2.0414    .0434

INDIRECT EFFECT AND SIGNIFICANCE USING NORMAL DISTRIBUTION
              Value      s.e.      LL95CI      UL95CI      Z      Sig(two)
Effect      -2.3371    1.4350    -5.1497     .4754     -1.6287    .1034

BOOTSTRAP RESULTS FOR INDIRECT EFFECT
              Data      Mean      s.e.      LL99 CI      LL95CI      UL95CI      UL99CI
Effect      -2.3371    -2.3261    1.2694     -6.3853     -5.1586     -.2981     .1454

NUMBER OF BOOTSTRAP RESAMPLES 5000
***** NOTES *****
----- END MATRIX -----

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* Association is significant at 0.05 level

** Association is significant at 0.001 level

Figure 3. Associations between treatment status, change in dysfunctional parenting and change in child difficulties (Mediation Model II).

5.5 Discussion

While it is important to investigate whether a parenting program actually works for parents and their children, it is equally important to understand which ingredients of the intervention work and for whom they work. In this study, moderation analyses allowed us to understand if some parent subgroups benefited more from the intervention delivered, while mediator analyses unravelled potential mechanisms of child behaviour change through the implementation of a brief universal parenting programme. These methodologically complex moderation and mediation analyses of third variable effects (Magill, 2011) can also inform policy makers and practitioners of the complexity involved in the provision of health services.

According to the results of moderator analyses, the interactions between group allocation and the moderator variables did not have a significant effect on change in child's behaviour. This means that none of the possible moderator variables affected the direction and/or strength of the relation between group allocation and change in child disruptive scores. Therefore, the selected demographic or baseline characteristics of the sample predicted similar levels of change in child behavioural difficulties in both treatment and control groups.

It was also found that although there was no interaction between group allocation and either the initial level of the child's difficulties or the initial level of parental distress on change in child behavioural difficulties over time, these variables predicted change in child disruptive scores regardless of the seminar series (non-specific predictors). Participants who reported greater child behavioural difficulties on ECBI Intensity scores at baseline also reported a greater change in child difficulties between the two assessment periods. Also, participants who reported higher levels of

distress at baseline also reported a higher change in child difficulties over time.

Despite non-significant moderators in the present study, literature indicates that the effectiveness of parenting programmes may vary depending on the participant characteristics. Findings from studies synthesised in two systematic reviews found that parents facing disadvantage such as having low income, being a single parent and/or suffering from depression displayed poorer treatment outcomes compared to advantaged families (Reyno & McGrath, 2006; Lundahl, Risser, & Lovejoy, 2006). However, the effects of these variables on treatment outcomes have not always been consistent; no moderation effects have been found for either low-income families or lone parenthood on treatment outcomes in randomised trials with American and British families (Gardner *et al.*, 2009; Gardner, Hutchings, Bywater, & Whitaker 2010).

There are also studies suggesting that factors like maternal depression and stress predicted poorer treatment outcomes using parenting programmes (Fossum, Mørch, Handegård, & Drugli, 2007; Griest, Forehand, & Wells, 1981; Webster-Stratton & Hammond, 1990; Werba, Eyberg, Boggs, & Algina 2006) while others argued that maternal depression was a significant moderator predicting better child outcomes (Gardner, Hutchings, Bywater, & Whitaker 2010). In the present study, it was found that the higher the level of depression in parents, the higher the level of change in child behaviour, regardless of the allocation group. Depressed parents often tend to rate their children's behavioural problems more severely than non-depressed parents or their partners (Webster-Stratton & Hammond, 1988). It is known that parental depression may be related to the development of child behaviour problems. Depression may cause some parents to be particularly negative towards their children; depressed parents may be less involved in a child's activities and find it more difficult

to use discipline effectively and consistently, thereby disrupting parent-child interactions (Forehand, Lautenschlager, Faust, & Graziano, 1986). At the same time, in families where parents are depressed, children may start seeking their parents' attention by misbehaving (Shaw, Gilliom, Ingoldsby, & Nagin, 2003). Therefore, a child's behaviour may naturally change without any intervention.

Another factor that may predict treatment outcomes is maternal age. Most research addressing this link focused on teen mothers but the mean age in this sample was 39. Maternal age was not a significant moderator of child difficulties in this study; yet, another study found that children with mothers with median age above 35 improved less in conduct problems compared to children with younger mothers (Beauchaine, Webster-Stratton, & Reid, 2005). One explanation might be that older mothers have more children and so have less patience to deal with disruptive behaviours. However, there was no significant relationship between maternal age and the number of children in the present study ($r = -.15, p = .107$). Alternatively, maternal age has been found to be positively associated with harsh and critical parenting practices, which was not the case in the present study ($r = -.03, p = .776$).

Child variables did not seem to influence treatment outcomes in the present study. A recent review of moderators of parenting interventions, focusing on child conduct problems found that high child problems at baseline predicted improvements from parenting interventions (Shelleby & Shaw, 2014). None of the included studies of this review found that high baseline child problem behaviour was associated with reduced effects. In the present study, it was found that the higher the level of child difficulties at baseline, the higher the level of change in child behaviour regardless of the allocation group. Parents who have children with severe difficulties may be more willing to improve the interactions with their children and work harder towards a

change in the child's behavioural problems. It may also reflect the tendency of some children to outgrow these behaviour problems due to rapid developmental changes, especially during early childhood, the relative instability of these difficulties between toddlerhood and later childhood (Gardner & Shaw, 2008) or just regression to the mean, as it happened in both groups.

The effect of child age was also explored, which did not function as a moderator factor in some studies. Contrary to Serketich and Dumas' meta-analysis (1996), which indicated that parent training was more effective for parents of school-aged children, other research indicated the opposite. A meta-analysis of Triple P studies found better outcomes for parents of younger (less than 6) than older children (Nowak & Heinrichs, 2008). Younger children are more dependent on their parents for meeting their basic needs and so might be expected to benefit more from parenting interventions that aim to improve their skills (Dodge, 1993). Older children who rely less on their parents and have more advanced reasoning abilities are more responsive to programmes that focus on strengthening the interactions between parents and children (Cedar & Levant, 1990). There are also other Triple P meta-analyses (De Graaf, Speetjens, Smit, de Wolff, & Tavecchio, 2008; Sanders, Kirby, Tellegen, & Day, 2013) and other trials where child age was not identified as a moderator of treatment outcomes, supporting the findings of this study (Cedar & Levant, 1990). Overall, literature provides contradictory findings on the effects of child age, which is an important variable for policy making, as current results suggest no clear-cut indication that early interventions are better.

There is not one clear direction found in the literature regarding the moderator effects of demographic variables on the relationship between a parenting intervention and child behaviour outcomes. One reason may be the different methodology used to

investigate moderation hypotheses. Although systematic reviews are better at assessing the strength of main effects than single studies, that is not necessarily the case for moderator questions. This is because in traditional meta-analyses, where subgroup analyses are used, socio-economic status is coded at the level of the trial, and so families in the whole trial are coded as mostly disadvantaged or mostly not disadvantaged (Leijten, Raaijmakers, Orobio de Castro, & Matthys, 2013; Lundahl, Risser, & Lovejoy, 2006). Thus, meta-analyses may completely lose the variability within the trial that the single trial moderator analyses pick upon.

Another reason may be that the moderator effects of demographic variables are specific to the nature of the intervention. A recent meta-analysis including all available research studies on all levels of Triple P regardless of trial design indicates that there are a number of significant moderators on child social, emotional and behavioural outcomes (Sanders, Kirby, Tellegen, & Day, 2013). They found that significant moderators of parenting practices were the Triple P level, the study approach and the study power. Larger effects were associated with Triple P Level 3 and 5 than Level 1 at baseline, with studies using a targeted or treatment approach than a universal approach, and for studies with less than 35 participants in the smallest group. So, the type of intervention delivered may moderate the treatment effects. For example, economically disadvantaged families were more responsive to individually tailored parenting interventions than group interventions (Lundahl, Risser, & Lovejoy, 2006).

In this study, there were no moderators that influenced the effects of the Seminar Series delivered as a brief universal preventive intervention, meaning that this type of intervention is not more beneficial or less useful to a specific group of parents and thereby not excluding any type of family. Consequently, this type of an

intervention could be used as a universal approach in a general population. Due to the nature of this sample, it was unknown whether this intervention could serve the needs of high-risk families (Morris *et al.*, 2008). This is particularly important for policy makers whose decisions are informed based on the programme variants, delivery methods and intensity levels that are required for particular areas.

By running a mediator analysis potential mechanisms and reasons why the Seminar Series may be effective as a brief universal intervention were explored. According to previous research findings, change in parenting practices was hypothesised to mediate between parent training and improvements in child conduct problems. In this study changing parents' dysfunctional practices partially explained improvements in children's behaviour when parents attended the Seminar Series, at both post-intervention and at 6-month follow-up. These results concur with other studies where parents, who were randomly allocated to attend parenting programmes, showed reductions in dysfunctional parenting practices and reported improvements in child behavioural difficulties over time (Beauchaine, Webster-Stratton, & Reid, 2005). Parenting programmes that aim to teach parents how to reduce negative and inconsistent parenting, implement effective discipline and manage coercive interactions have been found to be effective for the reduction of child conduct problems (Patterson, Reid, & Dishion, 1992; Shaw, Bell, & Gilliom, 2000). There is also growing evidence that intense or brief parenting programmes that follow a positive approach and focus on improving parent-child interactions can result in child behaviour changes, especially in high-risk families (Gardner, Burton, & Klimes, 2006; Martinez & Forgatch, 2001).

Mediation analyses are particularly useful to identify which variables account for some, if not all, of the relationship between an intervention and an outcome. In

this study since the change in dysfunctional parenting practices at post-intervention partially influenced the change in child's behavioural difficulties at post-intervention and at 6-month follow-up, the efficiency of the Seminar Series can be modified around this mediating variable. This seems to be a more accurate way of understanding the most important elements of an intervention rather than exploring parents' subjective perceptions about it, which may potentially be misleading. In a mediation analysis of the variables that mediated the effect of the "Incredible Years" parent training programme on child conduct problems, parents considered changes in mood and confidence as the most salient aspect of the programme for the improvement in child behaviour. These variables, although improved by treatment, were not correlated with treatment outcome and so they did not have any mediation effects on the outcome. However, by using parent and child observations, it was found that positive parenting partially mediated the effects of the parenting intervention on the negative behaviour of the child (Gardner, Burton, & Klimes, 2006).

Mediators were hypothesised to be part of causal path that followed from the intervention and proceeded to the outcome, but causality cannot be demonstrated, as participants were not randomised to the mediator (Weersing & Weisz, 2002). A further limitation in this study was that change in dysfunctional parenting and change in child behaviour problems were assessed using parental self-reports. For this reason, it is possible that the correlation between the mediator and the primary outcome measure was obtained because of the measurement method and not any sort of causal connection. Since both measures were based on parents' self-reports, who might have given socially desirable answers and so, any correlations could be due to the parents' perceptions of their child's and their own behaviour (Rutter, 2005).

Another criterion that should be met before establishing mediation causality is that of temporal ordering of the mediation and outcome measurement, meaning that the mediation must occur before the end of the intervention and before the assessment of the outcome measures (Kaemer, Stice, Kazdin, Offord, & Kupfer, 2001; MacKinnon, 2008). So, it is recommended that the potential mediator should be measured during the study (Weersing & Weisz, 2002). Similar issues have been noticed in previous research where the methods may have obscured the mediation relationship between variables as both the mediator and the outcome were measured at the same point in time (Gardner, Burton, & Klimes, 2006). In this study, since the mediation variable and the outcome variable were measured at the same assessment point, at post-intervention, in mediation model I, it was difficult to demonstrate that the mediation was part of a causal path that followed from the intervention and proceeded to the outcome. To overcome this limitation, changes in dysfunctional parenting practices between baseline and post-intervention, which preceded changes in child behavioural difficulties at 6-month follow-up, were found to be a significant mediator in mediation model II.

There is still a debate on whether mediation analyses are inherently causal. According to Neyman, randomised trials can estimate causal effects without bias (Neyman, 1990); however, although average causal effects can be identified, the causal mechanisms cannot be explained (Cook, 2002; Deaton, 2009; Heckman & Smith, 1995). Due to randomisation the path between the treatment allocation (X) and the mediator (M) may be unbiased, yet, the path between the mediator (M) and the outcome variable (Y) may be still biased because of the presence of confounders in the mediation process due to lack of randomisation to the mediator (Imai, Tingley, & Yamamoto, 2013).

To conclude, it seems that there were no significant baseline demographic characteristics or parent and child baseline measurements to moderate the effects of the Seminar Series. For this reason, it is assumed that this type of intervention is not particularly effective or less effective for any one type of parent and is likely to be seen as useful across the general population. In addition, although cautious in the light of methodological limitations, a partial mediation of changing parents' dysfunctional practices at post-intervention for changing children's behaviour at 6-month follow-up was suggested. To show any possible causality, a "causal chain approach" should be followed (Spencer, Zanna, & Fong, 2005), where first the causal effect of the treatment on the mediating variable is established in an RCT, and then the mediator is manipulated and its effects on the outcome are estimated. These variables could be tested in parallel groups or crossover designs (Imai, Tingley, & Yamamoto, 2013).

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CHAPTER 6

Chapter 6: Focus groups

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6.1 Overview

This chapter explores a sample of Greek parents' perceptions of the positive parenting approach after they attended the Triple P Seminar Series that was delivered for the universal prevention of behavioural and emotional difficulties in children aged 2 to 12. Focus group sessions were scheduled where intervention parents from the pilot RCT were invited to participate regardless of the number of seminars they attended.

There was a twofold rationale for including this additional session. This was the first time that the Triple P programme was delivered to Greek parents, so the initial purpose of the focus group session was to evaluate the Seminar Series' practical implications in the everyday life of Greek families. This was investigated by exploring parents' views on the barriers to and facilitators of using positive parenting strategies to manage their child's behavioural and emotional difficulties. Secondly, parents evaluated the acceptability, feasibility and cultural relevance of the intervention. Parental views on the usefulness of this brief format of parenting intervention were also examined during the group discussions as well as through a questionnaire.

6.2 Introduction

6.2.1 Literature Review

The methods of process evaluation in intervention studies generally include several core categories, such as the reach of the programme into the target group, the degree to which its various components are delivered with fidelity, the acceptability of the intervention in the form of satisfaction of the parties involved, and the extent to which the intervention meets agreed quality criteria (Green & Lewis, 1986; Hawe,

Degeling, & Hall, 1990). This review describes the characteristics of participants and the aspects of the programmes that parents find important to keep them engaged in a parenting programme. Its main focus is to analyse parents' perceptions of positive parenting and its components, which aim to change their practices. These views are important for policymakers and practitioners to determine the therapeutic programmes that work in practice, and tailor them to meet the users' needs.

Rosenstock (1990) presented the *Health Belief Model*, in which demographic and socio-psychological variables, perceived efficacy and perceived control as well as health motivation are some of the most significant mediating factors that connect the various types of perceptions with the predicted health behaviour. In this theoretical model, parents' motivation to participate in preventive interventions and to change their behaviour is given particular importance. Furthermore, according to attribution theory (Heider, 1958), self-efficacy theory (Bandura, 1977) and cognitive evaluation theory (Deci & Ryan, 1985), parental motivation is likely to be increased if the programme makes them attribute their results to internally controllable factors, makes them believe that these cognitions are effective agents in reaching desired goals and makes them be interested in the intervention. Once motivation is activated, change can be accomplished in a relatively short time (Miller & Rollnick, 2002).

Recruitment of parents with children characterised by conduct problems in parenting interventions is a serious challenge (Prinz *et al.*, 2001). Families who have had children diagnosed with disruptive behaviour were seven times less likely to be engaged with therapy (Peters, Calam, & Harrington, 2005). Once this barrier is overcome, attrition is likely to arise as a significant problem. It is estimated that among families that begin treatment, 40-60% drop out without completing the intervention (Armbruster & Kazdin, 1994; Kazdin, 1996). Mediator factors, which

associate the various types of perceptions with the predicted health behaviour in parenting interventions, have been assessed mainly in studies investigating the underlying reasons for attrition.

There are multiple child, parent, family and contextual factors that place families at risk for termination of the treatment prematurely (Friars & Mellor, 2009). These include: early onset and more severe child antisocial behaviour, comorbid diagnoses, child academic impairment, socioeconomic disadvantage, parental education and socioeconomic status, single-parent families, parental stress and life events and parent history of antisocial behaviour during childhood (Kazdin, 1995; Kazdin, Mazurick, & Bass, 1993; Snow, McDougal-Frey, & Kern, 2002). In addition, it seems that disadvantaged parents living in poverty, residents of rural and remote areas where there is limited accessibility and a lack of service, recent immigrants, and indigenous parents need additional effort to engage them with participating in parenting interventions (Cunningham, Bremner, & Boyle, 1995; Harrington *et al.*, 2000; Sanders & Bor, 2008).

Parental willingness to participate in a parenting programme also depends on several factors, such as the nature of the programme offered, how it is delivered, perceptions of the parents as to whether the programme is relevant and meets their needs, how much time they will need to invest in completing the programme and the payoff they anticipate relative to other uses of their time (Morawska & Sanders, 2006). It is also expected that the longer the treatments are, the higher the percentage of parents who respond poorly or drop out of treatment (Snow, Kern, & Curlette, 2001). Evidence supports the assumption that it is the parental perception of how demanding the treatment is that determines attrition rates at the beginning of the treatment (Kazdin, Holland, & Crowley, 1997; Kazdin, Holland, Crowley, & Breton,

1997). This perception is highly associated with parental characteristics, such as parental psychopathology and poor quality of life (Kazdin & Wassell, 2000).

Kazdin and colleagues (1997) conducted a study to identify possible obstacles to participation in treatment. Parental perceptions that treatment might be demanding, unlikely to be helpful, and of little relevance to the child's problems, as well as a poor relationship with the therapist, were found to contribute to their dropping out of treatment over and above the contribution of more well-studied family, parent and child factors.

Grimshaw and McGuire (1998) conducted in-depth interviews to assess group-based parenting programmes. It was found that although parents expressed a positive view towards parenting programmes, it was hard for parents to attend training sessions due to the lack of childcare. Some parents also felt that attending parent training programmes might imply that they were not good parents. Equally, the majority of parents who participated expressed their desire to have attended a parenting programme before their child reached the age of three. Consequently, the way parents are approached and the period in which they get parenting information seem to be vital attributes.

Bloomfield and colleagues (2005) conducted five focus groups with parents whose children were under six years of age, as well as with health professionals to evaluate their views on effective parenting and how parents can be helped to feel more efficacious in their parenting role. There were qualitative differences on how each group expressed themes, such as expectations of others, establishing routines, play, behavioural issues and discipline, empathy and communication. Professionals put considerable emphasis on perceived behavioural management to be a major concern for parents, while parents considered child emotional development and the

understanding of the child to be equally important. The findings suggest that it is essential to take into consideration the parents' perspectives, so that the programme is acceptable for parents and the perceived outcome of effective parenting is achieved.

Extended research has been conducted to investigate parental perceptions of child difficulties and parenting interventions. Studies document parental perceptions of common behavioural problems and their attributions for these behaviours (Baker-Henningham, 2011; Mash & Johnston, 1983; Webster-Stratton, 1988). There are a great number of studies, which assess parental perceptions associated with their competence in managing child behaviour, as well as child behavioural difficulties in infancy and childhood (Ballenski & Cook, 1982; Gilbert, Hanson, & Davis, 1982; Hubert & Wachs, 1985) and the most common management strategies parents use to deal with child misbehaviour (Halpenny, Nixon, & Watson, 2010; Baker-Henningham, 2011). The relationship between parental perceptions and parenting is clinically important, as it is observed that attributions for misbehaviour are relatively more stable and internal to the child in abusive parents in comparison with those given by non-abusive parents (Larrance & Twentyman, 1983). Likewise, causal attributions held about child behaviour have been related with parental affect (Weiner, 1985). This aspect is critical because although parent management training is directed at the parents, many parents believe the cause of the problem lies within the child. In fact, parents who believe that they are responsible for their child's behaviour are more likely to participate and complete a programme based on parent management training.

Studies and qualitative syntheses highlight key aspects that parents consider important in order to access and engage with parenting programmes (Eisner &

Meidert, 2011; Koerting *et al.*, 2013; Sumargi, Sofronoff, & Morawska, 2013) This information may be particularly useful to policymakers and practitioners in policy-making and decision-making processes due to the wide range of parenting programmes available to parents. However, only a few studies have investigated parental perceptions of the intervention programme itself and its components that may change parenting style effectively. This information may contribute to the understanding of the mechanisms for change in parenting practices.

Barlow and Stewart-Brown (2001) conducted a pilot study based on interviews to assess parents' experiences of a parenting programme. Parents underlined the importance of participating in parenting groups because of their power to support the individual, to mirror concerns and encourage achievement. This is in accordance with previous findings indicating that some parents would rather receive advice derived from other parents than an expert (Oakley, 1992; Smith, 1998; Snow, Kern, & Curlette, 2001). However, Grimshaw and McGuire (1998) noted that groups might also prevent change and exclude certain individuals or groups of individuals. Another important outcome of Barlow's and Stewart-Brown's (2001) research was that parents who took part in group-based interventions increased their feeling of empathy, as well as their ability to identify with their children. This seemed to have influenced both their perceptions regarding the reasons for children's behaviour and the inappropriateness of particular discipline strategies, such as shouting, smacking and threatening. The feeling-based element added to the programme seems to be necessary in a purely behavioural intervention, where behavioural strategies such as "Time Out" and "Ignoring" can be used in abusive ways by parents who cannot identify empathically with their children. Therefore, a feeling-based approach incorporated to a behavioural intervention seemed to be

preferable for parents than a behaviour-based programme alone.

A recent systematic review of qualitative studies revealed what parents perceived to be essential for effective practice in parenting programmes (Kane, Wood, & Barlow, 2007). Although there are a small number of papers identified in this review, information on different types of parenting programmes that were delivered in various ways was provided from the user's perspective. After having identified the main interconnecting themes across qualitative papers, a framework was developed to indicate the factors that may need to be addressed in interventions so that parents engage in parenting programmes. These factors include: (1) parents' acknowledgement that there is a problem; (2) parents' understanding of the seriousness of the consequences of conduct disorder; (3) gain of knowledge and skills for dealing with children's behaviour; (4) acquisition of control and confidence in their ability to parent effectively; (5) non-judgmental support from professionals in the process of gaining new knowledge, skills and understanding, and help with implementing parenting skills; (6) parents' need for peer support; (7) parents' need for their own needs to be recognised and; (8) inter-parental support.

There are certain limitations in these studies. Firstly, in most of the studies the small sample size used, the focus on Caucasian parents and the dominance of non-working mothers in parenting studies, as they have relatively more spare time, limit the representativeness of the selected samples and the generalisability of the findings. Studies have shown that fathers seem to have different expectations for their children and slightly different perceptions of child rearing than mothers (Gilbert, Hanson, & Davis, 1982; Stephens, 2009; Witt, 1997).

Another problem regarding parental reports is the issue of positive response bias. Research studies have shown that client satisfaction in parenting programmes

tends to be overly positive despite the actual services provided (Mitchell-DiCenso, Pinelli, & Southwell, 1996; Bailey, Scarborough, & Hebbeler, 2003; Goldring & Shapira, 1993; McWilliam *et al.*, 1995; Zigler & Balla, 1982). Some parents may be also satisfied with a programme because they lack information about the quality of other programmes, and so they think that they have received the best one (Lanners & Mombaerts, 2000). Also, parents' assessments of the programme may be influenced by the amount of their attendance; the accounts of parents who have fully attended a programme may be more detailed and have greater insight, and therefore may be more valid (Barlow & Stewart-Brown, 2001).

Taking parental perceptions into account, and having the programme tailored by adjusting its components to reflect parental views before its implementation, might increase parental interest, and in turn, reduce attrition. This assumption is consistent with other research findings suggesting that a parenting programme can be efficient once parental concerns and motivations are integrated into the programme's design and practitioners employ effective clinical methods for behavioural change (Miller & Rollnick, 2002). Information provided directly by parents, the service users, indicated the key factors that parents perceived to be helpful in order for parenting programmes to facilitate changes in parents' practices (Kane, Wood, & Barlow, 2007). The present study focuses not only on what happened before and after the intervention, but also on the actual mechanisms that take place while parents implement commonly used parenting practices, which may lead to changes in parenting style. In this context, the concept of culture was taken into account, to make sure that the Triple P programme was suitable for Greek parents.

6.3 The Role of Culture

Children develop through their cultural experiences and social schemas, which in turn guide their behaviour, and through ethnic identity that can directly influence their disruptive behaviour (Holmes & Lochman, 2009). Accordingly, culture has an impact on parenting, as parents tend to adjust their parenting style to the cultural conditions. For example, Frisby (1992) reported that there are considerable differences between Caucasian and African-American parents' attitudes, behaviours and preferences regarding parenting and parent education. To illustrate, there is evidence showing that physical aggression can be advantageous for youth growing up in severely harsh, threatening and violent low-income neighbourhoods (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004; Gonzales, Cauce, Friedman, & Mason, 1996; Julian, McKenry, & McKelvey, 1994). Parents acquire parenting knowledge in a particular cultural context that may vary with reference to family structure, accessibility of extended family support, gender-based roles and exposure to particular traditions. Parents gain this knowledge through other members of the culture, other experienced parents, modelling, and family-of-origin experiences (Grusec, Hastings, & Mammone, 1994; Sanders, 2008).

It is essential to take culture and ethnicity into consideration for several reasons. Cultural factors may have an impact on whether parents are interested in participating in a parenting programme, whether they perceive a behavioural difficulty as a problem, and whether they consider different parenting styles and disciplinary strategies acceptable, feasible and useful. Therefore, parenting interventions need to address differences in parenting across cultures (Bernal, 1984). Grusec and colleagues (1994) presumed that parental perceptions associated with methods of changing children's behaviour are more likely to be affected by the culture in which one lives, whereas more specific perceptions of self-efficacy and

negatively biased attributions are more likely to be influenced by specific child rearing experiences.

Triple P implements key strategies to assure the cultural relevance of the interventions provided. This is achieved by soliciting consumer opinion about parental strategies advocated, conducting focus groups of elders, service providers and parent consumers to identify key concerns and issues related to programme applicability with specific ethnic groups, translating materials to ensure that indigenous families are included, using voice-synchronised dubbing of selected video material and carrying out studies with different ethnic groups to evaluate the efficacy of the culturally adapted procedures. In fact, research indicates that the Triple P programme contingent upon the principle of positive parenting can be both effective and culturally acceptable in various cultural contexts, such as Hong Kong (Leung, Sanders, Leung, Mak, & Lau, 2003), Japan (Matsumoto, Sofronoff, & Sanders, 2007), Germany (Heinrichs *et al.*, 2006), Switzerland (Bodenmann, Cina, Ledermann, & Sanders, 2008), Australia (Sanders, Markie-Dadds, Tully, & Bor, 2000) and New Zealand (Venning, Blampied, & France, 2003). This is the first time that the Triple P was delivered in Greece and parents' perceptions were investigated to gain better insight into the mechanisms of change.

6.4 Objectives

The facilitator has previously studied parents' views on the potential acceptability, feasibility and cultural relevance of the programme (Foskolos, 2010). In this pilot study, an opportunity sample of Greek parents in Athens completed the Strengths and Difficulties Questionnaire. From the parents whose children's scores were at the abnormal range, a random sample was drawn and invited to a 2-hour

session. During this focus group, parents watched a 55-minute DVD entitled '*Every Parent's Survival Guide*' without having any previous knowledge or additional information about the programme. Based on their understanding of the strategies presented on the DVD, parents rated them as acceptable, feasible and culturally relevant suggesting that this parenting intervention could be delivered in the Greek context.

In the present study, parental perceptions of the programme were investigated after parents had implemented the strategies in their everyday life. The results of the pilot RCT suggested that children whose parents attended the Seminar Series showed a significant improvement in their behaviour over time, whilst parents showed a significant reduction in dysfunctional parenting practices after the intervention. The findings from the mediator analysis also speculated that the reduction in dysfunctional parenting might be associated with improvements in child problem behaviour. Due to the relatively small sample size of the pilot study, parents' perceptions of the facilitators of and barriers to applying positive parenting strategies were investigated in a detailed way to provide more in-depth understanding to parents' personal experiences, making the results more ecologically valid.

This chapter presents the study design, conduct of the study, analysis of results and interpretation, as well as the validity of results, based on the guidelines provided by the COREQ (Consolidated criteria for qualitative research), a statement on the reporting of focus groups (Tong, Sainsbury, & Craig, 2006).

6.5 Methods

6.5.1 Procedure

After the completion of the Seminar Series, all parents who were randomised to the intervention group were invited to participate in an additional session, the focus groups, regardless of their attendance, education level, experience, or background, as they could all contribute to the discussions (Morgan, 1988; Stewart & Shamdasani, 1990). Parents who attended no seminars or were allocated to the control group were not invited to the groups. Six focus groups were formed. No repeat sessions were carried out.

The researcher, who delivered the Seminar Series to the parents and was knowledgeable about the intervention, facilitated the focus groups. He had also previously conducted focus groups in a pilot study (Foskolos, 2010). The focus group sessions took place in the same conference room of 'Bookshop Patakis' where the Seminar Series was delivered and were held on a Saturday, so that parents who were working full-time could attend. The time slots varied from 10 am until 6 pm when the bookshop closed. Each focus group session lasted 90 minutes; during the first 30 minutes parents filled in a questionnaire and for the remaining 60 minutes the discussions took place.

Parents were gathered in small groups to share their experiences and views on the programme, and also to practise their self-management skills. The focus groups were offered as an additional element, which was incorporated in this study. The researcher created the focus group session for the purpose of this study, which was entitled "*What did I do well? What would I do different next time?*" The title and structure of this session derived from the standard therapy provided in Level 4: Standard Triple P. As part of their standard 8-week therapy treatment, parents learn how to use their own self-management competencies. Self-management includes all the tools or skills that parents can use to become more self-sufficient. These skills

involve self-monitoring, self-determination of performance goals and standards, self-evaluation against some performance criterion, and self-selection of change strategies. Ultimately, each parent was responsible for deciding the parenting strategy they would follow. Therefore, at the beginning of the Seminar Series parents had to select which aspects of their own and their child's behaviour they wished to work on, set goals for themselves and choose specific parenting and child management techniques. During the focus groups, they were prompted to self-evaluate their success with their chosen goals against self-determined criteria. During this time parents could also ask questions they had about the applicability of the strategies discussed during the Seminar Series, and they received feedback regarding the implementation of their newly acquired skills in a supportive context, using a self-regulatory framework (Sanders, Markie-Dadds, & Turner, 2000).

The facilitator had already attempted to build a trusting relationship with the participants, via the intervention delivery, and by informally interacting with them before and after the seminars. Beverages and snacks were also provided to make participants feel comfortable and welcome (Morgan & Scannell, 1998). The researcher adhered to the Triple P principles (Sanders, Markie-Dadds, & Turner, 2000) by creating a positive and encouraging environment for the participants where there was no judgement and no attempt to impose his views on them. The facilitator practised active listening and non-verbal skills while trying to understand the perspective of each participant and avoided signs of disrespect that could be quickly transmitted to the group and could have resulted in reduced contributions. The researcher only answered parents' questions after other participants had expressed their opinions and only by reminding them of the information previously given in the Tip Sheets. He also avoided head nodding and short verbal responses, such as 'ok',

‘yes’, ‘uh huh’, ‘excellent’, which might indicate preference about opinions. He paused for five seconds after a participant had finished talking before starting to talk. This allowed other participants to jump in and express their opinions. Further probes, such as “*Would you explain that further?*” or “*Can you give me a specific example of that?*” were used to request additional information (Krueger & Casey, 2000). Lastly, the facilitator tried to be aware of the group dynamics making sure that all participants had adequate time to speak.

6.5.2 Participants

The participants of the focus groups had taken part in the intervention and RCT conducted between April and June 2012, and thus they already knew the facilitator. Parents received details of the focus group sessions at the end of the third seminar. Those who attended this seminar had the opportunity to apply immediately and reserve a place at their preferred day and time, based on days and time slots that were set by the researcher. Participants who were not present on that day were invited by phone or email.

The number of focus groups may vary according to the purposes of the study. The use of multiple focus groups allows the researcher to assess the extent to which saturation has been achieved (Flick, 1998; Morse, 1995). It has been suggested that four to six focus groups may be adequate to reach data saturation with each group meeting once or multiple times (Krueger, 1994; Morgan 1997). It has also been observed that there are rarely more than three or four focus groups carried out in the social sciences (Stewart, Shamdasani, & Rook, 2007). Six groups were organised to limit bias that might have been seen in a single or a small number of focus groups so that themes could also have been explored across groups. Therefore according to

pragmatic guidelines, it was expected that within the first three or four groups data saturation would have been achieved because of the number of sessions, the common characteristics between participants and the standardisation of the questions (Morgan, 1996).

Six focus group sessions were organised and a total of 47 out of 83 parents (57%) took part. In the first session there were nine parents, in the second six (seven, including a couple), in the third 11, in the fourth seven, in the fifth nine and in the sixth five (six, including a couple). There were two parents who came with their partners as both had attended the seminars. Although both parents' opinions were included in the analysis they were counted as a unit and so as one participant. There were also five parents scheduled to come to the session who did not attend. The main reasons for not attending were related to health issues, personal and working arrangements or clashes with family schedules.

The number of participants of each group is an important element in focus group research. It is recommended that the optimum size for a focus group session is between six to eight participants but they can work effectively with as few as three and as many as 14 (Stewart & Shamdasani, 1990). In this study, the group size seemed to be appropriate in all groups. Even in the largest one, the facilitator made sure that all participants got sufficient time to speak in order to avoid any frustration or disappointment (Bloor, Frankland, Thomas, & Robson, 2001).

The majority of parents who agreed to take part in the focus groups had attended the whole seminar series (n=37, 79%) and represented a substantial 88% of all parents who attended three seminars. There were eight parents (17%) who had attended two seminars representing the 40% of their subgroup, and two parents (4%) who had attended one seminar representing the 11% of their subgroup. The

sociodemographic characteristics of the participants by group are presented in Table 1 and 2.

The discussions were audio- and video-recorded. All sessions were transcribed verbatim from audio recording. When the sound of the audio-recorder was unclear the video-recorder was used to clarify the content. The transcript was reviewed three times to check for accuracy of the information provided. To enhance the reliability of the study, the final quotations selected were returned to parents for comments and/or corrections to ensure that no changes had been made to their statements. The transcript of the focus groups was written first in Greek, so that the content was not altered, it was analysed and then translated into English. The translation was revised by a Greek linguistics PhD student of Cambridge University for understanding and relevance of the translated material.

To prevent the identification of the participants and ensure confidentiality their names were coded in a particular way. Each quote was accompanied by three numbers following this format (No1.No2.No3): the first number represents the number of focus group session they attended, the second number represents the page of their quote on the transcript, and the third number represents the number of letters of their surname followed by the number of letters of their first name.

Table 1. *Characteristics of parents who participated in focus group sessions*

	Session 1 (n=9)	Session 2 (n=6)	Session 3 (n=11)	Session 4 (n=7)	Session 5 (n=9)	Session 6 (n=5)
Mothers	7	5	11	7	8	5
Fathers	2	1*	0	0	1	0*
Age						
>40	6	2	7	4	5	4
<40	3	4	4	3	4	1
Marital status						
Married	8	5	11	6	6	3
Other status	1	1	0	1	3	2
Education						
< University degree	1	1	1	0	0	1
> University degree	8	5	10	7	9	4
* Couple, father was also present.						

Occupation						
Full time	5	3	10	4	7	3
Non-full time	4	3	1	3	2	2

Monthly income						
Low	6	6	3	3	5	2
High	3	0	8	4	4	3

Number of children						
1	5	3	9	3	8	4
2 or more	4	3	2	4	1	1

 Table 2. *Characteristics of children whose parents participated in focus group sessions*

	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6
<i>Child's gender</i>						
Boys	7	2	5	2	4	1
Girls	2	4	6	5	5	4
<i>Age</i>						
2-5	6	3	7	5	5	4
6-12	3	3	4	2	4	1
<i>Child ECBI intensity scale</i>						
Below cut-off	5	3	10	2	6	2
Above cut-off	4	3	1	5	3	3

6.5.3 Measures

Questionnaire.

During the first 30 minutes of the focus group sessions parents were asked to complete the Triple P Parent Questionnaire, part of the Parent Opinion Questionnaire (POQ) (Sanders *et al.*, 2004). The POQ includes several questionnaires to assess parental perceptions of several aspects of parenting interventions. The specific ‘Triple P Parent Questionnaire’ evaluating the strategies presented in the Seminar Series was used in this study, though in a simpler format due to the limited time available. This tool was chosen among others because it was designed for Triple P evaluations and is currently being used in Triple P research (Morawska, & Sanders, in press).

The questionnaire was initially designed to measure only acceptability, feasibility and cultural relevance of the strategies. *Treatment acceptability* was pioneered by Kazdin (1981) and is defined as the perceptions of lay persons, clients, and others of whether the procedures recommended for treatment are appropriate, fair and reasonable for the problem or client. The acceptability of the strategies and its acceptability as a possible treatment for children with disruptive behaviours were evaluated. *Feasibility* has not been adequately defined in social policy and research mainly because it depends on the nature of the intervention. Andrews and Buettner (2001) developed a strategic approach to assessing the feasibility of a prevention and/or intervention programme. Their approach is basically focused on three concepts, namely availability, affordability and feasibility. The concept of feasibility was the main focus and was analysed through the questionnaire provided to the participants, as well as through the discussion. *Cultural relevance* refers to the

extent to which interventions are consistent with the values, beliefs and desired outcomes of a particular community (Kumpfer, Alvarado, Smith, & Bellamy, 2002; Nation *et al.*, 2003).

However, two columns were added to the original questionnaire to fit the purposes of this study: (1) a column asking whether parents actually used each strategy and (2) a column measuring the usefulness of each strategy. The concept of perceived ‘usefulness’ was introduced to measure how practical the strategies were to help them overcome their own and their child’s difficulties in everyday life.

Focus group discussion script.

All focus group discussions took part in the second part (60 minutes) of the session and followed exactly the same structure and format in order to enhance the reliability of the results. Having a focus group script also allowed the facilitator to be on track and on time. A topic guide was constructed with a conversation in mind including topic questions with areas for prompting. Questions were moving from general to more specific and the question order was selected on the basis of covering the aims of the study, and at the same time creating a meaningful conversation with parents in areas of interest.

Particular attention was placed on the structure, process and content of the discussion groups to improve group performance and overall effectiveness (Schwarz, 2002). To avoid socially desirable responses (Grimm, 2010), the title of the session encouraged parents to share both positive experiences as well as difficulties they encountered while implementing the programme. For the same reason, although the topic of the discussion was clear to the participants, they were

not asked directly to evaluate the Seminar Series during group discussions. Each focus group session had three main parts, the opening, the main and the closing section.

At the opening section, to communicate respect and encourage participation, the facilitator introduced the session with a welcome statement, an overview and the aim of the assembly, ground rules for participation, and the opening question. The overview provided the purpose and rationale for the focus group discussion. Ground rules were set as follows: participants were reminded that they would have to talk clearly and in order, without interrupting while someone else was talking, and minimise side conversations. They were allowed to describe their personal experiences, comment on other parents' experiences without judgement, and express their agreement or opposition to others' opinions with respect. During the main section, introductory, transition and key questions were introduced making sure all topics under investigation were adequately explored. The first question was to introduce themselves to the group, talk briefly about the child for whom they completed the questionnaires and share their overall view on the programme, which allowed everyone to talk. The participants were guided that there was a first section where they would discuss what they did well whilst implementing the strategies, and a separate section to talk about their difficulties and the ways they could improve their practices. The closing section wrapped up the focus group session. The facilitator thanked the participants, gave them an opportunity for further input, informed them on how the data would be used and when the process would be completed. This way, the focus group agenda was also kept simple. The structure of the session is presented in Figure 1.

**Open Questions*

- Please tell us your name and one thing you would like to share about your child.

**Introductory Questions*

- Think of Positive Parenting Program. What did you find easy about the Seminar Series and what did you find difficult?

Transition Questions

- Think about the strategies we talked about during the Seminar Series.
- Which strategies did you apply? Did you notice any changes?
- Why do you think you achieved this change?

Key questions

- Which strategies did you find the most difficult to apply?
- Think of a case where you tried to apply a strategy and it did not work. What did exactly happen and it did not work?
- How did you deal with this problem?
- Why do you think it did not work?
- What do you need so you can deal with such situations in the future?

**Final questions*

The aim of this focus group was to describe the benefits and the difficulties you faced in applying the strategies you learnt during the Seminar Series three months ago. Is there anything we did not refer to or anything you would like to add?

Figure 1. Topic questions of the focus group sessions.

6.5.4 Ethical Requirements

This study received ethical clearance by the University of Oxford Central Research Ethics Committee. The British Psychological Society Guidelines (British Psychological Society, 2000) were used in designing this project. The informed consent process involved presenting a detailed written description of the purpose of the study. It specified who was conducting the research and how to contact him. All participants were offered a copy of the informed consent form. Before the focus groups began participants were reminded: 1) that the session would be audio- and video-recorded and; 2) about the information related to confidentiality and recordings, which was included in the informed consent they signed for the main study. He also made sure that they were comfortable with the procedures and confirmed their willingness to continue participation.

6.5.5 Analysis

The focus group discussions were analysed using a thematic analysis. Thematic analysis is an analytic method, which is used to encode qualitative data (Boyatzis, 1998). Like other methods, such as grounded theory, interpretative phenomenology and discourse analysis, thematic analysis also searches for certain themes and patterns across a data set rather than within a data item, such as individual interviews or case-study forms of analysis such as narrative analysis. However, unlike the methods previously mentioned, thematic analysis is not attached to any pre-existing theoretical framework but it is flexible enough to be used within different theoretical frameworks.

In this study, an inductive analysis was followed which had a descriptive and

exploratory orientation as opposed to a confirmatory, theoretical approach. The data were coded without any attempt of trying to fit the codes and themes into a pre-existing coding frame, or the researcher's analytic preconceptions. As a result the inductive themes were derived bottom-up from the researcher's readings of the data and so they were content-driven rather than theory-driven (Patton, 1990). The themes were also identified at a semantic or explicit level rather than a latent or interpretative level (Boyatzis, 1998). So, the themes were selected within the explicit or surface meanings of the data without exploring beyond the transcript. The analytic process progressed from description to interpretation; the data were initially organised to show patterns in semantic content. These patterns were summarised, and then their significance, meanings and implications were further explored (Patton, 1990). In terms of epistemology, an essentialist or realist approach was followed on the basis that the research question was relevant to the way parents made sense of their realities, experiences and events, while a simple, largely unidirectional relationship is assumed between meaning, experience and language (Daly, Kellehear, & Gliksman, 1997; Potter & Wetherell, 1987; Widdicombe & Wooffitt, 1995). Overall, the data were analysed based on an inductive, semantic and realist approach.

Only one researcher coded the data due to cost barriers. The thematic analysis was based on the six steps described by Braun and Clark (2006). During the first phase, the researcher familiarised himself with the data. Having collected the data, he had some prior knowledge of it as well as some initial analytic thoughts. Yet, he made sure that he was familiar with the depth and breadth of the content by actively reading through it. Initial notes and marking ideas for coding were taken.

At the second phase, initial codes were generated as a way to organise the data into meaningful groups (Tuckett, 2005). The analyst coded the content of the entire data set. Extracts of data were coded inclusively while keeping any relevant accompanying narrative so that the context was not lost. At the third phase, the different codes were analysed, and the relationship between codes, between themes and between different levels of themes was explored. This way, the codes were sorted into potential themes, and all the relevant coded data extracts within the identified themes were collated.

At the fourth phase, themes were reviewed so that they were derived from enough data, were not too diverse and were not collapsed into each other. Once all the collated extracts for each theme appeared to form a coherent pattern, a theme was then refined. The validity of each individual theme in relation to the entire data set was checked and the thematic map was reviewed to make sure it was an accurate representation of the data set as a whole. Before this report was produced, the themes were defined and further refined at the fifth phase. It was important to identify the ‘essence’ of what each theme represented and determine what aspect of the data each theme captured, while making sure that the themes, and any possible sub-themes, were presented in a coherent and internally consistent account with surrounding narrative. A thematic map representing an overall conceptualisation of the data patterns, and relationships between them is displayed in the results section (Figure 1,2).

This analysis was conducted manually instead of using NVivo, a thorough qualitative analysis software package. This software has many advantages as it can be a single location for storage where the data set can be easily accessed, and handle

a large amount of data using consistent coding schemes so that time may be saved (Bowling, 1997; Kelle & Heather, 1995; Lee & Fielding, 1991; Moseley, Mead, & Murphy, 1997; Tesch, 1990; Webb, 1999). For the reasons above, the software may facilitate the analysis and interpretation of the data (Morison & Moir, 1998; Roberts & Wilson, 2002). On the other hand, there are some disadvantages of using NVivo for qualitative analysis. It is debated that computers are unable to analyse data better than the analyst on the grounds that they cannot understand the meaning of text (Kelle, 1995; Roberts & Wilson, 2002). For this reason, using the software program may distance the analyst from their data, and so may disrupt and distort the analysis (Bong 2002; Bourdon 2002; Roberts & Wilson, 2002). It is also argued that it is likely that the analyst follows a prescriptive approach to analysis, becomes reluctant to alter categories of information once they have been developed or even takes short cuts to analysis (Robson, 1993). Lastly, existing barriers include the time and effort taken to gain proficiency in using this program (Weitzman, 2000). Ultimately, despite the familiarity of the researcher with the software, after initial attempts to use the Nvivo for this analysis, the size of the project seemed to be unsuitable for this programme and, on this basis, was carried out manually (Basit, 2003).

The main themes were presented along with the codes, and extracts from the discussions were selected to justify the choice of the description and interpretation of the data. The selection process was conducted so that the extracts were clear representations of the codes without repetitions of similar examples. The extracts that were not selected are presented in Appendix 1. It should be noted that in the examples provided, the sequence of three dots (...) represents the omission of a word or phrase, whereas words within parenthesis represent words that were added by the

researcher to clarify the context of the phrase. Whenever two or more participants commented on a statement, the comments of each participant were separated by a dash (-) as well as their coded names. The parts of the quotes in bold represented the different codes of each theme, whereas the non-bold surrounding narrative was used so that the context was not lost (Bryman, 2001).

MAIN THEMES

SUB-THEMES

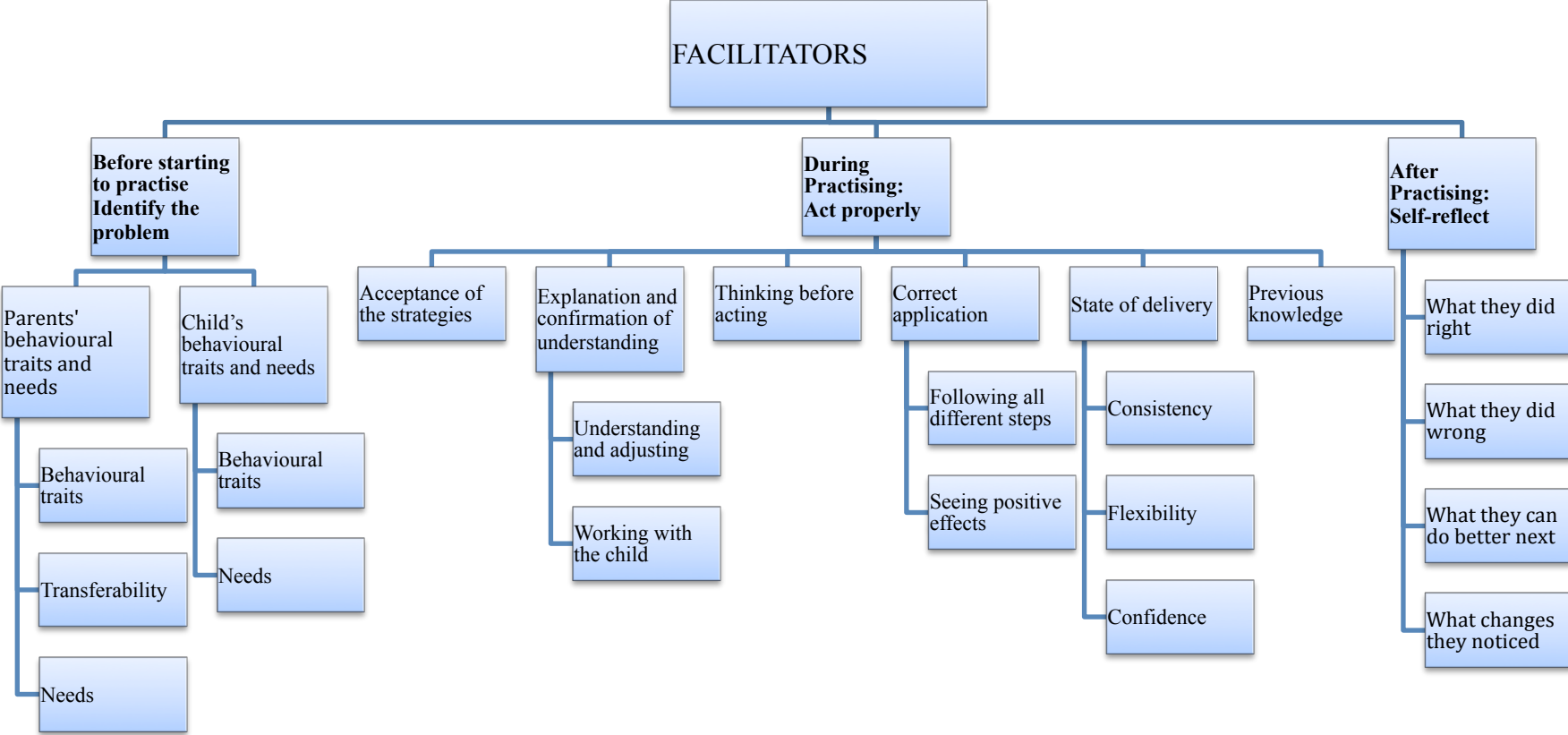


Figure 2. Facilitators of positive parenting.

**MAIN
THEMES**

**SUB-
THEMES**

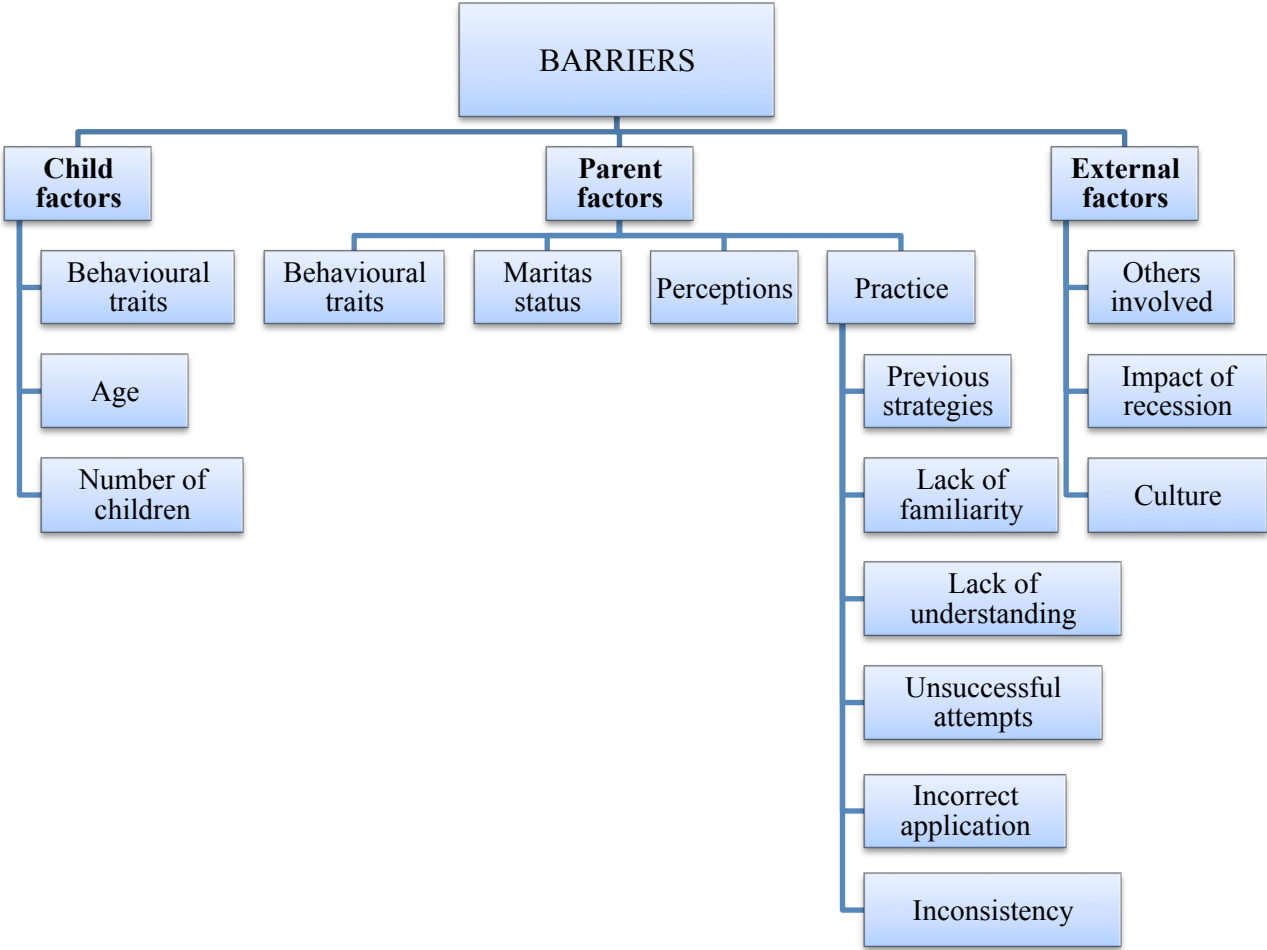


Figure 3. Barriers to positive parenting

6.6 Results

6.6.1 Facilitators of positive parenting programme

Theme: Before starting to practise: Identify the problem.

(1) Parent's behavioural traits and needs

(a) Behavioural traits

There were many parents from all six focus groups who linked their negative behaviours to their child's behavioural and emotional difficulties. Parents referred to very specific traits of their behaviours, which they thought might have had an impact on the way they behaved towards their children. Half of the selected quotations under this theme (11 out of 20) consisted of examples where parents considered that negativity, including being stressed, anxious or overwrought, being easily irritated, annoyed or upset, or having anger issues, may have resulted in dysfunctional parenting behaviours, such as raising their voice, yelling, and using corporal punishment as a form to discipline their children. Also, other factors, such as having a stressful day, nagging or arguing children, and having to stay at home without much to do, may have intensified parents' behavioural responses.

*“What made a huge difference for us was when I managed to **reduce the yelling and screaming at home**; and when I stopped it **I felt more confident in myself**; and now, no matter what happens, I'm not going to yell or scream because **I know I can now use some of these strategies instead**. I step back and discuss the situation - we discuss a lot now.” (1.5-6.77)*

*“**I'm very stressed as a person**, and I don't know why but **I panic sometimes**, not because of the child, but on other occasions, so I may transfer it (this stress) to my kid; of course it's my own issue.” (1.10.129)*

*“I tried to be calm by talking to my child but I don't do it anymore and **it resulted in having a child with anger issues, because I have anger issues in the first place**. (...) I now try to talk with a calm voice, and whenever I'm upset, I just don't talk to him, I go to a different room, I take deep breaths, but I don't make him do it (take deep breaths). I also used to hit him, and in turn he was hitting other kids; it was a problem at school, but we overcame it.” (2.9.117)*

“I’m impulsive. And it’s when he does something repetitively, not just once. I don’t know, maybe it’s just due to being tired and having responsibilities (...) I’m much more sensitive at the end of the day, and when the nagging starts I lose control.” (4.21.156)

*“Sometimes, I catch myself, even now, **correcting him more than 15 times within 10 minutes**: ‘You don’t eat properly, don’t eat this way, don’t put your feet on the chair’; I’ve realised that I have to stop myself doing this, even if he does something, because **as teachers we tend to correct others’ behaviour all the time**. And I’m also a perfectionist, quite meticulous and dogmatic (...) I need to learn to stop behaving like this. And he needs time too, to understand and absorb it; and so the whole process will take time. I might sometimes falter, but I already see an improvement.” (5.24.67)*

(b) Transferability

Parents suggested that their children could possibly have adopted their negative traits. Parents used words such as ‘transfer’, ‘mirror’ and ‘perceive’ to express the idea that they may have modelled dysfunctional behaviours while their children were actively seeking and observing the environment, perceiving and retaining information from it, which resulted in the children imitating these behaviours. Children also seemed to automatically adjust to their parents’ behavioural changes and react accordingly. Therefore, parents came to the realisation that the children tended to reflect, like mirrors, their own behaviours.

*“I think that **we, the parents, are the mirror of our children**; I notice that especially with my youngest. When I’m angry or tense, I yell, and **that’s exactly what he does when he’s angry**. But once I’ve used my relaxation technique and become calm, the kids become calm too. (...) On those days where I’ve had a tough time at work or I’m having problems elsewhere, **the kids too will reflect that; they have different personalities, which in turn makes it even harder for you**.” (4.31-32.87)*

*“We do know some things in theory, but personally, most of the time, it doesn’t always work in the real world. For instance, when I come back home tired - and **most of the time I come back home tired because of tension at work** - this is when I realise **it affects the kids’ behaviour**; whenever I’m calm, everything else is much better.” (2.13.75)*

“And I think, somehow, this has been transferred to the child, and she now has low self-esteem; and although I try and teach her how to be polite with others – and I am, basically, a polite person! – when you display anger it undermines all of this, and subverts what you’re trying to teach your children.” (4.5-6.75)

(c) Needs

Parents emphasised the importance of taking care of themselves, which was one of the main principles of positive parenting introduced in the first seminar. Working towards changing aspects of their behaviour included satisfying their need to be calm, relaxed, secure, confident, and to have a break from children. Parents recognised that taking care of themselves was a prerequisite for the child’s development.

“When you become a parent your priorities change, and you pretty much stop caring about yourself which I think creates problems; my husband, however, thinks the child should always come first. But this causes problems because if you don’t look after yourself, it will in turn affect your child. It’s a vicious circle, and both you and the child will miss out in the end.” (1.20.138)

“This is the first time I’ve heard someone else say this - that I have to be content for my child to be content. So I need to find time to relax (...) My mother doesn’t think that we need any free time, almost like if you’re a mother that takes precedence and you become a bit like a slave! But I said, ‘my house, my rules, and I know I need time for myself. I need quality me-time...’”(6.20-21.56)

(2) Child’s behavioural traits and needs

(a) Behavioural traits

As initially instructed during the seminars, parents had to focus on one or two traits of their child’s behaviour that they wanted to change or improve. Drawing from personal experiences parents shared the specific behavioural traits of their children that they worked on during the seminars. Parents mentioned that it was important not only to focus on changing the child’s negative behaviours but also to

reinforce the positive ones. Parents first identified the specific traits of their child that they had planned to work on, and then decided on a strategy plan to follow by selecting the strategies that best fitted the child's traits.

"(...) my son has insecurities, so I've been encouraging him and pushing him in positive directions. If, for example, he does something good or achieves something, he will come running to me and say, 'Mummy, I did it! and I tell him, 'Well done!!' I think this has helped a lot." (1.18.129)

*"And I've also tried what you called 'incidental teaching'; **But not consciously, especially with my oldest daughter who is always asking me questions.** She's improved in so many ways, even just her general knowledge. And her teacher says they've seen an improvement. It's like she's absorbing more information! Though it's not from TV, as I only let her watch DVDs! (...) However, I also think a child's **personality is hugely important, and seeing as she's very inquisitive I think this technique really suits her.** And I also think we have a better mother-daughter connection now." (2.11.99)*

"A clearly-set routine has helped him a lot because he is a child who reacts well to rules." (5.6.67)

(b) Needs

There were also parents who chose certain strategies in order to meet their child's needs. Children may display unusual behaviours as a response to their parents' actions. For instance, a well-behaved child may feel ignored in a family where parents' attention is placed entirely on the troubled child. Parents who spotted such patterns were more likely to correct them by applying specific strategies. Also, by having recognised the child's immediate needs, parents could prevent misbehaviour.

*"Until now I've been handling things badly, and as a result **my daughter feels that she's been left out.** She's the oldest (of two children) and **she constantly thinks that she's the one to be blamed for everything that happens,** and that her brother's (intolerable) behaviour is never criticised (...) So, I started applying the 'affection' strategy to her - my son had until this point been monopolising my time and I realised that this was a mistake - and I've already noticed positive changes in*

*her behaviour. **She is a child with many qualities and she should not be ignored.***”
(2.5.66)

Theme: During Practising: Act properly.

(1) Acceptance of the strategies

Strategies that initially challenged some parents were related to managing misbehaviour, remaining calm during upsetting moments and taking care of themselves. It seemed that those parents who accepted these strategies by understanding their rationale and recognising their importance were more likely to apply them in a consistent way regardless of unsuccessful attempts. As a result parents gradually changed their own attitude, and in turn their child's behaviour. Accepting a strategy seemed to be essential for using the same strategy across situations, especially if it had direct effects.

*“First of all, **in order to do this (be relaxed) we have to step back and wonder how much time we have dedicated to ourselves each day (...)** if I've managed to sit down and have a coffee, or smoked a cigarette, or met with a friend, anything to just relax a little, then everything else just seems so much easier.”*
(1.34.77-89)

*“I was calm when I was talking to them; and basically **I saw how important it was to stop, turn, look them in the eyes and talk with a calm voice**; due to this strategy the noise in house was reduced; and the use of a calm, deep voice really helped. I always knew that what I was saying was right, it was just the way I was saying it. The tone of my voice was always my main problem, and as my son once said to me, ‘Mum, it's the way you're saying it, it's like you're cursing me’. **It's not what you say, it's the way you say it.**”* (1.11.71)

*“I've applied relaxation and I have to say it really works. And not just **when you are upset but when you're stressed**. Taking deep breaths really works.”*
(3.39.105)

*“Or the fact that we have to look the children in the eyes; after these seminars, I felt that I was quite detached; (...) and although my job is about communication and I am in contact with people everyday **I realised that I did not look my child in the eyes that much (...)** but it's hugely important and significant; and I realised that after a while she started turning and looking at me (when she*

wanted to talk to me) and this was something I never imagined could happen. He feels more secure (...) Now we communicate better and we're closer as a result." (6.19.148)

(2) Explanation and confirmation of understanding

Parents who had a clear understanding of the strategies and avoided common mistakes were able to adjust the strategies to their child's characteristics, such as their age, or their personal traits and preferences. Parents also found that it was important to involve their children in the formation of a strategy, so they could clearly explain the strategy to them and confirm their understanding, rather than simply imposing the strategies on them. They also informed their children on strategies that aimed to manage parental behaviours, such as 'taking care of oneself', and the effects their application would have on them. Children who were kept fully informed of their parents' new attitudes were more likely to follow instructions, rules or discipline and learn new skills. To ensure success, parents had to make sure that they had a good understanding of the strategy before applying it.

(a) Understanding and Adjusting

"The word 'No' has a negative reaction not only to children but to all of us." (3.30.128)

*"During one incident he had difficulty taking off a t-shirt; he knew how to take off a jumper but now there were no sleeves to pull; **I showed him how to do it and now it is not a problem any longer (...)** I sat down, asked him, and let him do it himself; so 'Ask, Say, Do' was very effective; and I applied it to increase his skills and to gradually increase his confidence too. It was also an effective mechanism that enabled us to be attentive to our other child at the same time, who often misbehaves."* (4.10-11.87)

"...so his dad says, 'Come' but he replied, 'I have to ask mum!' because I forgot to tell him that Time Out had finished, because I hadn't really understood that I had to tell him that Time Out had finished (...) so when M. asked me about

*punishment, I wondered for a while but **the next day I explained him that it was not a form of punishment.***” (4.24-39.73)

*“I have tried to teach it (breathing) to my son too; for the time being I say, ‘Fill up your belly with air to stop crying because sometimes crying is not easy to stop’, and I have actually told him ‘try to stop crying and relax’ but he replies, ‘I try, but I can’t do it!’; **it is not easy to explain it to a four-year-old.**”* (4.32.89)

(b) Working together with the child

*“I applied a behavioural contract, an idea I got from the behavioural charts (...) so I said ‘**Shall we sit and write it, agree on the terms, and you will try to follow it and accept the consequences if you don’t stick to the contract.** She sat and we discussed it and she made the mistake of suggesting less time on the computer than I was actually going to offer her, as I was canny enough to ask her what she would suggest (...) She followed it, then for the summer we made new arrangements (...) I’m not too strict; I want her to develop her own sense of boundaries and responsibility (...) Now if she doesn’t follow the terms, she is not allowed to use the laptop (...) **This was important for her to learn to set boundaries for herself (...)** It helped us a lot. It was good for both of us.”* (6.6-10.127)

*“When I first started applying it, **I tried to be very analytical** and it was very difficult, but then it just became a routine. Now I just say ‘Well done!’ like it’s second nature but sometimes he just looks at me bewildered. Like one time I said, ‘Well done!’ for something, but he sat there staring so I said, ‘What’s wrong L.?’ and he said, ‘But you didn’t say the rest!’ **He was expecting me to say all sorts of other things, not just ‘Well done!’ but an explanation. And he’s started doing it himself too,** for instance he will say, ‘Well done Mummy for the cake you just made because, although you were tired, you still made it.’”* (3.6.96)

*“I applied Quiet Time and Time Out, but we referred to it as punishment because we didn’t know how to explain it to a two-year-old. But he’s a cooperative kid and responded to my intervention. **I knew I had to do it this way** (...) he cries he says ‘I don’t want to go mummy’, but I explain we do not throw our toys around and I then put him back to his spot, talking to him the whole time, and then I realise I shouldn’t (be talking to him); so I stop it and then I say, ‘Only if you stop crying will you come out’ and then he says, ‘Have we finished now?’ I don’t respond and I wait, and even if time for Time Out has passed because he was talking to me, I would wait a minute and then let him out; I haven’t seen a massive change because he’s generally a compliant child, but I tried Time Out **because I was advised to.**”* (5.29-30.96)

(3) Thinking before acting

Before responding to their child's behaviour, some parents took a moment to think about their next step so as to prevent impulsive reactions and intervene appropriately. Parental perceptions of child's behaviour dictated to a great extent their reactions, so parents were more likely to intervene if the child's misbehaviour was perceived as problematic rather than normal. Specifically, they thought about the impact of their behaviour on their child and what the child would learn from it. This process seemed to challenge some parents, who found it difficult to remain calm during an upsetting moment despite their initial constructive thinking. Thus, mediating cognitive factors seemed to play an important role in determining parents' reactions along with other possible variables.

*“In general I do not have negative thoughts; it is just this feeling of getting upset; when I see that I'm starting to get upset, I try to control it. **I think, ‘This (being upset) is not going to help my child now, it's a type of violence and I do not like being violent towards my kid, so relax.’**” (1.8.119)*

*“**It is not always bad when siblings fight!** I used to fight with my brother all the time, and it's not like we hurt each other and we love each other”-“ It's the same with my kids.” (2.13.105-75)*

“They started fighting, but we soon realised it wasn't anything serious so we didn't need to intervene, and they just calmed down on their own and started playing with their toys again.” (5.34.138)

(4) Correct application

At all six focus groups, parents mentioned how they applied a wide range of child-oriented and parent-oriented strategies learned during the seminars. These strategies aimed to build positive relationships between parents and their children, encourage desirable behaviour and teach children new skills, manage misbehaviour and lastly, inform parents on how to take care of themselves. Some of them followed a strategy plan, which combined an array of strategies in order to improve their child's and their own behaviour.

Some parents just stated which strategies they implemented, while others described in more details the different steps involved in applying a strategy proving that they had a clear understanding of its mechanisms and that they actually practised it correctly. By following each step, parents managed to put into practice even the most challenging strategies such as Time Out, where parents emphasised that all steps needed to be followed to show satisfactory outcomes. By applying the strategies correctly, parents were more likely to observe positive benefits on both their children and themselves, and with certain strategies, such as with praise, incidental teaching, independence and having realistic expectations, directly after their practice. Also, after having seen the benefits of a strategy, parents were more likely to apply it to deal with other similar difficulties.

(a) Following all different steps

*“(To balance family and work) this is what we do, we all **go to the gym together.**”(2.30.79)*

*“My little girl was trying to put on her shoes but she was getting upset, so I said, ‘My love, have I shown you how to put your shoes on? **Let me show you. First, we open this strap...**’ and she started repeating, ‘**First, we open this strap.**’ Now I **apply this to other situations she might find difficult.** I tell her, ‘Be patient, would you like me to show you how to do it?’ and then she tries calmly to do it by herself. It worked very well.” (3.9.99)*

*“**You have to ignore him automatically once he does it; it worked for me** (...) When he does it (seeking attention), I stop, I freeze and he doesn’t react; he freezes too” - “As he has no feedback.” (3.31.105-128)*

(b) Seeing positive effects

*“I also applied **descriptive praise** and I really think that the kids liked it and **it has shown great results.** I used to praise them by saying ‘Yes! Well done!’ but without explaining why I was praising them, whereas now I do; I find it’s really helped them a lot.” (2.11.89)*

“What helped me a lot was to plan things ahead; to have a schedule, a routine; the seminars reminded me that if I do not have a schedule planned for the week or month, we are more likely to lose control (...) it helped me to not get stressed and irritable.” (4.22.73)

“I used to always praise him but not in a descriptive way; changing this helped the child to understand what exactly he was doing that was good, in order that he repeated it.” (5.5.75)

(5) State of delivery

(a) Consistency

Parents provided a wide variety of examples illustrating an improvement in their own performance and their children’s behaviour. The common factor of the accounts that included positive changes was parental consistency. Parents who reported achieving changes also reported applying strategies in a consistent way, across situations and time. By behaving in a predictable way regardless of circumstances or unsuccessful attempts, they provided their child with a strong sense of anticipation.

Consistency could be analysed at an intraparental and interparental level. Intraparental consistency refers to behaviours that are in agreement with the principles of positive parenting across time and conditions. Parents who were constantly consistent seemed to be certain about their actions, and cautious when establishing rules and using logical consequences. Some parents found it quite difficult to change their previous dysfunctional behaviours, and felt that they were performing. After a while positive patterns became a routine.

Interparental consistency refers to the agreement between parents to follow a common parenting approach. Only few parents established it from the beginning as they both attended the seminars. Others shared with their partner the tip sheets that

included the information of each seminar. Parents who worked together as a team towards achieving the same goal tended to report positive changes on themselves and their children. This was attributed to the fact that they supported each other and avoided undermining their partner's efforts, interfering when their partner intervened and sending mixed messages to their child. There were also parents who applied strategies successfully and this way set an example for the other members of the family who gradually started imitating them.

Intraparental consistency

*“She sometimes has tantrums, she is 6 years old and now we have overcome the main difficulties which started at the age of 3 to 4. (...) I was out of control with her, I had major anger episodes, or I was talking too much when I shouldn't have been. (...) When you said about rules, I started applying them. **At the beginning it was really difficult, then it became more about my attitude.** I now give clear instructions, and I do not even talk sometimes (planned ignoring) and instead of shouting, ‘What are you doing now?’ which is what I'd usually do; or, when I noticed that she was doing crazy things, I would be doing something different, in other words I was applying planned ignoring; I applied all sort of strategies and I realised this way issues were solved, so I continued doing them.” (1.6-7.118)*

*“I did the Quiet Time. Stay here for a while – in the same room – and calm down for five minutes. He didn't calm down immediately though. **It was more effective with my daughter than my son; it depends on the child's personality as well (...)** To be honest it worked two or three times out of the 15 that I tried it.” (2.22.75)*

*“I have not done the Quiet Time because in general they (two children) manage to solve minor issues on their own; Time Out worked very well, though, especially with the youngest. **I have seen a huge difference; at the beginning I would put her there three times a day, whereas now I might put her there once every two to three days (...)** I use it only in very severe circumstances (...) I was very consistent (...) the first two or three times she cried, then I said, ‘Go for Time Out!’ and she would go to my bedroom, where the TV was switched off so that she had nothing to do, and she would sit there for two minutes and that was it.” (4.11-12.1511)*

Interparental consistency

“My husband asked me to teach him what I’d been learning at the seminars.” (1.11-12.119)

“However, I see my husband while preparing them for the school in the morning, he let them be more independent and at the end of the day I think that he is right to do it this way. And because we try to follow a specific strategy in order to be consistent, without undermining each other or confusing the kids, I think he was right and we apply it better now. It had good results (...) because at this age they learn to dress, brush their teeth...” (2.28.79)

“Using descriptive praise helped me and my partner a lot. I started doing it first, then everyone else followed; it was especially great when the kids started doing it (...) It is so funny to see these things working in a positive way. It felt great!” (4.27.87)

“We applied both Quiet Time and Time Out. We applied it (T.O) in the past but not in a consistent way; now we apply it in a very consistent way. Now every situation is more manageable, and it doesn’t take the kids by surprise how we manage the situation; they seem to understand that they get cranky because they’re tired...” (6.11.125)

“What helped me a lot was a set approach towards child’s behaviour. (...) this was very important because one was more flexible, the other quite strict. It helped us to manage his behaviour faster. Like recently when he started hitting others after starting at kindergarten, and we had no idea where this aggression had come from (...) but by using a common approach and Quiet Time - we didn’t apply Time Out much - we realised that it was an issue of limits, and we had to be strict with them. And within one week the change was dramatic!” (6.14.66)

(b) Flexibility

Apart from being consistent, parents were also flexible enough in their practice to achieve positive changes. They were able to adjust to the circumstances while remaining consistent at the same time. The principles of a strategy remained the same, but the practice was shaped to fit the situation. This required certain qualities from the parents: those who succeeded knew the strategies well and understood its principles, had a clear rationale behind their decision for adjustment, knew their children enough to recognise whether the child was manipulating the

parent with misbehaviour, and were in control at all times. In all cases, parents informed the child about the adjustments, especially if they were breaking a well-established rule, for instance.

*“In my family we only eat sweets at weekends (...) but it was Wednesday and she asked for an ice-cream because all the other parents bought their children ice-cream. I said, ‘But it’s Wednesday, you know we’re only allowed sweets at the weekend,’ and she asked, ‘So, why is everyone else eating ice-cream?’ I replied, ‘The others eat on the weekdays but not on the weekends,’ and the discussion was over. The other children ate their ice-cream and she wasn’t bothered at all. The same day we went to a birthday party in the evening; she saw the birthday cake and she wanted to eat it but she said to me, ‘Mum, it’s not the weekend!’ and I replied ‘**You’re right my love, today is not a weekend day, but today because it’s a special occasion, would you like to have some cake and make an exception to the rule?**’; so ground rules worked really well for us.” (4.41-42.87)*

“(...) Interestingly, we added a new parameter to the strategy; even if they were calm, mum or dad might say, ‘Yes, but I’ve not calmed down yet!’ and it worked really well. (...) we’ve also set a time limit; when to go and when to come out (...) and importantly we never show any resentment for what has happened, it’s all forgotten and we start a new slate. Before they go (to Quiet Time or Time Out), we explain the reasons to them and that if it happens again, they’re aware of the consequences” (6.11.125)

(c) Confidence

Another factor for successful positive parenting seemed to be parental confidence. Successful attempts produced positive outcomes, and in turn raised parents’ levels of confidence. There were also parents who persistently carried out strategies that initially did not seem to work, but having understood the rationale behind a strategy and not giving up because of temporary failure, they achieved the desired outcomes whilst strengthening their confidence. Another occasion that seemed to boost their confidence was related to discipline. Parents who did not give in to their child’s misbehaviour managed to discipline successfully an upsetting child. To achieve so, these parents needed to be able to recognise whether there was

a reason for the child's misbehaviour or the child was only seeking attention. Besides, even the most well-behaved child would occasionally challenge the parents in order to test the boundaries.

*"Let's discuss it later when we've both calmed down..." because I'd only raise my voice otherwise, which wouldn't have helped the situation; **Now I remain relaxed without having to make a conscious effort to breathe.**" (1.29.156)*

*"I have applied Time Out, and I do not pay any attention to her, I do not talk to her. She goes away. (I put her back) again, and she goes away. I repeat. She cries and I do feel sorry for her at this moment. **Recently, though, I have seen some good result.**" (2.23.115)*

*"I told him to stop but he didn't; **then I ignored him completely; I have never seen him more upset; he grabbed me by my foot and he was dragging himself beside me. He couldn't accept (the fact) that I was ignoring him.**" (3.30.96)*

*"He hits his sister so I take him and put him in his room, then he starts yelling and screaming; I ask him to stay on the sofa, but he doesn't and instead lies on the floor and plays with his toys, so I take him back and I leave. **I do this about three times** (...) eventually he calms down; usually after about ten minutes in his room he has calmed down." (4.37-38.54)*

*"... (mother) He usually showers with his dad's help, so he showed him how to do it on his own (...) and I (father) told him that if he wanted to go to a summer camp he would have to learn to do something on his own (...) He struggled at the beginning, and was yelling, saying 'I'm not doing it, come to shower me!' but I replied 'No, you can just stay there if you like!' or, when he was on the toilet he would shout, 'Finished, someone come (to help me clean myself)' but I insisted, 'No.'; **he was there for about 20 minutes, yelling, but I said, 'I'm going to sleep now; you can sleep there if you like'.**" (5.9.65)*

(6) Previous knowledge

There were some parents who already knew some of the strategies suggested at the seminars and found the Seminar Series as a great opportunity to refresh some of their previous knowledge, as well as perfect their practice. Having been familiar with some of the strategies meant that they had already accepted their rationale and had possibly tried to practise them in the past. This might have enforced their efforts to reuse them.

“I did not have particular issues with my daughter; I came mainly for myself. I had applied a lot of things (strategies) from before (the seminars) without knowing it, involuntarily.” (1.5.77)

“I did not know either about self-talk or the balance between family and work; I have followed some parenting programmes on TV (Super Nanny) and for this reason I was familiar with some of these strategies; but also from what I have learnt from my life; the Seminar Series made me think in a more strategic way, to follow certain strategies; not that I have applied everything to the greatest extent possible.” (2.13.105)

Theme: After Practising: Self-reflect.

(1) What they did right

While discussing positive parenting strategies and sharing personal experiences with other parents, parents provided vague as well as detailed examples where they used a strategy and it worked. As opposed to vague examples, the main focus was on the detailed ones where parents described the specific steps they followed while practising a strategy making their experiences more vivid and realistic. In these reports, they reflected on the benefits of the strategies, the changes they achieved and how they incorporated new practices in their everyday routine.

Specific examples

“I was calm when I was talking to them; basically I saw how important it was to stop, turn, look them in the eyes and talk with a calm voice; due to this strategy the noise in the house was reduced; and the use of a calm voice, as you said (it was important), a calm deep voice because what I was (actually) saying was always right, but the tone of my voice was my main problem; as my son said once ‘Mum, the way you say it, it’s as if you’re cursing me’; from these things I realised that the tone of voice might be more important than what I was actually saying.” (1.11.75)

“I try to remain calm when he has a tantrum; it takes much effort to remain calm (...) I haven’t managed to do the breathing thing during Time Out (...) one thing I do try to do when I feel that I am getting upset is to step back, and only

come back when I am relaxed (...) I stop paying attention to him (...) I think how to deal with it then I come back." (4.21.54)

"I made a routine and I put a lot of effort into it, downloading all the pictures and putting them on the wall at their height level so they could see them; initially, they were very excited because it was something new, and they seemed to like it." (5.26.138)

*"We were at the playground and a boy came and started irritating my son by being boisterous. At first, my son tried to keep up and started acting up as a result, but he soon realised this wasn't having any effect so he left and went to play on his own. **I liked that I did not have to intervene.** He later appeared to gain the respect of the other boy who then asked him if he'd like to play together."* (5.35.138)

*"I can't force him to do anything but I will suggest these things in case he finds something he likes; (...) **I tried to explain to him** the idea of trying new things, and that (summer camp) is a great opportunity for this (...) I want him to be able to make his own decisions, for example I try to avoid buying books for him; he does, of course, want to buy silly books that I don't approve of and **I'm obliged to buy (some of) those for him. I have to respect his wishes.**"* (6.31.148)

(2) What they did wrong

Parents also reflected on the situations where they did not apply a strategy properly. Most of the time they recognised their mistakes and the underlying reason for their dysfunctional reactions to their child's behaviour. It was important that they could specify the exact steps of a strategy that they did not follow and what it was that led them to unsuccessful attempts. Having realised their mistakes, parents might have been more prone to correct them next time they faced a similar situation. Although some of the parents did not fully complete a strategy, through their descriptions they showed that they had altered their maladaptive thinking to realistic mental habits, which was an essential step towards adopting a positive parenting attitude, and thus felt that they had made an improvement. Having this sense of progress may have functioned as a reinforcer to their subsequent practices.

“I have some serious bursts of anger and immediately think, ‘Wait a minute, that’s not good!’ (...) but the positive thing is that I think that straight after the outburst, whereas it used to take me much longer to realise!” (1.9.129)

“Once he was sitting on his bed (during Time Out) and he was doing nothing but after 1-2 minutes he started playing with his trains (...) OK, we probably shouldn’t talk to him, but now that I think about it, I have done it in the past.” (3.27.107)

*“I used the behavioural charts and told her, ‘If you don’t suck your thumb, you’ll get a star.’ She replied ‘I want (to have the star) on my painting board!’ so I said ‘OK.’ But later that day she told me she found it really hard to not suck her thumb, so I told her that she wouldn’t be getting another star then. ‘I’ll just put the star up myself!’ she said, and did it. I told her this wasn’t acceptable and made her wipe it off, at which point she started whimpering, crying, ‘I can’t!’ and she put it back, and I let her. **I obviously didn’t apply the technique properly (...) because I gave in to her request for a star.** She thought it was terrible to take off a star from her chart or not to give her another one (...) she was so upset, she started crying.” (3.32-33.78)*

“My issue is that I can’t control my emotional state and I end up doing stupid things that I immediately regret (...) there are times, though, that I predict what’s going to happen and stop it in its tracks, and these moments I’m really pleased with myself and congratulate myself. But the next day I may not be able to have the same self-control.”(4.34.67)

(3) What they can do better next time

Participants not only mentioned what mistakes they made during their practice but they explained what they could do better next time. Parents who had recognised their mistakes, and thus had gained a better understanding of how their behaviours could have influenced their child, tended to explain what they could do better next time to improve their practice. Remembering what worked and what did not work was essential for maintaining or altering their behaviour. However, knowing what aspects they needed to improve as well as the rationale of these changes did not necessarily mean that they implemented change in practice.

“Next time I feel it happening I need to take a step back and remind myself not to (yell).” (1.10.129)

*“He managed to be consistent with the activities he liked such as time for relaxation, for play, for the PC (...) although we planned it together, and **I didn’t enforce it** (...) It did not work for me and this was my fault; **I should have insisted more. Next time I need to work on it more.**” (2.3-4.66)*

*“**I want to talk to the kids more frequently and in a calmer voice before we reach that point (of arguing, nagging), to correct myself before I explode.**” (4.34-35.87)*

*“I realised that the child requires (to have) quality time with us, because we are not very happy and smiley at the moment at home. So, when you devote some time for affection, laughter and jokes (...) then she feels better. (...) Basically, I can see that she is happier now; she does not smile a lot because she is often angry and she whines, **but maybe I should establish this time in a daily basis.**” (4.27.54)*

*“**We set rules for things that are important regarding the child’s behaviour, earmarking things that we want to change. They are not visible though, this is something that I need to apply.**” (5.26.1010)*

(4) What changes they noticed

Parents mentioned a wide variety of strategies that they applied and worked effectively in managing their child’s misbehaviour and reducing parental stress and tension. Most of the parents used strategies to change their own attitudes and in turn observed positive changes in their child’s behaviour; a third of the selected quotes included descriptions where parents focused on changing solely themselves, while a few were targeting solely their child’s behaviour. Among the strategies that were most commonly used were using a calm voice, giving clear instructions, praise, having a routine, discipline, remaining calm during an upsetting moment, quality time, as well as discipline strategies such as Time Out and Quiet Time. By applying new strategies and/or optimising previous practices, parents mentioned changes in their cognitions towards parenting which was necessary for the implementation of the strategies as well as retention of effective parenting. They also acknowledged that changing their attitudes was not an easy process and time was required to

achieve enduring changes. Because of the constant challenges that parents had to face along the way, they sometimes reverted to previous preconceptions. Lastly, it was encouraging to see that during focus groups parents suggested to each other alternative ways to achieve change.

Changes on themselves

*“I also applied descriptive praise and I really think that the kids liked it and **it has shown great results**. I used to praise them by saying, ‘Yes! Well done!’ but without explaining much about why I’m praising them, whereas now I find that it helps them a lot!” (2.11.79)*

*“**I do breathing techniques via meditation that I started last year** and it has helped me a lot because **I get stressed out easily**. Breathing through the diaphragm helped me to calm down. And the muscle exercises, you suggested, too. (...) **It helped me to relax, to control my work-related stress, as well as the stress I was experiencing at home with my child.**” (5.28.67)*

*“I used to tell my kid to stop doing stuff, but didn’t tell him why. Now I do. **So for me that was very important because I never thought or heard or read that I had to mention to him what to do instead.**” (6.18-19.148)*

*“It’s worked on various levels, for not only do I now notice when I’m relaxed, I see what effect it has on my kid. **I now think differently**, that maybe my child is naughty or anxious because I’m in a bad mood, so the blame is laid on me rather than my child. **I see it from the opposite perspective.**” (6.22.56)*

Parent’s changes affecting child’s changes

*“My son’s eight and the oldest of four, and there was a definite lack of quality time between us. So, I arranged an evening just for the two of us, where I was there when he got back from school and sat with him while he read and, after, when he went for a swim. Then, when everyone else was home but asleep, we had an extra half hour together. **This created a different child within two weeks (...)** he used to be quite rude, disrespectful, irritable and used to get in trouble at school (...) **I spent more time with him and paid more attention to him. And I saw a huge difference; he stopped showing off, he gained confidence in his abilities, he calmed down and he behaved well at school and at home.** (...) and he would really look forward to those evenings where it was just the two of us, which was lovely.” (1.1-2.75)*

*“I liked it so much that **not only I applied it to G.** (who has serious difficulties) **but to everyone** and it had a great impact on all of them (...) because I could see the satisfaction in the eyes of whoever got praised, and for as long the positive atmosphere lasted so did the good behaviour. Also, as a generally glass-half-empty person, it’s really helping me to be more positive.” (2.4.66)*

*“**I have to try and deal with what jealousy there is.** Thankfully it’s not bad, so I just try and alleviate what’s there and not really pay too much attention to it, as I think that would just exacerbate it (...) and I think it’s working. I’ve noticed positive changes (...) and I see him reacting in a better way to his brother, and he’s becoming more independent (...) and his self-esteem is improving too.” (4.18.85)*

*“(...) for this reason I think that in order to punish a child effectively, you first have to work on yourself. If you’re not calm when chastising your child, it will be ineffective... **so I stopped (hitting), and took the time to work on myself (...)** and it works, for both the child and me (...) **I now step back, calm down, and then we talk about it.**” (4.37.85)*

*“The routine helped him decide what he really wanted to do, like being read more stories at night or watching TV. He always, for example, wanted dinner to last longer on those nights he didn’t want to go to bed. We typed out the plan on his computer so that he was implicit in the new routine; so when he wanted to go off list, as it were, I would say, ‘But didn’t we plan this together?’ (...) **It helped him take responsibility for his own actions and easier for me to be in the right (...)** It was about finding a balance between thinking and doing, whilst also allowing time for just pottering about and doing everyday, mundane things.” (5.6-7.67)*

*“I tried to make it part of my routine to spend some quality time alone with her, which I hadn’t done before; she was pretty aggressive and argumentative before, **but this helped relax her and make her more tolerant and understanding, and if I carry on doing this I know she’ll get better and better (...)** Even mundane things like sitting on her bed playing cards, or reading her stories, helps her mindset.” (5.8.68)*

*“I noticed that he now understands when he does well, and his self-esteem has shot through the roof as a result. **He glows when you say, ‘I really like what you did, you did a really good job!’; giving a child direction and encouragement is vital.**” (6.24-25.148)*

Changes on their children

*“We had started applying it (T.O, Q.T) before the seminars. **We’re much better now because it’s been a while and she’s used to it;** at the beginning she was whining a lot, and yelling, and screaming, and even though she now might sulk a bit, she’s much more amenable.” (3.20.78)*

*“It’s not punishment because we explain the situation, along the lines of, ‘You did something wrong so you’re not allowed to watch the DVD, and we control the situation and ask them how they’re feeling and if they’ve calmed down and if they understand why we’ve had to stop them watching the DVD. **And the kids are so much calmer now!**” – “It’s also really important the children understand when they’re relaxed.” (6.30.125-68)*

6.6.2 Barriers to positive parenting programme

Theme: Child factors.

(1) Behavioural traits

In their accounts, parents distinguished between the effectiveness of the strategies on different children. They pointed out that particular strategies might have been effective for one child but not others. Children's different personalities accounted for such a dichotomy. For instance, parents found it difficult to apply 'affection' to an introvert child who was reluctant to express emotions. Children who were perceived as difficult by their parents, because they tended to be argumentative, disobedient, stubborn, manipulative or irritating, were more likely to put an additional burden on their parents' practice. There were also parents who thought that their children were misbehaving on purpose and were intentionally trying to make them reach their limits. There were descriptions of children who happily accepted discipline, such as logical consequences and Time Out, and the next moment repeated the same mischief on the grounds that they had nothing else to lose. So, the element of manipulation on the side of the child was quite prevalent in parents' accounts regarding child misbehaviour.

Lastly, parents admitted that the child's problematic behaviour might have been elicited because of their own behaviour. Realising that it was a two-way interaction, parents expressed their guilt for not taking control of a situation and so felt that they might have been responsible for their child's misbehaviour.

"It (planned ignoring) works for me too, especially with my oldest daughter (6yo); however, it does not work for the middle one, who is very stubborn; with the oldest one I just ignored her and after a while she stops nagging or complaining; I think it's because of her personality, whereas the youngest one is

very persistent, so it seems as if she's really trying to get to battle with me (a fight, game) and see which one of us is going to back down first." (2.6.79)

"And there are times when the children don't express their emotions; they are very introvert"- "They do like affection though, or a massage"- "they do not always show it though."(4.28-29.87-85)

*"...it's because **she doesn't show any attachment to her toys**, as she finds it really easy to leave them and be distracted by something else, like opening up my drawers and routing around; for this reason she doesn't react when you take a toy away."* (4.47.54)

*"Although we try to encourage independence, we have a major issue with reaction; **he is very argumentative. He is very manipulative.** (...) From experience, I have an 8-year-old who understands the logical consequences very well for every type of behaviour. **He would explain them to you, if you ask him he would elaborate on the consequences, but he chooses not to follow them** (...) he could easily explain to you a logical argument but he does not apply it to himself (...) and he does it (as a way) to react; and he gets on my nerves on purpose because he knows that at that time I have to go to work etc. so don't have the time to deal with it; I have lost control."* (5.14-15.65)

(2) Age

Some parents perceived the age of their child as a burden to their practice. Although the strategies were age-tailored and matched the age range of the selected children, parents linked the feasibility of the strategies with their child's age and relative cognitive abilities. A common misconception alleged that young children were too young to understand the strategies and so certain strategies such as Time Out could not be explained to them, and for this reason, implemented. However, there were also parents who despite the difficulties they faced because of the young age of their child, they put an effort into applying the strategies.

On the other hand, older children were expected to have a better understanding and act in a mature way, and so the strategies seemed to be more age-appropriate. Yet, there were parents who thought that their child was too old for these strategies. In a sense, regardless of whether a child's age facilitated or

hindered parenting practices, there was the underlying misconception that the strategies cannot be adjusted to the child's age.

Age appropriate.

*“What worked well - **and I think it has to do with the children reaching a certain age** - was to let them take some control and do things by themselves.” (4.9.87)*

*“I saw a significant difference regarding descriptive praise, too. I did it in the past but not really consciously and systematically; I think it helped a lot, **maybe because of the age, as they are old enough to understand**; but I also apply it to the younger one and I think that it is a self-assertive way for them.” (4.12.1511)*

*“I used to automatically solve his problems; I have learnt not to do that (...) **I think maybe it is the age, but also it might be because of the way I handled it** (...) Now I let him think and decide what he had to do by himself.” (4.14-15.67)*

Age-inappropriate

*“I have tried to teach it (breathing) to my son too; at the time I say, ‘Fill your belly with air to stop crying because sometimes crying is not easy to stop’, and I have actually told him, ‘Try to stop crying and relax’ and he replied, ‘I try, but I can’t!’ and I have said several times, ‘Now fill up your belly with air, breathe from the mouth to fill it with air’; **of course it’s not easy to explain this to a 4-year-old.**” (1.32.89)*

*“I do not think I can apply all these strategies, at all; **he’s quite old; he isn’t, like, three.**” (2.23.66)*

*“It doesn’t work anymore. I used it in the past. **But now he’s at an age where we discuss things, and he has opinions on things.** We talk and I try to describe how we’re both feeling; but he has issues with describing emotions; he has low self-esteem (...) Now that he’s grown and developed mentally, I think he’ll be able to work on his emotions; it’s much easier to work on this side of things, his negative emotions, through talking as it is seems logical to him.” (4.17-18.85)*

*“My main concerns have to do with kids aged 2.5-3.5 because an 8-year-old child might not want to do what you say but at least he understands it; **when N. was 2.5 I did not know if he understood completely what I was saying, and so I tried to say it in a simpler way and I ended up lecturing him**, and he was getting bored, and he would let me talk and talk and talk because I was afraid that he would not understand me; and most of the time I just bored him, and he got tired and reacted to it.” (5.12.96)*

*“I applied Quiet Time and Time Out, but we referred to it as punishment because **we didn’t know how to explain it to a two-year-old.**” (5.29-30.96)*

*“First of all, I did not apply the ground rules (...) **I had the impression that he is too young to understand them.**” (6.27.56)*

(3) Number of children in the family

Another child variable that impeded parenting practices was the number of children in the family. Parents who had more than one child tended to pay special attention to the child who had difficulties whilst ignoring the needs of the other children. This neglectful behaviour seemed to have a negative effect on the other children, who tended to misbehave to grab their parents’ attention, become jealous or quite withdrawn. So, a misbehaving child was likely to disrupt the interactions between the members of the family. At the same time, there were cases where having only one child was challenging enough for parents mainly because they were used to spoiling an only child. It appeared that the primary reason for parents’ feelings of inadequacy to implementing the strategies was not the number of children they had, but their own insecurities to intervene, manage and control their child’s behaviour, especially misbehaviour in the first place.

*“Until now I’ve been handling things badly, and as a result **my daughter feels that she’s been left out. She’s the oldest (of two children) and she constantly thinks that she’s the one to be blamed for everything that happens, and that her brother’s (intolerable) behaviour is never criticised (...)** So, I started applying the ‘affection’ strategy to her - my son had until this point been monopolising my time and I realised that this was a mistake - and I’ve already noticed positive changes in her behaviour. She is a child with qualities and she should not be ignored.” (2.5.66)*

“I gave each of them 30 minutes, but he didn’t want to stop there so I gave him 45; he wanted even more, so I stretched it to an hour; but then when it was time for me to be with his sister he wouldn’t leave us alone (...) Whenever he interrupted us I applied Time Out, but he wouldn’t accept it; he kept coming and interrupting us, and in the end we started fighting and I hit him, which sorted it out.” (3.20.105)

“Having younger children in the family is a big issue (...) the first kids are usually ‘a trap’ - this is what we call our oldest child; the second child has brought us emotions that we never thought we had; so much tension (...); they are more assertive (...) I was expecting that this would be the case for the oldest, because, as they say, a child experiences very intense feelings when another child is born with whom he has to compete for the love of the mother and, for this reason, I thought that the oldest would have the problem (...) yet, the youngest expresses jealousy more intensively, and he is more assertive.” (4.30.85)

“What we tried most during this period was to make him do things on his own, like having a bath, because he’s an only child and has been a bit spoilt.” (5.8.65)

Theme: Parent factors.

(1) Behavioural traits

Parents’ personality and behaviours had largely affected the way they responded to their children through their practices. The most prevalent trait that impeded their parenting practices was low self-esteem especially after having realised the mistakes that they made in the past. These thoughts were associated with guilt and assumptions of personal responsibility for their child’s misbehaviour that they were actually not responsible for. Guilt was also prevalent in parents who had an only child and were overprotective. Parents with low self-esteem were more likely to lose control while applying a strategy, and give in to their child’s requests as a way to stop them misbehaving without realising that this way misbehaviour was actually reinforced. Parents who were overthinking and had negative thoughts ended up exaggerating the importance of the child’s behaviour, while those who had unrealistic expectations from their children inclined to set them up for failure whilst creating a negative learning environment. Parents susceptible to everyday stress described themselves as edgy, irritable, and they were more unlikely to remain calm

during an upsetting moment. Parents suggested that this negativity could have been transferred to their children.

Parents who lacked patience to follow through a strategy, especially the first time they applied it, while remaining consistent across time, did not achieve positive results. Being overpowering and controlling, and minimising the involvement of their partner in their child's upbringing, might have been a burden for some parents. Also, parents who were teachers or in authority positions, tended to lecture their children as a response to minor misbehaviour, over-discipline their child and be loud, providing this way the attention the child might have been seeking. These parents were also likely to make the child feel guilty about their behaviour.

“What if he doesn't want to cooperate? It's his choice; I think it should be his choice”- “You can't force him to cooperate.” (1.14.138-129)

*“I've never left him on his own, not even when going out for a walk - I'll always have him with me. **But I left him recently over a weekend to go somewhere with my husband so that we could have some time together**, and he reacted really badly; he started ignoring me, not picking up the phone when I called him, and he wouldn't talk to me when I came back and just sulked and said, ‘Would you have liked it if I left with dad and you were on your own?’ which made me feel really guilty. But on the other hand, I know I have the right to spend time alone with my husband, right? Maybe I've spoilt him too much (...) **He knew exactly what was going to happen**, I had explained it to him (...) **It made me sad, and I felt bad** (...) I deserve time for myself, but does he now take it for granted that he has me all the time because he's been spoilt?” (1.22-23.129)*

*“I applied it (planned ignoring) when he was doing something wrong or something annoying, but it just made him more upset and it caused chaos as a result; but I managed to do it a few times (...) **though in the end I just gave in.**” (2.5.66)*

*“My son screams to the point where you just want to rip your ears off; the noise is intolerable. He does it to get my attention (...) I say, ‘**Go to your room and shut the door so I can't hear you. Cry as much as you like but only come out when you've stopped yelling. I can't stand it.**’ He never wants to go but he does know when I've reached this state I might hit him, so that makes him go to his room. After a while he'll come out and go, ‘Mum, I've stopped,’ but then he'll start nagging again. I'll then say, ‘F., what did I just say? I told you to go to your room*

and only come out when you're stopped yelling, but you're doing it again, so back you go!' It seems to work but it's not really how I should be doing it, right? Though it's practical in that it stops me from yelling." (3.29.118)

*"I told him to stop but he wouldn't; then I ignored him completely; I've never seen him so upset; he grabbed me by the feet and was dragging himself beside me. He couldn't accept that I was ignoring him (...) **It was so upsetting for him that I can't bring myself to do it again.** The way he looked at me I was like, 'Oh Christ!' (...) he took it so hard, it was as if he was thinking, 'Doesn't he love me anymore? Why? What did I do?' (...) I've done it a few times."* (3.31.96)

*"...and also **punishment makes me feel bad.**"* (4.36.85)

*"We say this but **suddenly you start feeling guilty** when you should not (pay attention to them). You wonder what has happened and whether I give her enough attention."* (5.11.105)

*"Maybe, **I get carried away a bit and make scenarios in my head** regarding what might happen later, and then I start imagining him doing it at school, him hitting the other children. So I'm perhaps over-analysing the situation."* (5.33.96)

*"**I told him that he had ruined the night,** and that because of what had happened the next time we had friends round he'd have to stay in his room. **I think I made him feel guilty and this isn't good.**"* (5.42.67)

(2) Marital status

Single, separated or divorced parents had most of the day-to-day responsibilities in raising the child but limited support from their partner. As a result, they were psychologically more vulnerable and expressed feelings of insecurity, so this may have led to a dependent relationship with their child.

At the same time, there was a separated father who was only visiting the child every two weeks. For this reason, he did not want to have any restrictions on his visits, such as following a routine.

*"I find setting a good example difficult especially while tidying up rooms; because I just **end up doing it myself** (...) I get tired, and I suggest doing it together but she's never in the mood."* (4.46.54)

*"The truth is that I do not want to have a 'routine' **because I want to spend all my time with her; but it isn't practical for me as I only see her every two weeks.**"* (5.28.105)

*"**My stress and anxiety stems from being a single parent,** so I have huge insecurities about not bringing him up properly. But what really helped were the*

handouts, the fact that everything was easy to digest in bullet points, as well as the positive feedback I got.” (6.20.56)

(3) Perceptions

One of the most prevalent barriers to the implementation of parenting practices was parental cognition. It seemed that the way parents thought before they acted, guided their feelings and behavioural responses. Negative cognitive patterns including distorted thinking, negative schemas, assumptions, counterproductive thoughts, underestimating their abilities to cope, resulted in dysfunctional parenting practices.

For instance, parents' response to children's fighting was determined by their thoughts; one parent perceived it as a way children used to grab her attention, another thought children fought because of their sense of competitiveness, while a third one did not pay any attention considering that children usually fought over trivial things. A father believed that threatening the child was an effective way to discipline him/her as it had immediate effects, ignoring its negative effects on his/her emotional and behavioural development. Another father opposed the establishment of ground rules in the house as it seemed a fascist way of functioning, overlooking the fact that well-drafted rules contribute to the smooth running of society. As previously mentioned, parents' assumptions that a child was too young to understand a strategy or too old to follow a strategy determined whether parents finally implemented it. There were plenty of examples of negative thinking where parents seemed to be close-minded with discipline strategies such as Quiet Time and Time Out and consequently did not even try them to check their effectiveness. Parents with low confidence also underestimated their abilities to cope with a

situation, for example a mother who applied Time Out found it difficult to make her child stay in the positive corner and calm down, when the instructions on the tip sheet clearly stated that regardless of the child's response, the parents had to take the child back to the corner.

In addition, parents who had unrealistic expectations of their children tended to set them up for failure. Any disagreements between the couple on the strategies derived mainly from their different perspectives on parenting. Mothers were typically perceived as the 'bad cop' of the family, while the father was entitled to spoil the child by disregarding rules and undermining the mother's efforts. Not all parents agreed to discipline their children or apply rules and a routine in children's everyday life, as they thought these strategies might have been too controlling and restricting for the child. Lastly, cognitive schemas on the importance of work over family made a parent struggle on balancing work with family.

“He said that he agreed with what we'd written down, but he didn't agree that it should be written down, because it seemed a bit fascist and that we're not the sort of people who follow rules anyway. But that's just what he said.” (1.16.138)

“ (...) Making the child scared of the parent is the best strategy to make them do something.” (1.30.810)

“This is what they want (grabbing our attention); this is the impression I get from my children; they fight in order to grab my attention; nipping, pulling each other's hair is the most aggressive they get; and then they come to me and say 'Mum, G. did this', 'Mum, E. did that' and I am the one caught in the middle.” (2.15.66)

“I think the fighting between the children is not attention-seeking, it's more about asserting their own strength between each other.” (2.16.95)

“They never fight over anything that serious” – “So, why are they bothered?” - “Maybe it doesn't seem serious to us, but for them it might be a big deal” - “But for them, something as trivial as (chucking away her pencils, shoving her) might be a big deal, whereas for us it's nothing at all, but as it's their problem they need to work it out between them; we can't solve all their problems for the rest of their lives.” (2.17.66-117-115-95)

“I don’t think we need to be very strict with our routine; it works for my husband, who has a different outlook on how you bring up children, and very different to mine (...) I don’t believe children should behave like robots; during summer, for example, I think she should be able to stay up a bit later, and when I’m with friends it’s so much nicer for me to be relaxed and not upset about her sleeping routine because I’ve already got enough stress to deal with! I want her to have a little bit of freedom.” (4.4-5.75)

“(...) It’s probably because I have issues with punishment that I couldn’t punish myself; I don’t believe in it, to be honest, so couldn’t use it.” (4.25.73)

“I also find breathing techniques difficult to apply (...) I found it difficult, but I tried it all the same though didn’t quite get the results I wanted.” (4.35.75-67)

“It is difficult for me to find the balance between work and family. Work is very important to me!” (6.35.127)

“I have not tried using the behavioural charts; I’ve got this thing about charts and stuff like that, I just feel a bit uncomfortable with them.” (6.40.125)

(4) Practice

The most common reason for failing to implement parenting strategies was related with feasibility issues. The main issues identified through parents’ descriptions were: (a) the existence of previous practices; (b) the lack of familiarity and (c) understanding of the strategies; (d) initial or previous unsuccessful attempts; (e) incorrect application and; (f) inconsistency in their practices.

(a) Previous strategies

Parents who had already started to apply other strategies were more reluctant to use the one suggested during the seminar.

“There is another technique, Prekop, which is completely different and instead of carrying the child away, we bring it very close to us and we let the child relieve his tension in our arms; at the beginning there will be a battle but it had a really great effect on my child; the child does not display any hysteria; (...) we do not get out of control.” (1.29.119)

(b) Lack of familiarity

It was also noted that time and practice was required to master parenting skills. Some of the strategies, such as remaining calm in upsetting moments using breathing techniques, or Time Out, were perceived as particularly difficult, so parents felt that they did not have enough time to practice and become familiar with them.

“As far as Time Out and Pause are concerned, I’ve not mastered them.” (1.24.89)

“I find it hard to make him sit in a specific place, he just follows me around or starts laughing or something (during Time Out).” (1.24-25.89)

“I didn’t try relaxation. I think it takes time for it to work; basically, during an upsetting moment, you can’t just suddenly say, ‘Sorry, I need to go away and relax for a minute or two, then I’ll come back and we’ll carry on.’” (1.33.89)

(c) Lack of understanding

There were also those who asked further questions and clarifications on certain strategies, such as Time Out, logical consequences or breathing techniques, showing that they had not understood them in the first place or had some comprehension gaps.

“I basically have not completely understood them (...) I would like you to tell me what exactly you did because I have not even understood it.” (2.21-22.66)

“(...) Super Nanny makes the child apologise, which I do not think is right, and then she hugged and showed affection to the child; do we do the same?”- “Do we have to say to him that I put you there to calm down?”- “When you put him in his room, should he do nothing?” (3.26-27.105-99-107)

“Do we take the breaths before or after we yell? (...) Could you tell us again where we have to place our hands when breathing?”- “And do we say, ‘Stop now, I am taking deep breaths?’” (3.39.118-107)

“Do we start a conversation during Time Out? (...) Although I applied Quiet Time, I didn’t apply the Time Out, I still don’t know the difference.” (4.3.75)

“...because sometimes when I do it (give a logical consequence), I stop and think ‘did I threaten him or did I use a logical consequence? What did I do?’” (5.12.96)

*“I would like to ask something regarding relaxation because I sometimes lose control with her and I start yelling at her and I feel terrible that I am shouting at her. **Is there a book or a page online where I can find more information?**” (5.43.114)*

*“Regarding Time Out and Quiet Time, I feel that I have lost control. **Initially, I do not know how and in which occasions you can apply Quiet Time.** Nothing serious enough has happened at home to make me use Time Out.” (6.27.56)*

(d) Unsuccessful attempts

Most of the parents who had failed in their initial attempts or had previously failed while practising a strategy did not even make an effort to reapply it at present. Their cognitions did not seem to be helpful either and so attempts followed by negative thinking were not further progressed. This was not always the case, because despite any unsuccessful trials, some parents would still make further attempts.

“I tried Time Out but it didn’t suit me so I didn’t try it again. I don’t know why, but it doesn’t.” (1.19.156)

“I find it difficult (to relax); during upsetting incidents. I just can’t force myself to relax; I have to impose it upon myself first and then...” (2.9.75)

“I used them in the past but it didn’t work very well.” (2.20.117)

*“I didn’t manage to apply Quiet Time or Time Out. **I hadn’t managed in the past, and can’t do it now either.** Neither helped with the child (...) It doesn’t work anymore. I used to think it was because he was too impulsive, and Time Out only worked back then as punishment. I use punishment.” (4.18.85)*

*“We tried to apply Quiet Time because he was younger, around 3.5 etc., and Time Out, and **I do not know, it’s always a possibility that we’re not using these strategies properly.**” (5.20-21.65)*

(e) Incorrect application

The most prevalent reason for failing was the incorrect application of strategies. Through their accounts, it became obvious that most of the time parents

did not manage to execute a strategy simply because they had not followed its different steps or had violated basic principles underlying it. Parents provided examples of their mistakes for all different techniques, but the vast majority of the quotes were related to strategies for managing misbehaviour. For each of the examples of this section, the explanation of their mistake was also provided. The last but equally important burden that parents had to deal with was consistency.

(ATTENTION) “He does it to get a reaction from me; he’d go to hit me, but not actually to hit me, just raises his hand. And I look him in the eyes and say, ‘Don’t! It’s not nice. Instead, tell me what’s bothering you.’ And then I also say, ‘How would you feel if someone did that to you?’ So he’ll say, ‘Mum, you bother me!’ and he goes to hit me again (...) so, again, I say we’re not allowed to hit people, and then he gets embarrassed and wants to hug me, but I move him away, I don’t kiss him and then I say, ‘No, don’t do this!’ and then he does it again.” (5.31.96) → Discussing extensively is a way of paying attention to an attention-seeker

(BEHAVIOURAL CHARTS) “We had applied the behavioural charts, we had used stars and other things, and we agreed that we could do this the first time and then the second time, the third time and the fourth time...At the beginning it worked well; in the second phase it was going even better (...) Then he started asking me to do crazy things (activities) ‘No, now let’s do this!’ and then started putting the stickers up by himself; the game was lost, and at this point I started getting upset, so we stopped it as it was not working. I don’t know, maybe I didn’t do it right; I think I’m not patient enough, I think this is the main problem.” (3.15.105) → Mother loses control of the strategy; she should be the one in control of the chart not the child

(COOPERATION) “(...) Making a child scared of you is the best of way of making them do something” – “You might solve the problem in the short term but not in the long run” – “Because when the child is scared of someone, he might deal with that fear by bullying others (because he feels threatened) (...) He will also do things out of fear”- “Basically, it can also cause the child psychosomatic problems as fear has detrimental effects on their kidneys; if you want them to have kidney problems too, then it’s OK!” (1.30.810-89-75-119) → (Corrected by the parents 89-75-119)

(GROUND RULES) “We have applied ground rules, and the behavioural charts; so we printed it, using pictures as he can’t read yet; we don’t yell, don’t scream, don’t hit” (4.20.54) → Rules should be stated in a positive way

(GROUND RULES) “We set rules for the important things we want to change in our child’s behaviour. I have set rules for few things, and I insist on these rules. They are not visible, though, and this is something that I need to apply.” (5.26.105) → Rules must be visible so that children can review and remember them

(INDEPENDENCE) “(...) they’re learning to do things like brush their teeth and comb their hair at this age... and you want to let them take the initiative and let them learn by their own mistakes but it’s hard seeing them fail, like when our youngest was left alone to look after herself in the toilet. She came back home with a skin rash because she didn’t do it properly, even though we had showed her how.” (2.29.79) → Parents sometimes overdo it; they need to have realistic expectations from their children based on their age

(INSTRUCTIONS) “So, on that day I remember asking him, ‘Will you pick it up or will I have to take it away? Will you pick it up?’, ‘No.’” (4.47.67) → Use of instructions as questions

(INSTRUCTIONS) “So when I had a dinner party, we agreed that when the guests arrived, he would switch off the television, say hello, say thank you in case they offer you a gift, switch the television on and keep the volume low so that you do not disturb us. So he did exactly the opposite.” (5.41.67) → The child may not respond to too many instructions, may not remember them, which in turn may create frustration to the mother and result in negative thinking and yelling

(LOGICAL CONSEQUENCES) “I directly set logical consequences, so the moment he will say this (swearing), I will give him a warning, ‘You won’t be going for a walk!’ which I know (going for a walk) is important to him; ‘You won’t be able to play on your computer for the usual 15 or 30 minutes!’; he swears and does whatever he wants, he knows that he has lost the reward and he doesn’t care (...) he said ‘Now that I don’t have anything to lose I’ll carry on!’” (3.18.105) → Logical consequences do not seem to work in a generally negative environment; Threatening (the consequences do not match the actions, so it is a form of punishment) instead of discussing and guiding the child to think about the impact of his actions

(LOGICAL CONSEQUENCES) “Children are very manipulative; so when I say ‘Go and tidy your room’, ‘No, I don’t want to’, ‘Go and tidy your room, otherwise we are not going for a walk’ (5.11.105) → The consequences do not match the actions, and so it is a form of punishment

(ROUTINE) “I made a routine and put so much effort into it. I downloaded all the pictures and put them on the wall at their height; at first they were super excited because it was something new to do... But they ended up tearing it apart, and they denied it, not to mention the fact that even before that I would have to make them look at it. I thought maybe it was because they already had rules at kindergarten and when they came home they looked forward to not having any rules; they followed a consistent routine and so when they came back home they wanted a bit of freedom (...) They don’t refuse to do the activities I suggest, just the

routine that I set for them; I wrote it (the routine) but they just ignored it. I might try it again in the future.” (5.26-27.138) → The mother does not seem to agree with the strategy and the children should be included in the process of forming the routine plan

(TALK) “When she’s being unsociable, maybe I should take her and leave the playground. Once I said, ‘We’ll have to leave if you do it again; (...) and then we will talk about it’.” (4.7.75) → Threatening instead of discussing

(TIME OUT) “I tried it (Time Out) many times, with my daughter who’s the youngest out of the two, and it was very effective; it wasn’t effective for my son; ‘N. stay here and calm down please’; I was influenced by (the TV show) Super Nanny regarding the child’s thoughts during this process. You said and insisted that they just have to calm down. Sometimes it worked, other times it didn’t (...) I did not get involved in a discussion with him (during the process); ‘Sit there and calm down’ without saying much; he reacted ‘Leave me (alone)’; during his reaction, I kept saying ‘Sit and calm down’”- “So, you did not apply it correctly.” (2.22-23.75-95) → Parents tended to talk too much during Time Out

(TIME OUT) “My child said ‘Mum, I’ve calmed down’ and I replied ‘J., stop saying it because it’s getting on my nerves’ and he says, ‘Mum, I calmed down, Mum, I calmed down’ and then I say, ‘Is this really you proving to me that you’ve calmed down?’; so sometimes it works, other times it doesn’t.” (1.27.129) → Parents respond to the child during Time Out

(TIME OUT) “We talked about it and we used it but we didn’t explain clearly enough to our daughter what Time Out is; it worked for a period, but then we exhausted it; we hadn’t realised that there were other ways (to solve the problem) without creating any tension; through discussion or directed discussion (...) because she reached the point where she would just think, ‘It’s OK, I’ll just take the punishment, just go and sit over there on my own for five minutes.’” (1.28.77) → Parents need to first explain to the child the strategy and then confirm understanding before applying it; child seemed to be in control of the strategy and this way manipulated the situation

(TIME OUT) “Mine used to say the same’ ‘I’ll just go and sit on my step,’ so the behaviour didn’t change” (1.28.156) → child seemed to be in control of the strategy, manipulating the situation

(f) Inconsistency

As previously mentioned, intraparental and interparental levels of consistency were important facilitators of positive parenting. At the same time, difficulties in implementation mainly appeared in families where either level of

consistency was problematic. Parents who did not achieve the results they expected from a strategy seemed to be inconsistent with their own practice across situations, time and settings. As they underlined, practice was required for achieving a high level of intrapersonal consistency and ultimately setting an example for their child. Lack of consistency between parents was equally emphasised as a barrier. For example, some partners were completely indifferent, or applied the strategy incorrectly, or disagreed with their partner on the positive approach to the child's upbringing and preferred to follow a punitive one that included threatening and punishment and had immediate effects. For this reason, any efforts made on positive parenting strategies by one parent seemed to be undermined by their partner.

Intraparental inconsistency

*"I take deep breaths at other times during the day **but not during upsetting moments.**"- "It is difficult to do it at these times."- "Unfortunately, we are still 'behind' regarding this approach." (1.9.129-138)*

*"**At certain times it's easier (to remain calm),** like when the tension isn't going on right in front of you, when the kid's not there screaming in front of your face or hitting you because you're not paying him enough attention (...) however, if the kids are fighting in the next room, I feel like I can take a deep breath and go and deal with it, but it rarely happens like this." (1.34.89)*

*"Before it (something bad) happens, I actually take control and think 'Stop!' and it will stop; and while there are moments where I can't quite make it stop, **it's much better than before where I felt as though I had no control whatsoever.**"(4.35.67)*

Interparental inconsistency

*"I disagree, **if we do not cooperate, one person cannot do everything by himself**"; "if the mother teaches the children how to behave, then the partner will notice the difference at some point"; "he might see you doing it but he might not do it himself"; "What if he does not want to cooperate? It is his choice; I think he has this choice."- "You cannot force him to cooperate." (1.13-14.138-77-129)*

“Dad said this...”, “Now you talk to me, when you are with dad, do whatever he says” - “Sure, but if I apply other rules than my husband, then the child...” - “So **other rules will be applied by the mother, others by the father, others by the grandparents?**” - “I do not agree with it” (1.15.138-129-77).

“Regarding parents’ cooperation, especially at times when you shouldn’t be talking to the child, and you should put him back to the spot, **(imagine) when you have the other parent disagreeing and talking to him and saying things like, ‘If you come out of this door, there will be trouble!’ you know, yelling and creating more tension and spoiling everything**” - “...and consequently you get upset, and you start arguing with the other (parent) and creating yet more chaos; it’s better if the other agrees to be absent.” (1.26-27.810-129)

“I have applied the Time Out but not the Quiet Time, not because I didn’t think it was a good strategy but it just hadn’t crossed my mind (...) Regarding Time Out, we had started applying it before the seminars but it only works if you follow it quite strictly; however, **I think my husband overdid it; I was a bit more gentle with it. It doesn’t have long-term effects; I think he’s too young to understand the cause and effect thing - I’m not sure if that is relevant.**” (2.21-22.95)

“**However, when one of the parents wants immediate results, he/she won’t have the patience with these strategies and will instead revert to scare tactics; at least it makes the kid do what you want them to do!**” (2.30.810)

“I have an issue with my husband **who has a different character to me, different temper, I need to work on it.**” (4.18.85)

“Time Out worked in the past. But gradually the child became neurotic; **my husband punishes the children but indiscriminately, so there isn’t a system** (...) and when the oldest child is in Time Out the youngest will try and grab his attention, shouting, ‘Come on, G!’ (...) **their grandmother also has a habit of taking them out of Time Out**, so I’ve stopped using it as punishment because there are too many distractions to make it consistent and therefore effective. Also, it’s not easy because of my anger issues, and I’m going through a period of real stress (...) also, punishing them makes me feel bad (...) I really think before you start effective punishment of your children you need to work on yourself so that you are calm when doing it.” (4.18.85)

Theme: External factors.

(1) Others involved

For parents who had external support and help a barrier emerged from having caretakers or grandparents involved in their child’s upbringing. According to

these accounts, grandparents often interfered with the approach parents followed for raising their children. It seemed that the concepts of routine, rules, and discipline instead of punishment were not incorporated in the Greek traditional model of family functioning.

For some parents the involvement of grandparents in their child's upbringing had no specific effect as they made clear to the child which rules applied at their house or at their grandparents' house. For the majority of parents, grandparents obstructed the implementation of positive parenting practices. As grandparents do not visit their grandchildren on a daily basis, they tended to spoil their grandchildren by offering them sweets, justifying their misbehaviour and skipping any discipline methods. In addition, they interrupted the parents' practices by taking them out of Time Out, or giving them treats when they were clearly not allowed. Some parents also thought that grandparents tried to impose their own traditional views on parenting on them instead of adjusting to the new approach, which was perceived as controlling. Parents emphasised that grandparents unintentionally undermined their efforts, especially when they were all living in the same house, and as there was no consistency, there was no particular reason for carrying on doing these strategies. There was also a parent who had a nanny at home who also tended to spoil the child by tidying her room and toys, although she had been asked not to do it.

“I do not think that the grandparents do any harm because the kid knows how the mother will react if they ask something from the mother and what to ask from the grandparents. So this is not an issue; let the grandparents mollycoddle them and you set the boundaries.” (2.26.117)

*“The problem is not mollycoddling but when, for example, G. hit E. in front of my stepmother and my father, I punished G. but my stepmother said, ‘Leave the kid alone, he’s too young...’”, “Yes (I refer to) this type of involvement (...) **Most of***

the time, what I think is that I only get negative reactions for having them there (at their grandparents' house) which I'm now trying to resolve." (2.26.66)

"That's why I'm against Time Out because it's a strategy of convenience for my husband and he misuses it (describing an incident where the husband used it while watching football to stop children play in front of the TV; forgets to tell them to come out of Time Out) (...) In general, it can be misused because we have the grandmother at home and everyone noticed that punishment worked and so they thought that whenever they had to deal with a difficult situation that they should use punishment; and it came to a point where they were saying, 'Do this or that, otherwise your mother will come and punish you' (...) because they punished the children for ridiculous reasons (...) and now it has lost meaning as it was used for convenience." (4.39-40.87)

"I think it's cultural; even if the child comes to me and says, 'We don't eat chocolate' my father will go, 'Come on, let him. K., you can take it (chocolate), as your granddad says it's OK (...) your grandfather says that you can eat sweets and so you can; let your mum say whatever she wants.'" (4.43.87)

"It's the fact that Greek families are interfering (...) I think that if we approach things differently that our parents did, I reckon (things will be better)." (4.43.73)

"Grandparents are so Greek!" (4.44.1511)

"My mother stays with us because my husband lives in Thessaloniki and so she is 55 years old and she can't...well, she doesn't like to do things the way I like to do them!" (4.44.1511)

"Someone else who looked after her, like her grandmother, would say, 'Why can't I tidy up her toys?' She couldn't understand that it was not for her to do but for my daughter." (6.17.127)

"... My mother doesn't think that we (mothers) need free time, so if you're a mother, you're basically a slave; and I told her that whether you like it or not, whether you approve of it or not, this is my house, my child, my time and I will do what I think I need for myself. And what I need to do is to have some time for myself; some quality time with just myself, without having the kid around..." (6.21.56)

(2) Impact of recession

The current recession was mentioned as a factor that was more likely to negatively affect the parents and subsequently the relationship with their children. Apart from one parent who grasped the opportunity of being unemployed to build her relationship with her child and spend more time with him, the vast majority

suggested societal factors related to recession as a barrier to their practices. Due to the high rate of unemployment and the overall economic crisis, parents have become hopeless and developed catastrophic thoughts regarding the future, which in turn caused additional anxiety and stress. There were two mothers who became totally disorganised and irritable since they were unemployed and had to stay at home. At the same time, parents who tended to work harder and more hours to make do with limited resources seemed to struggle a lot with their parenting practices. They found it quite challenging to balance work and family, set and follow a specific routine and have quality time with their children. As a result, they thought that this demanding situation certainly had an impact on the child's behaviour.

*“Quality time is not always feasible owing to **our working schedule.**”*
(1.2.75)

*“There are many parents who **work for many hours and it would be difficult for them to find the balance between work and family**, for example my husband comes back at 8pm and he's tired; he tries to get involved with the kid, but it is not easy.”* (2.29-30.95)

*“**I work in the private sector, in education, and I've got a lot of work to do, reading and lots of responsibilities** (...) I don't have the endurance of a younger woman; I have lots of responsibilities during the day, and I've dropped the ball (I have lost control).”* (5.21.65)

*“I see the difference between then and now. **Then, I was working long hours but now, for the last one and a half years since being unemployed, I see how different I've been behaving towards my child. I'm completely relaxed now, I don't shout, the tension isn't there, and the child is more relaxed too** (...) This isn't necessarily the answer, though, as I know many people who can't just give everything up and stay at home, it's just not practical. **And I know people who have been unable to change their circumstances, they don't get to socialise with their friends, that sort of thing, and there's tension at home as a result.**”* (6.35.148)

*“**I've been unemployed the last 17 months and the stress is unbearable; I'm earning 500 Euros and it barely covers the basics** (...) and I see that unemployment is going to continue to be high (...) ironically, when I was working I had a better balance and the house was in much better shape, even though I had less time. I was organised and had a routine, but now there isn't a routine and I'm*

all over the place and it affects the child; I try, but without a good work-life balance it's really hard. (6.35-36.56)

“Along with ‘cooperation’, the issue of ‘avoiding negative thoughts’; the country’s gone to the dogs and it’s depressing for everyone and every day we wake up it seems to be worse.” (6.40.56)

(3) Culture

Parents mentioned that the cultural environment where their families developed might have put an obstacle in parenting and, in turn, in the child’s upbringing. Tradition seemed to be a possible reason for the lack of the fathers’ involvement in raising the children in a family. Typically, mothers used to stay at home and raise their children. Now, mothers had to contribute to the family income, and so might have been working the same hours as men, while also having home duties. The lack of support and group effort increased the mothers’ responsibilities in and out of the house, often accompanied by increased stress and anxiety.

In addition, Greek children were grown in nuclear families where strong relationships were formed along with dependency caused by overprotective parents (Vasiliou & Vasiliou, 1970; Zarnari, 1970). Due to the strong emotional connection parents formed with their children, they found it quite challenging to discipline them and appeared to be quite sensitive when facing an upsetting child.

Another cultural characteristic of Greek parents mentioned was their focus on the opinion of ‘others’ in society, which influenced the way they responded to a child’s misbehaviour. For instance, a parent shared that shouting diligently was preferable to being ridiculed in front of others and a common practice of parents when their child misbehaved in social situations. Silent social rules of what was acceptable in public seemed to guide parents’ response to their child’s behaviour.

“We are not used to doing things this way, basically.” (2.24.117)

*“Whenever I am at a social gathering and a child misbehaves, the most common reaction, which is my reaction too, is to **shout diligently so as to avoid being ridiculed in front of others.**” (2.24-25.66)*

*“I know many Greek parents who just allow their children to cry and cry, until they learn to stop and fall asleep. I don’t understand how parents can let their children go through this sort of torment; **other people sympathise with the situation, but I don’t:** they (these parents) can’t punish their kid to make him learn how to calm down. It seems to me that it is a kind of facism and I think that the only problem in Greek society is the systemising of the behaviour; it can be done but it isn’t the way Greek parents do things but they should.” (2.25.95)*

*“It was quite difficult for me to **balance work and family life**, especially here in Greece.” (4.3.73)*

*“I have an issue regarding **cooperation with my partner**; I think it is cultural, it’s a Greek (phenomenon).” (4.22.73)*

*“I think that relationships should be based on group effort; there is an issue with that; it’s a combined effort; but **working together is not part of Greek values.**” (6.40.68)*

“I think that we try to behave like our fathers, our grandparents, and there is a gap between generations, and we all fall into this gap (...) couples here have not learnt how to solve their issues together.” (6.41.56)

6.6.3 Acceptability, feasibility, cultural relevance and usefulness of strategies

According to the ratings of parents on each of the strategies presented in the Seminar Series, it can be observed that parents scored all different strategies above the mean rating score of 5 for acceptability, feasibility, cultural relevance and usefulness (Table 3).

Parents used most of the strategies to a great extent but around half of the parents or less applied routine (57%), behavioural charts (21%), Quiet Time (47%), and Time Out (55%). In terms of acceptability, almost all strategies had a mean score of above 9, meaning that they were perceived as acceptable and that their application served their purposes. The strategies that received the lowest mean score were the behavioural charts (7.96), Quiet Time (7.72) and Time Out (7.68). Regarding feasibility, although many strategies had a mean score of 8 and above, there were some techniques that they thought they were more difficult to establish, such as routine (7.36), the behavioural charts (6.95), encouraging problem solving skills (7.89), Quiet time (6.55), Time Out (6.72) and most of the strategies on taking care of themselves, including balancing work and family (7.49), avoiding negative thoughts (7.34), cooperating with their partners (7.89), self-reflecting (7.21) and remaining calm during upsetting times (7.45).

Parents gave a mean score of around 7 regarding cultural relevance to almost half of the strategies (44%). The following strategies were perceived as less culturally relevant than the majority of the strategies, suggesting that they might have been less suitable for the Greek culture: routine (7.72), the behavioural charts (7.09), planned ignoring (7.87), Quiet Time (7.13), Time Out (7.11), and most of the strategies on taking care of themselves including balancing work and family (7.55), having realistic expectations (7.87), avoiding negative thoughts (7.62), cooperating

with their partners (7.89), self-reflecting (7.55) and remaining calm during upsetting times (7.81). Lastly, regarding the usefulness of these strategies, parents scored all strategies with a mean score of 8 and above.

Table 3. *Acceptability, Feasibility, Cultural Relevance and Usefulness of positive strategies.*
(scores from 0-not at all to 10-extremely acceptable/feasible/culturally relevant/useful)

Strategy	Applied it % of parents	Acceptable Mean (SD)	Feasible Mean (SD)	Culturally Relevant Mean (SD)	Useful Mean (SD)
Building positive relationships					
Quality Time	93.6% (n=44)	9.83 (0.48)	8.49 (1.79)	9.32 (1.43)	9.94 (0.32)
Talk calmly	95.7% (n=45)	9.79 (0.62)	9.04 (1.35)	9.15 (1.44)	9.94 (0.32)
Affection	97.9% (n=46)	9.87 (0.40)	9.47 (1.02)	9.43 (1.10)	9.87 (0.54)
Encouraging desirable behaviour					
Descriptive Praise	95.7% (n=45)	9.66 (0.64)	9.26 (1.26)	9.00 (1.38)	9.66 (0.76)
Routine	57.4% (n=27)	8.81 (1.65)	7.36 (2.45)	7.72 (2.38)	9.32 (1.00)
Positive Attention	89.4% (n=42)	9.47 (1.02)	8.70 (1.74)	8.85 (1.41)	9.64 (0.79)
Engaging Activities	85.1% (n=40)	9.53 (0.80)	8.40 (1.85)	8.72 (1.56)	9.81 (0.50)
Teaching children new skills					
Set Good Example	91.5% (n=43)	9.53 (0.80)	8.40 (1.58)	8.57 (1.75)	9.83 (0.56)
Incidental Teaching	89.4% (n=42)	9.62 (0.80)	8.77 (1.43)	8.85 (1.29)	9.66 (0.79)
Ask, Say, Do	76.6% (n=36)	9.30 (1.40)	8.15 (1.90)	8.57 (1.50)	9.45 (0.97)
Behavioural Charts	21.3% (n=10)	7.96 (2.19)	6.95 (2.88)	7.09 (2.40)	8.26 (2.07)
Set Goals	76.6% (n=36)	9.47 (0.86)	8.04 (2.09)	8.43 (1.44)	9.66 (0.64)
Initiatives					
Independency	93.6% (n=44)	9.49 (1.14)	8.62 (1.80)	8.49 (1.47)	9.64 (0.74)
Problem Solving	87.2% (n=41)	9.32 (1.20)	7.89 (1.72)	8.23 (1.58)	9.64 (0.74)
Managing misbehaviour					
Ground Rules	70.2% (n=33)	9.21 (1.02)	8.00 (1.66)	7.68 (2.14)	9.47 (0.86)
Directed Discussion	72.3% (n=34)	9.15 (1.02)	8.30 (1.61)	8.51 (1.53)	9.45 (0.78)
Planned Ignoring	89.4% (n=42)	9.11 (0.94)	8.02 (1.69)	7.87 (1.86)	9.02 (1.03)
Instructions	93.6% (n=44)	9.62 (0.68)	8.09 (1.83)	8.02 (1.89)	9.66 (0.73)
Logical	93.6% (n=44)	9.43 (1.06)	8.17 (1.77)	8.21 (1.84)	9.55 (1.00)
Consequences					
Quiet Time	46.8% (n=22)	7.72 (2.24)	6.55 (2.64)	7.13 (2.22)	8.19 (1.85)
Time Out	55.3% (n=26)	7.68 (2.64)	6.72 (3.01)	7.11 (2.55)	8.21 (2.21)
Taking care of themselves					
Work-Family Balance	68.1% (n=32)	9.17 (1.27)	7.49 (2.14)	7.55 (2.08)	9.70 (0.72)
Realistic Expectations	83.0% (n=39)	9.23 (1.18)	8.06 (1.63)	7.87 (1.87)	9.70 (0.72)
Avoid Negative Thoughts	85.1% (n=40)	9.38 (0.99)	7.34 (2.17)	7.62 (2.42)	9.66 (0.84)
Cooperation	85.1% (n=40)	9.49 (0.88)	7.89 (1.63)	7.89 (2.34)	9.79 (0.62)
Self-reflect	61.7% (n=29)	9.11 (1.20)	7.21 (2.15)	7.55 (2.10)	9.40 (0.90)
Relaxation	61.7% (n=29)	9.30 (1.12)	7.45 (2.22)	7.81 (1.99)	9.51 (0.83)

6.7. Discussion

In these focus group sessions, parents shared their personal views and experiences regarding the brief parenting intervention they received at the pilot RCT. Six focus groups were organised where parents discussed the facilitators of and barriers to positive parenting strategies.

The facilitators of positive parenting were relevant to what they did before, during and after their practice. Before applying any strategies parents had identified the problem and focused on the specific traits of their child's or their own behaviour that they aimed to change. During implementation, acting properly was key to the change process. Regardless of the outcome, parents who had built the skills to self-reflect on their efforts were more likely to repeat the strategies, improve over time by correcting their own mistakes, and notice the changes in their children and themselves.

The barriers to positive parenting included child, parent and external factors. Specific characteristics of the child, such as a fractious personality, age and the number of children in the family, were perceived as burdens to parents' practices. At the same time, parental characteristics, such as a difficult personality, marital status, their perceptions and most importantly negative factors associated with their practice, had a great impact on their parenting. Lastly, the involvement of others in the child's upbringing, the current socio-economic changes due to recession, and the culture were identified as factors that prevented parents from applying positive parenting practices.

Parents also rated each of the strategies presented in the Seminar Series as acceptable, feasible, culturally relevant and useful. However, from their ratings it was apparent that certain strategies were preferable to others. At least half of the

parents who participated in the focus group discussions had tried all of the strategies but one (i.e. behavioural charts).

6.7.1. Meaning and Implications of the Study

6.7.1.1 Facilitators and Barriers

In terms of facilitators, the first theme, ‘identify the problem,’ depicted the reciprocal and bi-directional relationship between parents and children. Parents recognised that their own behavioural traits may have elicited specific behavioural responses from their children and vice versa. Having identified the aspects of their own and their child’s behaviours that parents aimed to improve facilitated the process of change. As a result, parents chose strategies that suited their own and their child’s needs. The second theme, ‘act properly,’ emphasised the importance of accepting, understanding and following through the parenting practices while parents remain confident, flexible and consistent. The last theme, ‘self-reflect,’ represented a cognitive process through which parents evaluated their efforts for further improvement and reflected on the changes they noticed on themselves and their child.

Regarding the barriers, the first theme, ‘child factors’, included the child’s characteristics, such as their behaviours, age and number of siblings in the family, which according to parents had a great impact on their practices. Children tended to be argumentative, disobedient and oppositional in families where they seemed to have lost respect for the parents and parents did not react. The second theme, ‘parent factors’ was oriented around parents’ behaviours, cognitions and the practical mistakes that they frequently made. There was a general lack of control, confidence, and consistency in their parenting, which might have created a sense of instability in

children. Parents seemed to be quite emotional and flexible when it came to setting boundaries, rules, logical consequences, a routine and discipline practices. This could be linked to the last theme, 'external factors,' depicting factors outside the family micro-environment such as others involved in the child's upbringing, social and cultural variables. The Greek parenting style might have been largely influenced by the norms of nuclear families, where fathers have traditionally been less involved in the child's upbringing, while grandparents appeared to contribute in a great extent to parenting duties. At the same time, their tendency to overprotect their children might have caused more problems in their behaviour than benefits. Also, the current recession has negatively affected their everyday life and, in turn, may have intensified parents' reactions.

The facilitators and barriers found in this analysis were in line with other theoretical models and findings from qualitative synthesis in other countries. In a qualitative synthesis based on parents reports on different aspects of the delivery of parenting programmes, it was found that parents' feelings before, during and after taking part in a programme, parental knowledge of the problem, recognition of parents' needs, opportunity to acquire knowledge and skills, opportunity to gain control and confidence and need for support from spouse or partner were among the main factors that could potentially improve parent-child well-being (Kane, Wood, & Barlow, 2007). These factors were among the facilitators identified in the present thematic analysis. Having identified the main problem parents aimed to change, including the recognition of their own needs, before starting practising their techniques was a key factor for achieving any changes. While practising, knowledge and skills through constant practice along with intraparental consistency may have helped parents to gain control and raise their confidence levels, as it has been

reported in other studies too (Furlong & McGilloway, 2012). Increased conflict with partners regarding the introduction of new techniques has been a common theme in literature (Furlong & McGilloway, 2012; Kelleher & McGilloway, 2006; Mockford & Barlow, 2004; Spitzer, Webster-Stratton, & Hollinsworth, 1991). Throughout their practices, parenting cognitions and schemas in the culture, in experiences with their children, in their interactions within and outside the family, have been shown to affect parenting behaviour and child outcomes (Grusec, Hastings, & Mammone, 1994).

According to Belsky, Lerner and Spanier's theory of parenting (1984), parental developmental history, personality, marital relations, work, social network, and child characteristics all have an impact on parenting, and could affect child development. As suggested in the present thematic analysis, all these factors can potentially be facilitators of and/or barriers to parenting practices based on how parents actually perceived and embraced them. The factors of parents' personality, knowledge, skills and parenting schemas have been proposed to associate with parenting practices (Belsky, Lerner, & Spanier 1984; Newberger, 1977; Prinzie, Stams, Deković, Reijntjes, & Belsky, 2009) and studies have confirmed these findings (Bloomfield *et al.*, 2005; Woodworth, Belsky, & Crnic, 1996), even in school-based interventions based on positive strategies, reduced negative strategies, and social and emotion skills enhancement (Baker-Henningham & Walker, 2009). Among parents, health visitors and family support centre workers, parental needs, consistency in parenting, cultural expectations, setting boundaries and applying discipline strategies as well as handling conflicts were also identified as barriers in parenting. The sense of achievement, understanding the child's needs for acceptance

and willingness to change were important factors for parents to feel effective in their parenting role (Bloomfield *et al.*, 2005).

6.7.1.2 Acceptability, feasibility, cultural relevance, usefulness

Based on the mean scores of the parents' ratings, all strategies were perceived to be acceptable, feasible, culturally relevant and useful. This finding is in line with a previous small pilot study conducted with Greek parents, who had not been through the programme (Foskolos, 2010). Some of the main characteristics of the two samples were different for example: (1) in the previous pilot study the sample size was much smaller ($n=6$) than the sample of the current study ($n=47$); (2) in the pilot study all parents had scored their children above the clinical cut-off for conduct disorders as measured by the SDQ, while in the present study 40% of the participants ($n=19$) had a child above the clinical cut-off for behavioural problems as measured by the ECBI intensity scale and most importantly; (3) parents just watched the strategies on a DVD whereas in the present study parents learnt and then practised them. It seems that the Greek parents in the pilot study (M_{PL}) and in the present study (M_{PR}) scored similarly when it comes to acceptability ($M_{PR}= 9.16$, $M_{PL}= 9.33$), feasibility ($M_{PR}= 8.46$, $M_{PL}= 8.41$) and cultural relevance of the strategies ($M_{PR}= 8.95$, $M_{PL}= 8.56$).

In terms of usefulness of these strategies, it seems that Greek parents perceived all the strategies as useful, recognising their importance in overcoming their own and their child's difficulties and their practicality in everyday life. In contrast, Japanese parents gave high ratings for the usefulness of certain strategies, such as 'quality time,' 'talk to your child,' 'show affection,' 'descriptive praise,' 'positive attention,' 'engaging activities' and 'directed instructions,' and lower

ratings to discipline strategies, such as ‘directed discussion,’ ‘planned ignoring,’ ‘Quiet time,’ and ‘Time Out,’ reflecting their preference for using a non-authoritarian approach, affective vocalisations and engagement to foster empathy (Matsumoto, Sofronoff, & Sanders, 2007).

Greek parents also gave high ratings to the majority of the strategies in terms of acceptability, feasibility and cultural relevance. However, there were a few strategies that received lower ratings: (1) in the group of the strategies aiming to encourage desirable behaviour ‘routine’ received the lower ratings in terms of its feasibility and cultural relevance and 57% of the parents stated that they used it; (2) in the group of the strategies focusing on teaching children new skills ‘behavioural charts’ received the lower ratings in terms of its acceptability, feasibility and cultural relevance and only 20% of the parents stated that they used it; (3) in the group of the strategies targeting misbehaviour management ‘Quiet Time’ and ‘Time Out’ received the lower ratings in terms of their acceptability, feasibility and cultural relevance and more or less 50% of the parents stated that they used it; (4) in the group of the strategies designed to encourage parents to take care of themselves ‘balancing work and family’, ‘avoiding negative thoughts’, ‘cooperating with their partners’, ‘self-reflecting’, and ‘remaining calm during upsetting times’ received the lower ratings in terms of their feasibility and cultural relevance.

Regarding the strategies in the first three categories, which targeted mainly the change in child behaviour, although there were many quotes underlining the importance of these strategies and the subsequent changes on the child behaviour, it seemed that for the majority of parents they were not feasible and culturally relevant. Looking at the parents’ accounts of their personal experiences when applying these strategies, there might be several explanations to the low ratings.

Firstly, a common feature of routine, behavioural charts, Quiet Time and Time Out is that parents use these strategies to control undesirable behaviours, set boundaries and structure to a child's life and manage misbehaviour, which might elicit escalation in concurrent child oppositional and aggressive behaviours. This means that they need to have the absolute control of these strategies in order to fully implement them. There were many incidents described where they did not seem to be confident enough to manage their child's uncooperative response, and so they might have felt intimidated and challenged having realised that their child was in control of the strategy. This may also be the reason why they gave up their efforts after their initial attempts. These are also strategies where parents do not see immediate effects after implementing them, as they require consistency across time to produce change. This may explain the lack of familiarity with some strategies. For the behavioural charts, Quiet Time and Time Out, there was also an apparent lack of understanding. Parents, who did not attend the whole seminar series, usually asked questions on implementation of strategies showing that they were uncertain about the steps involved, and one even asked about the difference between Quiet Time and Time Out. Due to the brief nature of the intervention, there was not much time to go through the strategies in details or involve parents in role-playing. The Seminar Series gives little chance for practice, refining the strategies and repeated coming back to the group for discussion and troubleshooting. Yet, the tip sheets provided at the end of each seminar included all the necessary details regarding their implementation.

Particularly, regarding routine, parents might have thought that it was neither as feasible nor culturally relevant as other strategies because of their stressful life. Due to the recession, parents seemed to have been working more; 66% of the

participants who participated in the focus group sessions had a full-time job, and so they might have found it difficult to set an established daily routine for the child within their busy schedule. In addition, there were a few parents who believed that children did not need a routine in the house, as they had to follow one at school, while others were of the opinion that a routine would restrict a child's possibilities and automate their life. Another reason could be that they did not involve children in the process of setting a routine but created the whole routine on their own. By being controlling and overprotective, parents encouraged dependency (Dishion & Stormshak, 2007; Vasiliou & Vasiliou, 1970; Zarnari, 1970). It is more likely that children would engage in a strategy if they were involved in it. Concerning behaviour charts, parents rated this strategy as less acceptable, feasible and culturally relevant as some parents seem to prefer verbal prompting to behavioural charts to teach their children new skills.

Regarding the discipline strategies of Quiet Time and Time Out, fathers seemed to have accepted these strategies for managing misbehaviour, whereas mothers appeared to prefer verbal explanations and reasoning as discipline methods supporting other cross-cultural research studies (Conroy, Hess, Azuma, & Kashiwagi, 1980; Hobbs, Walle, & Caldwell, 1984; Ujiie, 1997). However, no generalisations can be made based of the fathers' opinions, as there was a sample size of only four fathers. Some mothers were reluctant to use strategies on discipline and expressed feelings of guilt when they had to punish their child, probably due to the emotional attachment they had to their children. They had also made assumptions around their child's cognitive abilities because of their young age, which might have uncovered their own insecurities on how to communicate these strategies or have been an easy way to rationalise their denial to use them. Like other studies,

inconsistency between partners and the interference of others, mainly of grandparents (Mason, May, & Clarke, 2007; Thomas, 1990), in the child's upbringing was also a barrier. This may be due to mothers' general lack of control over the strategy and over other people as well as lack of support in their role, suggesting a possible lower status within the family, and so possibly reflecting issues of low self-esteem, too. Yet, it could only mean that parents did not have to deal with aggression or severe misbehaviour to use these strategies, or did not perceive their child's behaviours as severe enough to use them (Dix & Grusec, 1985).

All strategies that parents could use to take care of themselves, such as having realistic expectations, avoiding negative thoughts, self-reflecting, relaxing, had lower mean scores than other strategies, in terms of feasibility and cultural relevance, even though parents seemed to have understood their rationale and recognised their usefulness. This was surprising because there was a common belief among focus group participants that parents' behaviour could have affected their child's behaviour. Due to their overprotective nature, Greek parents may have prioritised children over themselves (Vasiliou & Vasiliou, 1970; Zarnari, 1970). Also, the application of these strategies might be more challenging in a country where the current recession has caused additional stress to people's lives. Parents whose life is too stressful may find strategies difficult, not necessarily because they do not understand their rationale or accept their importance, but simply because they are too distressed to do it (Bloomfield *et al.*, 2005; Webster-Stratton, 2009). Parental stress is likely to increase parent irritability, aversive interchanges or getting involved in a dispute about the response to child misbehaviour, as well as influence their disciplinary practices. Parents who are stressed tend to focus on the child's negative behaviour and attribute them to the child rather than to the situation

(McCarty, McMahon, & Conduct Problems Prevention Research Group, 2003; Patterson & Forgatch, 1990; Patterson, 1988; Patterson, Reid & Dishion, 1992; Wahler & Dumas, 1989). For this reason, they struggled to balance work and family, remain calm in upsetting moments, or take a moment to self-reflect, especially if they had a difficult child.

6.7.2 Strengths and Weaknesses

There are a number of studies that explore parents' views on parent involvement in parenting; yet, there is inadequate evidence on parental perceptions of the implementation of positive strategies in everyday circumstances, which was the main aim of this study.

The concepts of credibility (in preference to internal validity), transferability (in preference to external validity), dependability (in preference to reliability), and confirmability (in preference to objectivity) were used to assess the trustworthiness of qualitative data (Guba & Lincoln, 1989). The credibility of data refers to the extent to which it is possible to have confidence in the truth of the findings (Barlow & Stewart-Brown, 2001). In the present study, the participants were part of a seminar group in a pilot RCT, and although 57% of the intervention parents attended the focus group sessions, there were no significant differences in demographics and dependant variables between the parents who attended a focus group session and those who did not.

To ensure that the participants were truthful, the researcher tried to establish a rapport from the outset of each session by making them feel comfortable, encouraging them to be frank, confirming the anonymity and confidentiality of the trial, and underlining his independent status (Shenton, 2004). The analysis was

limited to verbal behaviour. Consequently, parents' perceptions might have been representations of socially desirable responses, especially due to their familiarity with the facilitator during the intervention (Adams & Cox, 2008); alternatively, they might have reflected the views of participants who dominated the discussions (Smithson, 2000). However, based on parents' accounts, it seemed that participants did not hesitate to express opposite views, argue or challenge others' views, while all participants were encouraged to share their experiences. Moreover, the quotations provided detailed descriptions of parental experiences, which helped to gain insight into the actual situations and, to an extent, the contexts that surrounded them. For this reason, it is speculated that the overall findings were accurate representations of participants' realities. Lastly, the outcomes of this study were congruent with the findings of previous research findings, increasing the validity of the results (Silverman, 2000).

Transferability refers to the extent to which the findings can be applied to other situations (Merriam, 1998). In this study, although parents were drawn from a mixture of social backgrounds, there was also a high representation of the parents who had attended the whole series. This may have made the findings more capable of being generalised. However, participants were not randomly selected and so sampling bias might have influenced them and their responses. Also, parents who attended two or one seminar did not have at least a university degree, were single, divorced or separated, and fathers were under-represented in this study. Therefore the results did not seem to be transferable to these groups of parents, and further research is needed to establish their views on parenting programmes.

Dependability refers to the extent to which the coding of the data was undertaken reliably. The research design and its implementation were described in

detail, along with the data gathering. The steps followed for coding the data were also specified in detail, and a reflective appraisal of the project evaluating the effectiveness of the process of enquiry undertaken was also included. The themes seemed to cohere meaningfully, while there were clear and identifiable distinctions between them, ensuring internal and external homogeneity (Patton, 1990). Only the researcher analysed the data and so although there was consistency in the methods of analysis, it could be argued that there might have been personal bias in the data interpretation (Patton, 1990). The reliability of the results would have been enhanced by the presence of another unbiased coder (Boyatzis, 1998). Due to cost and feasibility issues, it was not possible to hire one. However, respondent validation was conducted to overcome any uncertainty about accuracy of what participants stated (Hennik, 2013). Parents reviewed the final selected quotations to ensure that no changes had been made to their statements, and 81% provided feedback.

Confirmability refers to the extent to which it is possible to conduct a formal audit of the study procedures. There was not any independent reviewer to undertake any formal assessments on the confirmability of the data obtained but the results seemed to be consistent with the findings of other studies.

6.7.3 Future Research and Questions

The focus groups discussions provided a rich variety of facilitators and barriers that parents had to deal with during their practice. These factors should be incorporated in the delivery of the Seminar Series and highlighted to parents to avoid common pitfalls and facilitate their process of change. Also, the scenarios, experiences and concerns provided could be used to design culturally relevant role-plays and activities to ensure Greek culture is represented throughout the training.

Integrating cultural experiences and metaphors into the training is also highly recommended when parenting programmes are delivered in a new setting (Webster-Stratton, 2009).

Further research should be conducted in groups of parents who were under-represented in this study to get a rich and more complete picture of parents' experiences on positive parenting. Specific speculations generated during this study can be further explored in future research.

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APPENDIX A. FOCUS GROUP DISCUSSION EXTRACTS

THEME CODE	FACILITATORS-EXTRACTS
Before Starting: Identify the problem	
<i>Parent's behavioural traits and needs</i>	
Behavioural traits	<p><i>“Although I thought I was a person who could control his temper, I recently lost control three to four times and hit his hands to calm him down; Of course, I wouldn't normally calm him down this way, as I'm totally against the use of violence and I thought it was a “decadence”, so I decided to do something about it. Anyway, I finally came to the seminars and I realised that other parents have hit their children too and how unacceptable it (hitting) was. I have not done it again and I will not allow this to happen again because you also give the right to the child to think that violence is acceptable and to reproduce it; and now that I do not do it, he has not completely stopped it - not that he really hits us but sometimes he hits our hands - and I talked to him about it because he actually said to me ‘you have hit me on my hands too’ and I said that I did, but every time I did it, I then apologised; (...) so after the seminars I explained to him that hitting him was a huge mistake and it should not have happened and that whenever we are upset about something, hitting is not the way to solve our problems; instead, we can count to ten silently, or have a little walk around, anything but this (hitting). I've tried this several times now, and I've not (hit him) again so far. (...) During upsetting moments, I try to relax, to get rid of the negative thoughts. (...) In general, I have a very good relationship with my kid (...) and generally I don't go for enforcement anymore, as I know that's not the way.” (2.7-9.95)</i></p> <p><i>“I was calm when I was talking to them; and basically I saw how important it was to stop, turn, look them in the eyes and talk with a calm voice; due to this strategy the noise in the house was reduced; and the use of a calm voice, as you said (it was important), a calm deep voice because what I was (actually) saying was always right, but the tone of my voice was my main problem; as my son said once ‘Mum, the way you say it, it's as if you're cursing me’; from these things I realised that the tone of voice might be more important than what I was actually saying.” (1.11.75)</i></p> <p><i>“I never praised my child and what you said about taking things for granted is true, everything was taken for granted; he should have been born with all the virtues in the first place (ironic tone), and all the good things he had, I thought it was great that he had these qualities; not I have never said “Well done” to him</i></p>

Praising is very effective for every kid who isn't used to being praised, to receive a praise even for simple things, to congratulate him, because I had taken everything for granted; because nobody did praise me.” (2.9.117)

*“When they fight, I can't intervene. I'm not calm enough to say 'N., come here, you know that you have to follow our rules.' **I know it's (because of) me, that when there's tension at home I can't remain calm.** I do try, when I'm in a good mood, to say, 'N., come here, is it right what you just did?' I try to bend down to his eye level, to talk with a calm voice. When I am calm, the tension stops; sometimes during an upsetting moment I can't keep calm, I can't take deep breaths, and then I can't go to the child and say with a calm voice 'N., what are you doing now?' I lose control during moments like this. I can try to solve this by breathing and stretching but it doesn't always work. (...) We do know some things in theory, but personally, most of the time, it doesn't always work in the real world. For instance, when I come back home tired - and **most of the time I come back home tired because of tension at work** - this is when I realise it **affects the kids' behaviour**; whenever I'm calm, everything else is much better.” (2.13.75)*

*“The problem wasn't that I didn't apply Time Out correctly. The problem was that it was me, my head was somewhere else and I wasn't paying attention to the children (...) I think the point is to find out why the child comes to a point where he misbehaves; **so the problem was not that he was hitting his brother, but that I was letting them play together on their own thinking that two boys at this age could play on their own in their room without any trouble and therefore allowing me to get on with some housework! So, it was my fault at the end of the day.**” (4.8.87)*

*“I used to automatically solve his problems; I have learnt not to do that (...) (describing an event when the kid was upset) 'sit here and calm yourself down because you are upset now'; because sometimes I also react spontaneously at home; 'we have to sit and think whether what you say might not be right towards your friend and he did not do it on purpose, think about it.' (...) It happened twice; somehow he got hurt but he did not react; I think maybe it is the age, but also it might be because of the way I handled it (...) **I let him think and decide what he had to do by himself.**” (4.14-15.67)*

*“For me the personal pep-talks and relaxation don't really work, I don't really have the personality for them. And **I recently got worse and reached the point where I told her that I was about to explode and that I could not put up with her**, because I have been working the last three months like a dog and I couldn't cope with her*

	<p><i>she asks me why I am upset, but I am not really upset; I think she perceives the tension between us like that, possibly because I raise my voice a bit without shouting, but it's enough to feel the tension.</i>" (6.33.127)</p> <p><i>"I see the difference between then and now. Then, I was working long hours but now, for the last one and a half years since being unemployed, I see how different I've been behaving towards my child. I'm completely relaxed now, I don't shout, the tension isn't there, and the child is more relaxed, too (...) This isn't necessarily the answer, though, as I know many people who can't just give everything up and stay at home, it's just not practical. And I know people who have been unable to change their circumstances, they don't get to socialise with their friends, that sort of thing, and there's tension at home as a result."</i> (6.35.148)</p>
Transferability	<p><i>"I'm very stressed as a person, and I don't know why but I panic sometimes, not because of the child, but on other occasions, so I may transfer it (this stress) to my kid; of course it's my own issue."</i> (1.10.129)</p> <p><i>"Any tension between the parents, any disagreement on any level, the kids pick up on it (...) and then we see it through their eyes."</i> (1.27.119)</p> <p><i>"I tried to be calm by talking to my child but I don't do it anymore and it resulted in having a child with anger issues, because I have anger issues in the first place. (...) I now try to talk with a calm voice and whenever I'm upset I just don't talk to him, I go to a different room, I take deep breaths, but I don't make him do it (take deep breaths). I also used to hit him, and in turn he was hitting other kids; it was a problem at school, but we overcame it."</i> (2.9.117)</p> <p><i>"I think it's important that children learn from example; if the parent is relaxed, and therefore happy, the child will in turn learn that's a good way to be; at the end of the day, children can "read" (sense) you pretty well, so if you're insecure they'll be insecure. I know this from looking at my own daughter and from the mistakes I made bringing her up."</i> (6.20.127)</p>
Needs	
<i>Child's behavioural traits and needs</i>	
Behavioural traits	<p><i>"I have to try and deal with what jealousy there is. Thankfully it's not bad, so I just try and alleviate what's there and not really pay too much attention to it, as I think that would just exacerbate it (...) and I think it's working. I've noticed positive changes (...) and I see him reacting in a better way to his brother, and he's becoming more independent (...) and his self-esteem is improving, too."</i> (4.18.85)</p>

	<p><i>“(parents invited guests for a dinner party with their kids; boys and girls play in groups; girls seem to annoy boys) I didn’t know what to say. I asked him to gather the puzzle pieces and put them away. He started complaining, so I took him to another room and I told him that today he’s the host. ‘But the girls were shouting at us, annoying us and laughing at us’ he complained, and I didn’t quite know what to say to that. But because he likes stories I decided to tell him that Ancient Greeks favoured hospitality, and that Ksenios Zeus was the god of hospitality (...) and so as V. was a visitor he should respect her; he looked at me and said that he would think about it, and it seemed to work as they all settled down.” (5.37.65)</i></p>
Needs	<p><i>“Last night we were at a wedding (...) and I had my youngest (son) in my arms. At some point I noticed that the oldest one was tired too (...) but he wasn’t showing me what he wanted. Once the youngest unhugged me, I asked the oldest one: ‘Would you like a hug?’ as I was hugging the youngest one for a long time and I had not paid attention to the oldest and he agreed (...) then the youngest came running back – he’s definitely the jealous type - and asked me to hug him again, and at first I said, ‘OK, bubba, get down and get your (younger) brother,’ because he’d started screaming (...) and then the oldest looked at me and I said to myself, ‘Oh, what are you going to do now?’ so I asked my husband to hug the youngest, and then the oldest turned to me and put his head on my shoulder, which showed me that I recognised his need; and you know it was the best outcome and proved that the youngest doesn’t just get his own way because he makes the most fuss.” (4.28-29.87)</i></p>
During Practising: Act properly	
Acceptance of strategies	<p><i>“First of all, in order to do this (be relaxed) we have to step back and wonder how much time we have dedicated to ourselves each day (...) if I’ve managed to sit down and have a coffee, or smoke a cigarette, or meet with a friend, anything to just relax a little, then everything else just seems so much easier.” (1.34.77)</i></p> <p><i>“I just want to say that doing something that doesn’t involve the kids is so important, to take some time out to do something just for you! It was hard before, but now I’m not always working I have much more free time during the day. And it doesn’t have to be seeing other people who aren’t the kids – often just sitting alone, doing nothing at all, and having nobody demanding things from you can do the trick.” (2.14.95)</i></p> <p><i>“I now try to find the balance between work and family, and especially focusing on having a dialogue with my child.”(4.1.85)</i></p> <p><i>“(...) for this reason I think that in order to punish a child effectively, you first have to work on yourself. If you’re not calm</i></p>

	<p>when chastising your child, it will be ineffective... so, I stopped (hitting), and took the time to work on myself (...) and it works, for both the child and me (...) I now step back, calm down and then we talk about it.” (4.37.85)</p> <p>“We set rules for things that are important regarding the child’s behaviour, earmarking things that we want to change.” (5.26.1010)</p> <p>“I applied Quiet Time and Time Out, but we referred to it as punishment because we didn’t know how to explain it to a two-year-old. But he’s a cooperative kid, and responded to my intervention. I knew I had to do it this way (...) he cries, he says ‘I don’t want to go mummy’, but I explain we do not throw our toys and I then put him back to his spot, talking to him the whole time and then I realise I shouldn’t (be talking to him); so I stop it and then I say, ‘Only if you stop crying will you come out’ and then he says, ‘Have we finished now?’ I don’t respond and I wait, and even if time for Time Out has passed because he was talking to me, I would wait a minute and then let him out; I haven’t seen a massive change because he’s generally a compliant child, but I tried Time Out because I was advised to.” (5.29-30.96)</p>
<i>Explanation and confirmation of understanding</i>	
Understanding and adjusting	<p>“I suggest you do something with him, stuff he’ll like, as chances are he’ll be bored and he expects you to do interesting things with him”- “But it is not that I do not spend time with him, he just repeats the same things until I find that time to be with him”- “Children, though, don’t have a sense of time (...) so what I have suggested is that we have a big clock in the kitchen that he always checks, and we know that when the big hand points here and the small one points there, that is the time to go to sleep; I’ve found this is a great way of finding a balance, and after a while he says, ‘Mum, it has not gone there yet, but it will!’ Anticipation was, and still is, one of our problems.” (1.31.75-129-89)</p> <p>“We set the ground rules verbally (instead of having them written).” (1.16.77)</p> <p>“At the moment when I am about to yell or scream, I’ve found a technique (...) I count to 5 and say, ‘I’ll count till 5 and then I will yell; but most of the time, the anger goes away’ (...) so the best thing to do is to close your eyes and you tell yourself to relax.” (4.34.73)</p> <p>“I have to try and deal with what jealousy there is. Thankfully it’s not bad, so I just try and alleviate what’s there and not really pay too much attention to it, as I think that would just exacerbate it (...) and I think it’s working. I’ve noticed positive changes (...) and I see him reacting in a better way to his brother,</p>

	<p><i>and he's becoming more independent (...) and his self-esteem is improving too." (4.18.85)</i></p> <p><i>"Besides, I found my own system, which is a sort of half-way house; so I count to three saying, 'D., I'm counting to three, then there's going to be consequences!' I try to be a little flexible with the rules, and it's very effective." (5.4.128)</i></p> <p><i>"I applied a form of relaxation, too. I started going to the gym, I exercised a lot and it released so much pressure. Sometimes when I'm in a bad mood I go to the gym and then return home in a much better mood." (5.29.65)</i></p> <p><i>"I applied a behavioural contract; I got this idea from the behavioural charts. As she is older, and she has her own timetable of activities, I think that it worked well. If she was younger, I would have applied the behavioural charts because kids like to see pictures or words indicating what they have to do, even if they do not openly admit it." (6.6-10.127)</i></p> <p><i>"I am not a man following a strict written routine, but there is a routine there, unofficially, it's just not written down." (6.32.125)</i></p> <p><i>"It isn't punishment because what we say is, 'You go there and stop watching your DVD because you did something wrong'; so it's because he is out of control... 'Did you calm down? Are you OK now? Did you understand why we did it? Oh let's go now. And both kids are much calmer now!'" - "And it's very important that they understand whether they are relaxed." (6.30. 125-68)</i></p> <p><i>"I try to find some time for myself and it has worked to some extent. For example, I said that I wanted her to go to bed early, to give myself some time to relax and be by myself." (6.34.127)</i></p>
Working with the child	<p><i>"...because when he (the child) spends time with his grandparents, you can immediately see that it does not take long to be out of control; so then you try to 'reset' the child and make him distinguish that when he is at home, there are specific rules that he should follow, while somewhere else these rules can be more flexible." (5.5.128)</i></p> <p><i>"I think it is very important to teach the children how to relax. It helped us on a different level too; the oldest had a difficulty with constipation (...) and he was in lot of pain; and at some point we were at the loo and I held him in my arms and I told him to relax and take deep breaths in order to relax. And he went through the process of relaxation, and although he was very young he took some deep breaths and now he says that it doesn't hurt anymore (...) and he actually now goes to the bathroom on his own." (4.32-33.87)</i></p>
Thinking before acting	<p><i>"Last night we were at a wedding (...) and I had my youngest (son) in my arms. At some point I noticed that the oldest one was</i></p>

	<p><i>tired too (...) but he wasn't showing me what he wanted. Once the youngest unhugged me, I asked the oldest one: 'Would you like a hug?' as I was hugging the youngest one for a long time and I had not paid attention to the oldest and he agreed (...) then the youngest came running back – he's definitely the jealous type - and asked me to hug him again, and at first I said, 'OK, bubba, get down and get your (younger) brother, ' because he'd started screaming (...) and then the oldest looked at me and I said to myself, 'Oh, what are you going to do now?', so I asked my husband to hug the youngest, and then the oldest turned to me and put his head on my shoulder, which showed me that I recognised his need; and you know it was the best outcome and proved that the youngest doesn't just get his own way because he makes the most fuss.'</i> (4.28-29.87)</p> <p><i>"Before it (something bad) happens, I actually take control and think 'Stop!' and it will stop; and while there are moments where I can't quite make it stop, it's much better than before where I felt as though I had no control whatsoever."</i> (4.35.67)</p>
<p><i>Correct application</i></p>	
<p>Following all different steps</p>	<p><i>"In an emergency, I do what you said, repetitiveness (putting the child back to Time Out). The last time it happened, she stopped and started cowering, and then followed me, but I wouldn't talk to her and make myself occupied with something else – then she understands something serious has happened (...) I always return her to the Time Out spot, and after four or five times she stops; she suggested we talk about it... but this is what you have to do (not to talk and go away)." (1.26.118)</i></p> <p><i>"And I also tried what you defined as 'incidental teaching'; especially with my oldest daughter, who asks questions all the time; as a result she improved her general knowledge; they even told me at school that she was very well informed about several topics, although I don't allow her to watch television; she only watches DVDs."</i> (2.11.79)</p> <p><i>"I did the Quiet Time. Stay here for a while – in the same room – and calm down for five minutes. He didn't calm down immediately though. It was more effective with my daughter than my son; it depends on the child's personality as well (...) I have tried to be calm. To be honest it worked two or three times out of the 15 that I tried it."</i> (2.22.75)</p> <p><i>"I have applied Time Out, and I do not pay any attention to her, I do not talk to her. She goes away. (I put her back) again, and she goes away. I repeat. She cries and I do feel sorry for her at this moment. Recently, though, I have seen some good results."</i> (2.23.115)</p>

	<p><i>“My kid had tantrums and didn’t know how to manage his emotions, and I think that I set a bad example, like when I was very tired during bath time and he was yelping but I couldn’t deal with it. I’m aware of him annoying me. But now I take a minute to step back as it were, not let his behaviour get to me, and it’s actually helped. He doesn’t have the tempers he used to. He has some anger outbursts but nothing like the 30-minute episodes where he’ll be in his room kicking his door just because I told him he couldn’t watch his cartoons. I really think he looks at me as his example, that his behaviour is learnt from mine.” (3.9.135)</i></p> <p><i>“During one incident he had difficulty taking off a t-shirt; he knew how to take off a jumper but now there were no sleeves to pull; I showed him how to do it and now it is not a problem any longer (...) I sat down, asked him, and let him do it himself; so ‘Ask, Say, Do’ was very effective; and I applied it to increase his skills, and to gradually increase his confidence too. It was also an effective mechanism that enabled us to be attentive to our other child at the same time, who often misbehaves.” (4.10-11.87)</i></p> <p><i>“I have to try and deal with what jealousy there is. Thankfully it’s not bad, so I just try and alleviate what’s there and not really pay too much attention to it, as I think that would just exacerbate it (...) and I think it’s working. I’ve noticed positive changes (...) and I see him reacting in a better way to his brother, and he’s becoming more independent (...) and his self-esteem is improving too.” (4.18.85)</i></p> <p><i>“(...) for this reason I think that in order to punish a child effectively, you first have to work on yourself. If you’re not calm when chastising your child, it will be ineffective... so I stopped (hitting), and took the time to work on myself (...) and it works, for both the child and me (...) I now step back, calm down, and then we talk about it.” (4.37.85)</i></p> <p><i>“So X and Y are on their way. They’re coming to our house so you can all play together with both your toys but also the toys they’re bringing. They’re not coming here to cry and if they do, they won’t ever want to come back, and you won’t ever be invited over to their house either. Do you understand? ‘Yes mum!’ And he did!” (5.36.138)</i></p>
Seeing positive effects	<p><i>“However, I noticed my husband when he was getting the kids ready for school in the morning, and he let them be more independent. I think he’s right to do that. Neither of us intervenes with each other’s actions as it just confuses the kids; but I think his approach was right and we apply that more now. It had good results (...) because at this age they learnt to dress, brush their teeth...”</i></p>

	<p>“...(description of an incidence at school where the kid was offered a sandwich from a parent of one of her classmates, and after a while she threw it on the ground)...so when we arrived home I asked her, ‘What mistakes did you make at school today darling? You took food from someone else, and as if this was not enough, you ate some of it and then you made another mistake - you threw it on the ground’ And she thought about it for the rest of the day, repeating it to herself until her father came home at which point she told him about it (...) However, I’m not sure how she’d behave in different circumstances, whether if she didn’t know the mother of the child she would’ve behaved differently(...) she realised, thought, that she had made a mistake as she discussed this with me.” (3.12-13.99)</p>
<p>State of delivery</p>	
<p>Consistency</p>	<p><u>Intraparental consistency</u></p> <p>“I always try to set an example for the children; sometimes they copy me, sometimes not.” (2.5.66)</p> <p>“I did exactly what you said – that, when we want the child to do something we ask it maximum of two times and then we expect him/her to do it. And it really worked because until recently I would have to repeat myself over and over. ‘F., it’s time for dinner!’; ‘I’m coming, I’m just on my computer!’; ‘F., now, your food’s getting cold!; every ten to 15 minutes, I was pleading with him but it just wasn’t happening. But now I say it once, with the second time coming almost immediately at which point I’d go to his room and either grab him by the hand or switch off the computer - without being upset or agitated or aggressive, but giving him no choice - and it really worked; after I did it twice or three times it really worked...” (3.7.118)</p> <p>“I have to try and deal with what jealousy there is. Thankfully it’s not bad, so I just try and alleviate what’s there and not really pay too much attention to it, as I think that would just exacerbate it (...) and I think it’s working. I’ve noticed positive changes (...) and I see him reacting in a better way to his brother, and he’s becoming more independent (...) and his self-esteem is improving too.” (4.18.85)</p> <p>“He hits his sister so I take him and put him in his room, then he starts yelling and screaming; I ask him to stay on the sofa but he doesn’t and instead lies on the floor and plays with his toys, so I take him back and I leave. I do this about three times (...) eventually he calms down; usually after about ten minutes in his room he has calmed down.” (4.37-38.54)</p> <p><u>Interparental consistency</u></p>

	<p>“One parent can affect the other: ‘My husband noticed my parenting skills improving, so he decided to come along too so that we could both improve...’ (1.17.119)</p> <p>‘We decided that whichever parent put the child into Time Out also had to be the one to tell them when Time Out was over (...) this way it was clear who had the issue and most importantly who was in charge of dealing with it.’ (4.24-25.87)</p> <p>“We praised him continuously, every time he did something nice we went, ‘Congratulations K., you have learnt to use the bathroom properly, you washed your hair really well!’ etc.’ (5.10.65)</p> <p>“What we hadn’t quite managed to do was to discipline him. Like, when he would play with one of his toys then refuse to put it away afterwards. We insisted, raised our voice, tried to engage with him but we’d end up tidying up his toys for him - not always, but sometimes. But now, by using a calmer voice, it’s easier and he seems more willing to cooperate. So a little bit of persistence, followed by logical consequence, works.” (6.14.66)</p>
Flexibility	<p>‘We’d always been using this as a last resort, but no so less often now, and it doesn’t bother him as much anymore. Now I’ll say, ‘Go to the bathroom!’ because this is where Time Out takes place for us; and he goes on his own and after a couple of minutes he’ll come out and he says he understands what he did wrong. We don’t explicitly call it Time Out (he is 4), we just tell him to go to the bathroom and think about what he did; so we have it as thinking time. He’ll either come out of his own accord, or he’ll ask if he’s allowed to come out. If he asks to come out and I think it’s too early, I’ll tell him so... it is his time for thinking; he’s not one for tantrums so I’ve never had to deal with that sort of behaviour; we’re not an anxious family at home, so he’s not been exposed to that sort of environment.’ (3.25.96)</p> <p>‘...because when he (the child) spends time with his grandparents, you can immediately see that it does not take him long to get out of control; so then you try to “reset” the child and make him distinguish that when he is at home, there are specific rules that he should follow, while somewhere else these rules could be more flexible.’ (5.5.128)</p>
Confidence	<p>“It (planned ignoring) has worked for me in situations where there is slight tension, not hugely stressful situations, but in case of nagging and of slight tension. I do nothing. I wait till she calms down, and I say to her, ‘When you’ve calmed down I’ll be waiting for you in that room, and then we can talk.’ Sometimes she cries, or she’ll nag, or both. But after a while she’ll come. She’s</p>

	<p><i>three-and-a-half years old.” (2.6.115)</i></p> <p><i>“Whenever I realise that I am upset, I go out and do something, and then I return home calm and ready to take care of my kid and deal with his nerves; this way I’ve found the child is less nervous.” (2.15.95)</i></p> <p><i>“I have not done the Quiet Time because in general they (two children) manage to solve minor issues on their own; Time Out worked very well, though, especially with the youngest. I have seen a huge difference; at the beginning I would put her there three times a day, whereas now I might put her there once every two to three days (...) I use it only in very severe circumstances (...) I was very consistent (...) the first two or three times she cried, then I said, ‘Go for Time Out!’ and she would go to my bedroom, where the TV was switched off so that she had nothing to do, and she would sit there for two minutes and that was it.” (4.11-12.1511)</i></p> <p><i>“At the beginning what we worked on and it scared them a little bit was the idea of the toy bin bag which at one point, I put outside the house, which made them think about it; also we wouldn’t be allowed to go for a walk unless they’d tidied up their toys; if it takes them two hours we will stay there for the whole two hours; once they left the toys because we had to leave the house in a hurry, but when we came back they knew they had to tidy up their toys before bed, even though it was 10pm.” (4.47.1511)</i></p>
Previous knowledge	<p><i>“Generally, I think that it really helps me to be reminded of the strategies; that is to say that I think that all strategies may be effective.” (1.19.156)</i></p> <p><i>“What I have been using for years now with my older son when he is in panic or upset or out of control and he screams because he wants something but he does not get it, is that I tell him to go and relax and then we can discuss it.” (1.24.89)</i></p> <p><i>“I used to do martial arts, so a strategy I used was meditation.” (2.11.79)</i></p> <p><i>“I have applied the Time Out but not the Quiet Time, not because I didn’t think it was a good strategy but it just hadn’t crossed my mind (...) Regarding Time Out, we had started applying it before the seminars but it only works if you follow it quite strictly.” (2.21-22.95)</i></p> <p><i>“I’d applied some of these strategies before, years ago; as the child grew up I stopped them because everything was OK. (...) Through the seminars I started wondering about my own behaviour. I was the one who had issues at home. I mean, I was slightly prickly, even with minor things, maybe because of work pressure or everyday stress or whatever. Through this process I reminded myself about</i></p>

	<p><i>much faster than I would've thought (...) and I was more relaxed, and talking much more calmly." (4.13-14.67)</i></p> <p><i>"On those days where I was more stressed, because of work, the kids would play up and make life even harder. What you said about taking a step back helped me a lot. I learnt some relaxation techniques while I was pregnant (...) and I was practicing these techniques on the nights I was upset and thought I wasn't coping (...) I was sitting in my room for one or two minutes, practising relaxation, and it helped the kids too (with being calm); I asked them to come to me, gave them a hug, read a story and you could see them going from being tense to being nice and calm and relaxed." (4.32.87)</i></p> <p><i>"I do breathing techniques via meditation that I started last year and it has helped me a lot because I get stressed out easily. Breathing though the diaphragm helped me to calm down. And the muscle exercises, you suggested, too. (...) It helped me to relax, to control my work-related stress, as well as the stress I was experiencing at home with my child." (5.28.67)</i></p> <p><i>"My stress and anxiety stems from being a single parent, so I have huge insecurities about not bringing him up properly. But what really helped were the handouts, the fact that everything was easy to digest in bullet points, as well as the positive feedback I got." (6.20.56)</i></p>
After Practising: Self-reflect	
What they did right	<p><i><u>Vague examples</u></i></p> <p><i>"The calm, clear instructions worked for me, especially with my son who has greater difficulties; I was talking to him calmly and it had a good result." (2.18.75)</i></p> <p><i>"Generally speaking, what helped me was having a positive attitude towards my child and the child having a positive attitude towards me." (2.12.115)</i></p> <p><i>"I applied relaxation as the idea of taking care of ourselves; to have me-time." (3.38.78)</i></p> <p><i>"Replacing the negative thoughts is easier said than done. What I have tried to do over the last couple of months is to start meditating again; that is to find some time either in the morning or at night to meditate. This helps me deal with all sorts of situations and be much calmer, not to be controlling or start yelling." (4.22.1511)</i></p> <p><i>"I applied the 'setting a good example' technique and it worked." (5.29.1010)</i></p> <p><i>"It's really nice to recognise when you're using a strategy and it works. I sit down and think 'Oh! That was incidental teaching' and then other times I ask myself, 'Why did you do it, what made you</i></p>

*act this way?’, and so, when I do something, I think ‘Oh, look what you did!’ and it’s **kind of like giving myself positive feedback, and it really helps.**” (6.26.56)*

Specific examples

“I think that it helps children to know that their parents enjoyed the time they spent with them, and that in turn they learn about the sense and the value of separation.” (1.23.119)

*“**Take three breaths; but I also have a strategy whereby I ask for something to inhale, as that, I find, helps; (...) breathing is very important, it calms you down, you get more oxygen in your brain, therefore we relax.** Stretching, too, is fantastic. We should all do it!” (2.10.138)*

*“I did the Quiet Time. Stay here for a while – in the same room – and calm down for five minutes. He didn’t calm down immediately though. **It was more effective with my daughter than my son; it depends on the child’s personality as well (...) I have tried to be calm. To be honest it worked two or three times out of the 15 that I tried it.**” (2.22.75)*

*“(To balance family and work) this is what we do, we all go **to the gym together.**” (2.30.79)*

*“**You have to automatically ignore him when he does it; it worked for me (...)** When he does it, I stop, I freeze and he cannot react; he freezes too” - “as he has no feedback.” (3.31.105-128)*

*“What helped me the most was to have a schedule, to **have a routine.** The seminars reminded me that if we are not prepared in advance we are more likely to lose control (...) and helped alleviate the stress because, after all, when I’m stressed I’m irritable! It also **reminded me to be more clear** (with instructions), when he plays with his ball and he is likely to break a window, I’ll say, ‘**Stop, because this might happen...**’ and quite often it does happen! And I wonder if I’ve got the magic touch! And I hadn’t applied Quiet Time before (the seminars), so he asked me, ‘Is this punishment?’ and I thought, ‘Oops politically correct regarding punishment, anyway’ (‘Ok, he’s kind of right!). I tried it (Quiet Time) and it worked. And once when he hit me (...) he became more of ‘a boy’ (active), more aggressive, and I became his punch bag and so I tried it (Time Out). To be honest, **I tried reasoning with him so he would understand what he was doing, but all he could see was that there was some kind of resistance** (on my behalf) (...) but I wouldn’t put up with his behaviour; I told him to go to his room and he didn’t like it.” (4.22-24.73)*

“I haven’t tried the breathing techniques, just the muscle

	<p><i>be honest, so maybe it's the fun element of it that helps me relax."</i> - "I do the same on the street or in the morning"- "I even did it at the beach!"- "I saw people looking at me, thinking, 'What's that crazy person doing?' but I didn't care (...) I'm going to suggest doing it with my child, as I think it'd be fun together!" (5.25.56-105-148)</p> <p>"We applied both Quiet Time and Time Out; they are both very useful and helped us a lot. We have two boys, five and two, and they are both at a stage where they're testing our limits as well as building their own relationship, so it's a funny mixture of fighting and affection, so it often gets out of control; for example, they might both start screaming so they both go to a different place to calm down, and it seems to be working at the moment. We applied it in the past but not in a consistent way; now we apply it in a very consistent way. Now every situation is more manageable, and it doesn't take the kids by surprise how we manage the situation; they seem to understand that they get cranky because they're tired... And I think that the time they now need to calm down is much less than what it used to be but one time, after Time Out time had finished, one of them said to me, 'But no, I haven't calmed down yet!' (...) Interestingly, we added a new parameter to the strategy; even if they were calm, mum or dad might say, 'Yes, but I've not calmed down yet!' and it worked really well. (...) we've also set a time limit; when to go and when to come out (...) and importantly we never show any resentment for what has happened, it's all forgotten and we start with a new slate. Before they go (to Q.T or T.O), we explain the reasons to them and that if it happens again, they're aware of the consequences." (6.11.125)</p> <p>"I lead by example. So I explain that if I have to tidy my bed, or that if I play a game I have to put the last one away first, and if I have to do it, why don't you have to do it? It's really helped. He used to say, 'You tidy it!' or, 'Grandma tidy it!'" (6.18.56)</p>
What they did wrong	<p>"(...) they're learning to do things like brush their teeth and comb their hair at this age... and you want to let them take the initiative and let them learn by their own mistakes but it's hard seeing them fail, like when our youngest was left alone to look after herself in the toilet. She came back home with a skin rash skin because she didn't do it properly, even though we had showed her how." (2.29.79)</p> <p>"Basically, I think he's constantly looking for approval or validation; unfortunately I tend to mention his flaws which is wrong and I can't seem to control it; for example, when a child talks back to his grandmother, no matter whether she is my mother-in-law or my mother, I can't allow it (...) but this leads to a divisive situation</p>

regardless of whether he's being good or bad, and it's difficult not to want to make him feel loved." (3.17.105)

"Theoretically I have the whole day to spend with the kids but end up spending my time doing chores while the kids play on their own; and it ends up with me not being happy with the state of the house because I'm quite anal with cleanliness, but neither have I spent time with the kids so that too makes me feel bad; I find it really hard to find a balance." (4.8-9.87)

"I'm impulsive. And it's when he does something repetitively, not just once. I don't know, maybe it's just due to being tired and having responsibilities (...) I'm much more sensitive at the end of the day, and when the nagging starts I lose control." (4.21.1511)

*"I applied Quiet Time and Time Out, but we referred to it as punishment because we didn't know how to explain it to a two-year-old. But he's a cooperative kid and responded to my intervention. **I knew I had to do it this way** (...) he cries he says 'I don't want to go mummy', but I explain we do not throw our toys and I then put him back on his spot, talking to him the whole time, and then I realise I shouldn't (be talking to him); so I stop it and then I say, 'Only if you stop crying will you come out' and then he says, 'Have we finished now?' I don't respond and I wait, and even if time for Time Out has passed because he was talking to me, I would wait a minute and then let him out; I haven't seen a massive change because he's generally a compliant child, but I tried Time Out **because I was advised to.**" (5.29-30.96)*

*"I told him that he had ruined the night, and that because of what had happened the next time we had friends round he'd have to stay in his room. **I think I made him feel guilty and this isn't good** (...) I had another dinner the other day so I asked him to go to his bedroom. When he wouldn't, I reminded him of what had happened the last time. He went to his bedroom on his own, had a bath, prepared his dinner and before bed, he came to say goodnight to everyone and then he asked me if I'd go to his bedroom and give him a goodnight kiss." (5.42.67)*

*"For me the personal self-talk (pep-talks) and relaxation don't really work, I don't really have the personality for them. And **I recently got worse and reached the point where I told her that I was about to explode and that I could not put up with her** because I have been working the last three months like a dog and I couldn't cope with her playing up anymore. **I want to be more relaxed** because sometimes she asks me why I am upset, but I am not really upset; I think she perceives the tension between us like that, possibly because I raise my voice a bit without shouting, but it's enough to feel the*

<p>What they can do better next time</p>	<p><i>“I didn’t at first apply the ground rules because I thought he was too young to understand them, but I now see how essential they are.” (1.7.77)</i></p> <p><i>“I didn’t work, maybe because I’m a very tense person and he riles me; he always wants his own way. Like, if you tell him there’s a party he’ll constantly be asking, ‘When? Is it now? How long until we go?’ and if the plans change he makes a huge fuss! (...) I guess I should be calm and stick to the plans, or at least get down to his eye level and explain the situation to him. It’s just that he’s so demanding! Even now, telling this story, I’m (getting anxious!)...” (1.30-31.129)</i></p> <p><i>“I used warnings as part of planned ignoring. ‘If you continue doing this, I won’t talk to you for the next five minutes.’ If I ignored him without the warning, his reaction was more violent. He realises his dad will stick to his five minutes; most of the time he becomes aggressive; during planned ignoring he still became aggressive and hit me; and at this moment I went against positive parenting (...) and demarcated my own space, and told him that if he entered that space there would be consequences (...) not physical (...) but next time he hits me during planned ignoring, what should I do? Time Out? We have not used this as a strategy yet, so don’t know how to.” (1.32.810)</i></p> <p><i>“When they fight, I can’t intervene. I’m not calm enough to say ‘N., come here, you know that you have to follow our rules.’ I know it’s (because of) me, that when there’s tension at home I can’t remain calm. I do try, when I’m in a good mood, to say, ‘N., come here, is it right what you just did?’ I try to bend down to his eye level, to talk with a calm voice. When I am calm, the tension stops; sometimes during an upsetting moment I can’t keep calm, I can’t take deep breaths, and then I can’t go to the child and say with a calm voice ‘N., what are you doing now?’ I lose control during moments like this. I can try to solve this by breathing and stretching but it doesn’t always work. (...) We do know some things in theory, but personally, most of the time, it doesn’t always work in the real world. For instance, when I come back home tired - and most of the time I come back home tired because of tension at work - this is when I realise it affects the kids’ behaviour; whenever I’m calm, everything else is much better.” (2.13.75)</i></p> <p><i>“The children fight often, so I asked them to write down what they want from each other, what requirements they have regarding each other’s behaviour, and we stuck them on the fridge. But I think I should have supervised it better (...) They felt very good about it, and</i></p>
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	<p>a good start but that was it (...) I should check whether they apply what they have written." (2.19-20.66)</p> <p>"I sometimes yell and at that moment I remember that I have to relax; my daughter also says to me 'Mum, you yell', because I have told her that I shouldn't yell, but often it's not until after the incident that I check myself at which point I relax." (4.21.1511)</p> <p>"Going over the situations in bed at night might help, looking at how you could improve (...) you should constantly practice; at night, think, 'OK, what happened today, what can I do differently next time.'" (4.22.1511)</p> <p>"My issue is that I can't control my emotional state, and I end up doing stupid things that I immediately regret (...) there are times, though, that I predict what's going to happen and stop it in its tracks, and these moments I'm really pleased with myself and congratulate myself. But the next day I may not be able to have the same self-control."(4.34.67)</p> <p>"We have not tried it (T.O, Q.T) but it is something that I have learnt here and I will apply it in the future." (5.21.65)</p> <p>"She could have said at the beginning, 'Since you can't play nicely with the toy, I'm just going to take it away from you before you destroy it.'" (5.39.96)</p>
What changes they noticed	<p><u>Changes on themselves</u></p> <p>"What made a huge difference for us was when I managed to reduce the yelling and screaming at home; and when I stopped it I felt more confident in myself; and now, no matter what happens, I'm not going to yell or scream because I know I can now use some of these strategies instead. I step back and discuss the situation - we discuss a lot now." (1.5-6.77)</p> <p>"She sometimes has tantrums, she is 6 years old and now we have overcome the main difficulties which started at the age of 3 to 4. (...) I was out of control with her, I had major anger episodes, or I was talking too much when I shouldn't have been. (...) When you said about rules, I started applying them. At the beginning it was really difficult, then it became more about my attitude. I now give clear instructions, and I do not even talk sometimes (planned ignoring) and instead of shouting, 'What are you doing now?' which is what I'd usually do; or, when I noticed that she was doing crazy things, I would be doing something different, in other words I was applying planned ignoring; I applied all sort of strategies and I realised this way issues were solved, so I continued doing them." (1.6-7.118)</p> <p>"I have some serious bursts of anger and immediately think, 'Wait a minute, that's not good!' (...) but the positive thing is that I</p>

much longer to realise!” (1.9.129)

“If we’re both upset, let’s discuss it later... it’s not right what you did but it would be better if we talked about it when we were both calm.’ Because if I’m upset I raise my voice, and that doesn’t help anyone (...) I’ve learnt to remain relaxed without having to consciously breathe.” (1.19.156)

“Although I thought I was a person who could control his temper, I recently lost control three to four times and hit his hands to calm him down; Of course I wouldn’t normally calm him down this way, as I’m totally against the use of violence and I thought it was like a “decadence” so I decided to do something about it. Anyway, I finally came to the seminars and I realised that other parents have hit their children too and how unacceptable it (hitting) was. I have not done it again and I will not allow this to happen again because you also give the right to the child to think that violence is acceptable and to reproduce it; and now that I do not do it, he has not completely stopped it - not that he really hits us but sometimes he hits our hands - and I talked to him about it because he actually said to me ‘you have hit me on my hands too’ and I said that I did, but every time I did it, I then apologised; (...) so after the seminars I explained to him that hitting him was a huge mistake and it should not have happened and that whenever we are upset about something, hitting is not the way to solve our problems; instead, we can count to ten silently, or have a little walk around, anything but this (hitting). I’ve tried this several times now, and I’ve not (hit him) again so far. (...) During upsetting moments, I try to relax, to get rid of the negative thoughts. (...) In general, I have a very good relationship with my kid (...) and generally I don’t go for enforcement anymore, as I know that’s not the way”. (2.7-9.95)

“I now try to talk with a calm voice, and if I’m upset, I won’t talk to him at all and just go to another room to take some deep breaths. I don’t make him take breaths, though. I also used to hit him and he, in turn, would hit kids at school. But we’ve overcome this problem now.” (2.9.118)

*“In the past, it was very convenient for me to use it (Time Out) and it was very effective and sometimes when I couldn’t find something else to do, I found it was a quick and easy solution;’ ‘Do this...No? Then punishment;’ and it worked very well at the time I needed it at home or in social settings; the child would come close to me for whatever time I specified, or I put him in an isolated place etc.; it worked very well. **After the seminars I changed my mind and I am against Time Out;** I think that if a parent does all the positive strategies, 99% he will not need to use Time Out; the most difficult*

youngest and the oldest (...) and although we punished him again and again, he repeated the same behaviour. The problem was not that I did not apply Time Out correctly. It was correctly applied. **The problem was that I, myself, was doing something wrong and that was not paying enough attention to the children** (...) The point is to find why the child misbehaves, and so the problem was not that he was hitting his brother; the problem was that I was letting them play together on their own thinking that two boys at this age could play on their own in their room while I did my housework, right? **The problem was mine at the end of the day.**" (4.8.89)

"What helped me a lot was to plan things ahead; to have a schedule, a routine; the seminars reminded me that if I do not have a schedule planned for the week or month, we are more likely to lose control (...) **it helped me to not get stressed and irritable.**" (4.22.73)

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"**I used to threaten him** that if he didn't tidy up his toys I'd throw them all away; but now I've altered it so it's less of a severe threat. I now say, 'If you don't tidy them up they'll be locked away in a closet.' The difference isn't massive but for me it's essential for him to understand consequences." (6.15.56)

"Incidental teaching is important because you take the opportunity to talk about things you wouldn't normally talk about; I used to give short answers, whereas now I really explain things. And he likes it a lot." (6.26.148)

Parent's changes affecting child's changes

"I was calm when I was talking to them; and basically I saw how important it was to stop, turn, look at them in the eyes and talk with a calm voice; **due to this strategy the noise in the house was reduced**; and the use of a calm voice, as you said (it was important), a calm deep voice because what I was (actually) saying was always right, but the tone of my voice was my main problem; as my son said once 'Mum, the way you say it is as if you cursed me, the way you look is as if you've sworn at me; I realised that the tone of voice might be enough rather than saying too much.'" (1.11.75)

"When I first started applying it, **I tried to be very analytical** and it was very difficult, but then it just became a routine. Now I just say 'Well done!' like it's second nature but sometimes he just looks at me bewildered. Like one time I said, 'Well done!' for something, but he sat there staring so I said, 'What's wrong Lorenzo?' and he said,

*other things, not just 'Well done!' but an explanation. **And he's started doing it himself too**, for instance he will say, 'Well done Mummy for the cake you just made because, although you were tired, you still made it.'* (3.6.96)

*"I did exactly what you said – that, when **we want the child to do something we ask a maximum of two times and then we expect him/her to do it**. And it really worked because until recently I would have to repeat myself over and over. 'F., it's time for dinner!'; 'I'm coming, I'm just on my computer!'; 'F., now, your food's getting cold!; every ten to 15 minutes, I was pleading with him but it just wasn't happening. But now I say it once, with the second time coming almost immediately at which point I'd go to his room and either grab him by the hand or switch off the computer - without being upset or agitated or aggressive, but giving him no choice - and it really worked; **after I did it twice or three times it really worked...**"* (3.7.118)

*"We of course spent time together in the past, but it was just random and not scheduled, just a matter of when I happened to have the time; now, it's planned and she knows it's her time, which also means she lets me get on with my stuff the rest of the time, like I'll be able to tell her, 'It's my time now as I've got housework to do, you go play,' and **she now doesn't demand attention from me like she would in the past (...)** I think it works because **she feels complete and content**. She knows she has her time with me every day, so she doesn't worry anymore." (3.8.67)*

*"My kid had tantrums and didn't know how to manage his emotions, and I think that **I set a bad example**, like when I was very tired during bath time and he was yelping but I couldn't deal with it. **I'm aware of him annoying me. But now I take a minute to step back as it were, not let his behaviour get to me, and it's actually helped. He doesn't have the tempers he used to.** He has some anger outbursts but nothing like the 30-minute episodes where he'll be in his room kicking his door just because I told him he couldn't watch his cartoons. **I really think he looks at me as his example, that his behaviour is learnt from mine.**" (3.9.135)*

"When he started nagging they told me to say, 'When you calm down, you'll be able to tell me what you want and I'll be able to help you,' which I tried. At the beginning I used to say, 'You're nagging, shut up, I can't stand it,' which would stop the nagging but not the problem. Eventually, though, he realised that if he stopped nagging and spoke more softly, I'd listen. So the nagging began to stop." (3.30.135)

"I applied the relaxation technique, and he said, 'Yes, mum,

worked for both of us (...) so when I become upset I take deep breaths.” (3.38.145)

*“What worked well – and I think it has to do with the children reaching a certain age – was to let them take some control and do things by themselves. Where we used to tell them to get dressed before but we’d in fact dress them, for example, **we now give the oldest his clothes and ask him to get dressed while I go and dress the youngest, giving the other time to do it by himself.** Before, when I told him to get dressed, he didn’t have enough time to manage it by himself even though I’d asked him, so it was almost as if he was failing the task. **Before, when he was always in a hurry, he didn’t have time to process the information.** Now he has plenty of time, and 80% of the time I come back after dressing the youngest and he’s all ready. We did, though, go through a phase of him saying, ‘I can’t put my shoes on!’ even though he knew how to do it (...) **Now he has this time, it’s helped him cope with the situation and his confidence has grown a lot.**” (4.9.87)*

*“On those days where I was more stressed, because of work, the kids would play up and make life even harder. What you said about taking a step back helped me a lot. **I learnt some relaxation techniques while I was pregnant (...)** and I was practicing these techniques on the nights I was upset and thought I wasn’t coping (...) **I was sitting in my room for one or two minutes, practising relaxation, and it helped the kids too (with being calm);** I asked them to come to me, gave them a hug, read a story and you could see them going from being tense to being nice and calm and relaxed.” (4.32.87)*

*“What we hadn’t quite managed to do was to discipline him. Like when he would play with one of his toys then refuse to put it away afterwards. We insisted, raised our voice, tried to engage with him but we’d end up tidying up his toys for him - not always, but sometimes. **But now, by using a calmer voice, it’s easier and he seems more willing to cooperate. So a little bit of persistence, followed by logical consequence, works.**” (6.14.68)*

*“Or the fact that we have to look the children in the eyes; after these seminars, I felt that I was quite detached; (...) and although my job is about communication and I am in contact with people everyday **I realised that I did not look my child in the eyes that much (...)** but it’s hugely important and significant; and I realised that after a while she started turning and looking at me (when she wanted to talk to me) and this was something I never imagined could happen (...) He feels more secure (...) **It helped because now we communicate better, and we’re closer as a result.**”*

“One of the things we’ve started doing less is shouting orders from a completely different room. It’s really made a difference, I think because there’s less actual strain on your voice, which can come across as aggressive, but also the physical presence of being there, close to your child, when you’re asking them to do something, especially if you can actually touch them while you’re asking them, rather than being several meters away, makes a huge difference.” (6.29.125)

Changes on children

*“I liked it so much that **not only did I apply it to G.** (who has serious difficulties) **but to everyone** and it had a great impact on all of them (...) because I could see the satisfaction in the eyes of whoever got praised, and as long the positive atmosphere lasted so did the good behaviour. Also, as a generally glass-half-empty person, it’s really helping me to be more positive.” (2.4.66)*

*“I have used it; **it helped me a lot especially with my son.**” (2.13.75)*

*“I have applied Time Out, and I do not pay any attention to her, I do not talk to her. She goes away. (I put her back) again, and she goes away. I repeat. She cries and I do feel sorry for her at this moment. Recently, though, **I have seen some good results.**” (2.23.115)*

*“During one incident he had difficulty taking off a t-shirt; he knew how to take off a jumper but now there were no sleeves to pull; I showed him how to do it and now it is not a problem any longer (...) I sat down, asked him and let him do it himself; so ‘Ask, Say, Do’ was very effective; and I applied it to increase his skills, and to gradually increase his confidence too. **It was also an effective mechanism that enabled us to be attentive to our other child at the same time, who often misbehaves.**” (4.10-11.87)*

*“I have not done the Quiet Time because in general they (two children) manage to solve minor issues on their own; Time Out worked very well, though, especially with the youngest. **I have seen a huge difference; at the beginning I would put her there three times a day, whereas now I might put her there once every two to three days (...) I use it only in very severe circumstances (...) I was very consistent (...) the first two or three times she cried, then I said, ‘Go for Time Out!’** and she would go to my bedroom, where the TV was switched off so that she had nothing to do, and she would sit there for two minutes and that was it.” (4.11-12.1511)*

*“**I saw a significant difference regarding descriptive praise too.** I did it in the past but not really consciously and systematically; I*

	<p><i>enough to understand; but I also apply it to the younger one and I think that it is a self-assertive way for them.” (4.12.1511)</i></p> <p><i>“The routine helped him decide what he really wanted to do, like being read more stories at night or watching TV, and fitting this round his dinner. He always, for example, wanted dinner to last longer on those nights he didn’t want to go to bed. We typed out the plan on his computer so that he was implicit in the new routine; so when he wanted to go off list, as it were, I would say, ‘But didn’t we plan this together?’ (...) It helped him take responsibility for his own actions and made it easier for me to be in the right (...) It was about finding a balance between thinking and doing, whilst also allowing time for just pottering about and doing everyday, mundane things.” (5.6-7.67)</i></p> <p><i>“We applied both Quiet Time and Time Out; they are both very useful and helped us a lot. We have two boys, five and two, and they are both at a stage where they’re testing our limits as well as building their own relationship, so it’s a funny mixture of fighting and affection, so it often gets out of control; for example, they might both start screaming, so they both go to a different place to calm down, and it seems to be working at the moment. We applied it in the past but not in a consistent way; now we apply it in a very consistent way. Now every situation is more manageable, and it doesn’t take the kids by surprise how we manage the situation; they seem to understand that they get cranky because they’re tired... And I think that the time they now need to calm down is much less than what it used to be but one time, after Time Out time had finished, one of them said to me, ‘But no, I haven’t calmed down yet!’ (...) Interestingly, we added a new parameter to the strategy; even if they were calm, mum or dad might say, ‘Yes, but I’ve not calmed down yet!’ and it worked really well. (...) we’ve also set a time limit; when to go and when to come out (...) and importantly we never show any resentment for what has happened, it’s all forgotten and we start with a new slate. Before they go (to Q.T or T.O), we explain the reasons to them and that if it happens again, they’re aware of the consequences.” (6.11.125)</i></p>
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THEME CODE	BARRIERS-EXTRACTS
<i>Behavioural traits</i>	Child factors
	<p><i>“...(because) it (Time Out) doesn’t suit me, I don’t know why, it doesn’t.” (1.19.156)</i></p> <p><i>“I tried (planned ignoring) but it didn’t work, maybe because I’m a very tense person and he riles me; he’s a very tense kid and he</i></p>

always wants his own way. Like, if you tell him there's a party he'll constantly be asking, 'When? Is it now? How long until we go?' and if the plans change he makes a huge fuss! (...) I guess I should be calm and stick to the plans, or at least get down to his eye level and explain the situation to him. It's just that he's so demanding! Even now, telling this story, I'm (getting anxious!)..." (1.30-31.129)

"He managed to be consistent with the activities he liked such as time for relaxation, for play, for PC (...) although we planned it together and I didn't enforce it (...) It did not work for me and this was my fault; I should have insisted more. Next time I need to work on it more." (2.3-4.66)

"The youngest is quite a difficult child and she needs to be handled in a particular way, in a more strict way. I try to be consistent with planned ignoring but when she starts having intense tantrums, or tries to hit the baby in order to grab my attention, I find it hard to apply it and end up punishing her because it's the only way." (2.7.79)

"I did the Quiet Time. Stay here for a while – in the same room – and calm down for five minutes. He didn't calm down immediately though. It was more effective with my daughter than my son; it depends on the child's personality as well (...) I have tried to be calm. To be honest it worked two or three times out of the 15 that I tried it." (2.22.75)

"I tried it (Time Out) many times, with my daughter who's the youngest out of the two and it was very effective; it wasn't effective for my son; 'N. stay here and calm down please'; I was influenced by (the TV show) Super Nanny regarding the child's thoughts during this process. You said and insisted that they just have to calm down. Sometimes it worked, other times it doesn't (...) I did not get involved in a discussion with him (during the process); 'Sit there and calm down' without saying much; he reacted 'Leave me (alone)'; during his reaction, I kept saying 'Sit and calm down'" - "So, you did not apply it correctly." (2.22-23.75-95)

"I used the behavioural charts and told her, 'If you don't suck your thumb, you'll get a star.' She replied 'I want (to have the star) on my painting board!' so I said 'OK.' But later that day she told me she found it really hard to not suck her thumb, so I told her that she wouldn't be getting another star then. 'I'll just put the star up myself!' she said, and did it. I told her this wasn't acceptable and made her wipe it off, at which point she started whimpering, crying, 'I can't!' and she put it back, and I let her. I obviously didn't apply the technique properly (...) because I gave in to her request for a star. She thought it was terrible to take off a star from her chart or not to give her another one (...) she was so upset she started crying."

	<p><i>“I didn’t manage to apply Quiet Time or Time Out. I hadn’t managed in the past, and can’t do it now either. Neither helped with the child (...) It doesn’t work anymore. I used to think it was because he was too impulsive, and Time Out only worked back then as punishment. I use punishment.” (4.18.85)</i></p> <p><i>“I have failed to set boundaries and rules. When he was at kindergarten, the teachers told us that he had an issue with boundaries and rules; he does not like rules. We have set some basic rules and we keep trying with others...” (5.20.65)</i></p> <p><i>“It has to do with the child’s personality as well; she’s very careless, for example, with her possessions, but she’ll continue to ask me where they are after she’s lost them.” (6.17.127)</i></p>
Age	<p><u>Age-appropriate</u></p> <p><i>“Quiet Time - because I never had to use Time Out - worked when he was 4 or 5 or 6, and after that I did not ever need it again (...) it is ideal because at this age we started getting organised, having a routine, (...) and setting boundaries, then it simply worked.” (4.17.67)</i></p> <p><i>“Having younger children in the family is a big issue (...) the first kids are usually ‘a trap’ - this is what we call our oldest child; the second child has brought us emotions that we never thought we had; so much tension (...); they are more assertive (...) I was expecting that this would be the case for the oldest, because, as they say, a child experiences very intense feelings when another child is born with whom he has to compete for the love of the mother and, for this reason, I thought that the oldest would have the problem (...) yet, the youngest expresses jealousy more intensively, and he is more assertive.” (4.30.87)</i></p> <p><u>Age-inappropriate</u></p> <p><i>“I have applied the Time Out but not the Quiet Time, not because I didn’t think it was a good strategy but it just hadn’t crossed my mind (...) Regarding Time Out, we had started applying it before the seminars but it only works if you follow it quite strictly; however, I think my husband overdid it; I was a bit more gentle with it. It doesn’t have long-term effects; I think he’s too young to understand the cause and effect thing – I’m not sure if that is relevant.” (2.21-22.95)</i></p> <p><i>“We think that our kids are too young and most of the time we don’t allow them to take the initiative.” (2.28.79)</i></p> <p><i>“I didn’t call it Time Out. When a child is that age it’s the action that matters, not what you call it... you could call it punishment, Time Out, or a holiday to Hawaii; but to him it’s still punishment.” (4.7-8.87)</i></p>

	<p><i>sit here because it is time for Quiet Time and you will sit here for five minutes’; first of all he doesn’t understand how long five minutes is; and there is no point in me coming and saying, ‘Two minutes left; one minute left...’ And after a while, he started sitting on the stool by himself (after he did something wrong) and so we missed the whole point of the strategy.</i>” (5.28.56)</p>
<p>Number of children</p>	<p>“It (planned ignoring) works for me too, especially with my oldest daughter (6yo); however, it does not work for the middle one, who is very stubborn; with the oldest one I just ignored her and after a while she stops nagging or complaining; I think it’s because of her personality, whereas the youngest one is very persistent, so it seems as if she’s really trying to get to battle with me (a fight, game) and see which one of us is going to back down first.” (2.6.79)</p> <p>“I try to talk to him, to explain things, to discuss, and to do things together... but we clearly have some issues. Also, if his sister, V., is at home, it’s impossible for him not to annoy her; he’ll always find a way of doing it, like if she’s playing with a puzzle he’ll go over and destroy it because he likes to see her scream.” (3.18.105)</p> <p>“I have to try and deal with what jealousy there is. Thankfully it’s not bad, so I just try and alleviate what’s there and not really pay too much attention to it, as I think that would just exacerbate it; (I follow) planned ignoring and then discussion.” (4.18.85)</p>
<p>Parent Factors</p>	
<p>Behavioural traits</p>	<p>“I’m very stressed as a person, and I don’t know why but I panic sometimes, not because of the child, but on other occasions, so I may transfer it (this stress) to my kid; of course it’s my own issue.” (1.10.129)</p> <p>“Don’t see it as ‘I just go home and I punish my kid’; in reality, it’s not easy to punish them.” (2.24.95)</p> <p>“He managed to be consistent with the activities he liked such as time for relaxation, for play, for PC (...) although we planned it together, and I didn’t enforce it (...) It did not work for me and this was my fault; I should have insisted more. Next time I need to work on it more.” (2.3-4.66)</p> <p>“Until now I’ve been handling things badly, and as a result my daughter feels that she’s been left out. She’s the oldest (of two children) and she constantly thinks that she’s the one to be blamed for everything that happens, and that her brother’s (intolerable) behaviour is never criticised (...) So, I started applying the ‘affection’ strategy to her – my son had until this point been monopolising my time and I realised that this was a mistake - and I’ve already noticed positive changes in her behaviour. She is a child with many aspects to</p>

her personality, and she should not be ignored." (2.5.66)

"The children fight often so, I asked them to write down what they want from each other, what requirements they have regarding each other's behaviour and we stuck them on the fridge. But I think I should have supervised it better (...) They felt very good about it, and they even smiled at each other when reading their lists (...) we made a good start but that was it (...) **I should check whether they apply what they have written.**" (2.19-20.66)

"(...) and we gave ourselves 10 days to reach our goal. Was that too much? (...) it's still there and we're waiting for him to achieve his goal (...) Should we go back to 5 days? I don't know. I thought it would be better to give him more time and it goes without saying he doesn't get a sticker every day, only when he achieves his goal (...) then we added the reward (...) I hadn't told him what the reward was going to be, only that there would be one (...) **At first we did it at 5 stickers, but there was no reward and it worked well; then I said that after the next 10 (stickers) you will get a reward, and I specified what the reward was.**" (3.11.107)

"We had applied the behavioural charts, we had used stars and other things, and we agreed that we could do this the first time and then the second time, the third time and the fourth time...At the beginning it worked well; in the second phase it was going even better (...) Then he started asking me to do crazy things (activities) 'No, now let's do this!' and **then started putting the stickers up by himself; the game was lost, and at this point I started getting upset, so we stopped it as it was not working.** I don't know, maybe I didn't do it right; I think I'm not patient enough, I think this is the main problem." (3.15.105b)

"I have a difficulty setting boundaries and rules and **he's able to bring me round because I'm not very clear,** and this is my problem." (4.5.75)

"**I'm impulsive.** And it's when he does something repetitively, not just once. I don't know, maybe it's just due to being tired and having responsibilities (...) I'm much more sensitive at the end of the day, and when the nagging starts I lose control." (4.21.1511)

"**I'm very outgoing and sociable,** his father is less so but very polite, and **it drives me mad when I see him in specific situations being very polite and kind, yet other times being rude** especially when he knows that I look at him **and I have expectations of him** (...) as you said he expected that I would react and every time I reacted (it got worse)..." (5.24.67)

"**He does it to get a reaction from me;** he'd go to hit me, but not actually hit me, just make the move. And I look him in the eyes and

	<p><i>then I also say, ‘How would you feel if someone did that to you?’ So he’ll say, ‘Mum, you bother me!’ and he goes to hit me again (...) so, again, I say we’re not allowed to hit people, and then he gets embarrassed and wants to hug me, but I move him away, I don’t kiss him, and I say, ‘No, don’t do this’, and then he does this move of his again.” (5.31.96)</i></p> <p><i>“For me the personal pep-talks and relaxation don’t really work, I don’t really have the personality for them. And I recently got worse and reached the point where I told her that I was about to explode and that I could not put up with her because I have been working the last three months like a dog and I couldn’t cope with her playing up anymore. I want to be more relaxed because sometimes she asks me why I am upset, but I am not really upset; I think she perceives the tension between us like that, possibly because I raise my voice a bit without shouting, but it’s enough to feel the tension.” (6.33.127)</i></p>
Marital status	-
Perceptions	<p><i>“When you become a parent your priorities change, and you pretty much stop caring about yourself which I think creates problems; my husband, however, thinks the child should always come first. But this causes problems because if you don’t look after yourself, it will in turn affect your child. It’s a vicious circle, and both you and the child will miss out in the end.” (1.20.138)</i></p> <p><i>“I find it hard to make him sit in a specific place, he just follows me around or starts laughing or something (...) I try and talk to him, saying, ‘Look, you really have to sit here and behave, then we can talk about it. If you’re crying, we can’t talk and then I won’t be able to understand why you’re upset.’; but I think my talking to him like this just makes him more anxious. And I think sitting in a specific spot just makes him more agitated. I think he’d prefer it if I just told him to go away and play and calm down. It’s this restriction, I think, that hinders him rather than the actual spot.” (1.24-25.89)</i></p> <p><i>“There is no such place (a bland-enough place at home for Time Out” (3.27.107)</i></p> <p><i>“If they’ve not attended these seminars, we find it difficult for us to convey all these messages.” (3.13.105a)</i></p> <p><i>“Our own expectations play an important role, in that we want them to do well and get brilliant grades, but children may not live up to these expectations.” (3.37.107)</i></p> <p><i>“I didn’t apply Quiet Time or Time Out with the child with the most severe difficulties, including tantrums, and to be honest I’m not sure if I will.” (4.2.54)</i></p> <p><i>“I didn’t call it Time Out. When a child is that age it’s the</i></p>

	<p>action that matters, not what you call it... you could call it punishment, Time Out, or a holiday to Hawaii; but to him it's still punishment." (4.7-8.87)</p> <p>"It came to a point where they'd use me (the mother) as a threat; 'Do it otherwise I'll get your mum!' (...) because they punished the children for ridiculous reasons (...) but now it's lost all power of persuasion!" – "... do this or mum will come and yell at you!" (...) so when he misbehaves someone else (the partner) could try and tell him what he's doing is wrong', it doesn't always have to be Mum." ... "Mother's the bogeyman.'" (4.39.67-87)</p> <p>"I have a fear that if you react this way (help the child every time he needs it), they get used to it and they then manipulate it; that is, they're always asking for you and you're always relenting, and even though you want them to be a bit more independent you still end up panicking when you see them playing on their own." (5.11.96)</p> <p>"My main concerns have to do with kids aged 2.5-3.5 because an 8-year-old child might not want to do what you say but at least he understands it; when N. was 2.5 I did not know if he understood completely what I was saying, and so I tried to say it in a simpler way and I ended up lecturing him, and he was getting bored, and he would let me talk and talk and talk because I was afraid that he would not understand me; and most of the time I just bored him, and he got tired and reacted to it." (5.12.96)</p> <p>"I cannot make him sit on a stool and say, 'Now then, you will sit here because it is time for Quiet Time and you will sit here for five minutes'; first of all he doesn't understand how long five minutes is; and there is no point in me coming and saying, 'Two minutes left; one minute left...' And after a while, he started sitting on the stool by himself (after he did something wrong) and so we missed the whole point of the strategy." (6.28.56)</p>
Correct application	
Previous strategies	-
Lack of familiarity	-
Lack of understanding	-
Unsuccessful attempts	<p>"I find it hard to make him sit in a specific place, he just follows me around or starts laughing or something (...) I try and talk to him, saying, 'Look, you really have to sit here and behave, then we can talk about it. If you're crying, we can't talk and then I won't be able to understand why you're upset.'; but I think my talking to him</p>

	<p><i>like this just makes him more anxious. And I think sitting in a specific spot just makes him more agitated. I think he'd prefer it if I just told him to go away and play and calm down. It's this restriction, I think, that hinders him rather than the actual spot."</i> (1.24-25.89)</p>
Incorrect application	<p><i>(ATTENTION) "The youngest is quite a difficult child and she needs to be handled in a particular way, in a more strict way. I try to be consistent with planned ignoring but when she starts having intense tantrums, or goes to hit the baby in order to grab my attention, then I cannot apply it; I punish her and this is the only way."</i> (2.7.79) → <u>Using punishment instead of Time Out</u></p> <p><i>"(...) and we gave ourselves 10 days to reach our goal. Was that too much? (...) it's still there and we're waiting for him to achieve his goal (...) Should we go back to 5 days? I don't know. I thought it would be better to give him more time, and it goes without saying he doesn't get a sticker every day, only when he achieves his goal (...) then we added the reward (...) I hadn't told him what the reward was going to be, only that there would be one (...) At first we did it at 5 stickers, but there was no reward and it worked well; then I said that after the next 10 (stickers) you will get a reward, and I specified what the reward was."</i> (3.11.107) → <u>Violation of basic principles of the strategy; Early high expectations, rewards were not specified from the start</u></p> <p><i>(BEHAVIOURAL CHARTS) "I used the behavioural charts and told her, 'If you don't suck your thumb, you'll get a star.' She replied 'I want (to have the star) on my painting board!' so I said 'OK.' But later that day she told me she found it really hard to not suck her thumb, so I told her that she wouldn't be getting another star then. 'I'll just put the star up myself!' she said, and did it. I told her this wasn't acceptable and made her wipe it off, at which point she started whimpering, crying, 'I can't!' and she put it back, and I let her. I obviously didn't apply the technique properly (...) because I gave in to her request for a star. She thought it was terrible to take off a star from her chart or not to give her another one (...) she was so upset she started crying."</i> (3.32-33.78) → <u>Mother loses control of the strategy, she should be the one in control of the chart not the child</u></p> <p><i>(GROUND RULES) "After the seminars I tried to apply one ground rule which was also displayed (for everyone to see) but I didn't really apply it; it was that we do not play on the PC unless we have finished our homework and have tidied up our room, and also under the condition that he could only play for one hour maximum a day and if he plays more than that he would have to inform me about it, and at the end of the week we'd tally the amount of hours he'd played; then he would play or not."</i> (2.18-19.66) → <u>Use of negative statements to form</u></p>

appropriate

(INSTRUCTIONS) “I once said, ‘Let’s give you some tasks. How about you put the knives and forks on the table, not just for you but for everyone else. Wouldn’t that be a lovely thing to do? But of course he wouldn’t, and didn’t. ‘I can’t do it now,’ he’d say. For the first week I just ended up having to forcibly say, ‘Do it!’; but even then, he only did it a few times; for every, say, eight tasks I’d ask him to do, he’d do maybe one and then begrudgingly; he’ll only do it through a whole load of nagging, so much so that it’s difficult to praise him for what he’s done.” (3.16.105) → Use of instructions as questions

(LOGICAL CONSEQUENCES) “What we did from time to time, and it worked, was to say, ‘If you don’t tidy up your toys we’re just going to stand on them and break them, etc., and if you don’t care about your toys we’re just going to give them to other kids who’d appreciate them more; we actually do this, and have two bin bags in which we store the toys in the loft!” (6.16.125) → the logical consequences are not entirely clear; some consequences have a threatening notation

(PLANNED IGNORING) “I told him to stop but he wouldn’t; then I ignored him completely; I’ve never seen him so upset; he grabbed me by the feet and was dragging himself beside me. He couldn’t accept that I was ignoring him (...) **It was so upsetting for him that I can’t bring myself to do it again.** The way he looked at me I was like, ‘Oh Christ!’ (...) he took it so hard, it was as if he was thinking, ‘Doesn’t he love me anymore? Why? What did I do?’ (...) I’ve done it a few times.” - “No, you should ignore him from the beginning; you did not apply it correctly; because it works for me”- “and then he started ‘Why don’t we talk? He started asking questions ‘Why don’t we talk about it? Why don’t we discuss it?’; because we have learnt to discuss our issues ‘I can’t stand that you don’t talk to me’; he’d rather be sent to Time Out because then at least he knows I’m not allowed to talk to him.” (3.31.96-105b) → Corrected by parent 105b

(QUALITY TIME) “I gave each of them 30 minutes, but he didn’t want to stop there so I gave him 45; he wanted even more, so I stretched it to an hour; but then when it was time for me to be with his sister he wouldn’t leave us alone (...) Whenever he interrupted us I applied Time Out, but he wouldn’t accept it; he kept coming and interrupting us, and in the end we started fighting and I hit him, which sorted it out.” (3.20.105) → Routine should be clearly set; and logical consequences should be followed for misbehaviour; mother should not have given in to the child asking for more time

blame each other, so I get down to their eye level and use a gentle voice (...) and say, 'You're not a mean person, so why are you saying mean things?' (1.12.138) → Having a calm voice and looking the child in the eyes does not change the context of what parents say; there is no attempt to solve the problem

(TIME OUT) "I find it hard to make him sit in a specific place, he just follows me around or starts laughing or something (...) I try and talk to him, saying, 'Look, you really have to sit here and behave, then we can talk about it. If you're crying, we can't talk and then I won't be able to understand why you're upset.'; but I think my talking to him like this just makes him more anxious. And I think sitting in a specific spot just makes him more agitated. I think he'd prefer it if I just told him to go away and play and calm down. It's this restriction, I think, that hinders him rather than the actual spot." (1.24-25.89) → Violations of principles of Time Out; mother was talking to the child throughout Time Out and so she was giving attention

(TIME OUT) "Whenever he interrupted us I applied Time Out, but he wouldn't accept it; he kept coming and interrupting us, and in the end we started fighting and I hit him, which sorted it out." (3.20.105) → Mother gave in and got involved in a fight giving attention to her child's misbehaviour

(TIME OUT) "Once he was sitting on his bed (during T.O) and he was doing nothing but after 1-2 minutes he started playing with his trains (...) OK, we probably shouldn't talk to him, but now that I think about it, I have done it in the past." (3.27.107) → The point of Time Out is for the child to learn to calm down in an upsetting moment and then be placed back to the situation and overcome the problem

(TIME OUT) "'Darling, why did you bite S.? You should've told her that it was yours and that you'd let her have it later.' Anyway, they talked, then they hugged, and she apologised to S.; but then she did something similar again so I took her home; I explained to her that because she continued to do these things I had to stop her from playing and bring her home; she was crying and trying to tell me she was a good child; I explained to her that I knew she was a good child, but what she did was wrong and I asked her not to hit the girl again; she was crying, and whimpering, and then asked me to give her a hug; I didn't want to because I was upset but I hugged her all the same."; I am not sure whether Time Out worked; Quiet Time and so and so..." - "Because you're talking to her all the time; too much talking and overanalysing, she feels like she's being nagged the whole time." (3.24.99-128) → Corrected by parent 128

(TIME OUT) "My son screams to the point where you just want to rip your ears off; the noise is intolerable. He does it to get my

	<p><i>hear you. Cry as much as you like but only come out when you've stopped yelling.' I can't stand it. He never wants to go but he does know when I've reached this state I might hit him, so that makes him go to his room. After a while he'll come out and go, 'Mum, I've stopped,' but then he'll start nagging again. I'll then say, 'F., what did I just say? I told you to go to your room and only come out when you're stopped yelling, but you're doing it again so back you go!' It seems to work but it's not really how I should be doing it, right? Though it's practical in that it stops me from yelling."</i> (3.29.118) → <u>The strategy is not clearly explained to the child; the principles of the strategy are not followed (guide him to the place, have a boring spot, give him the time to calm down); the mother also threatens the child who seems to be the person in control</u></p> <p><i>(TIME OUT) "Time Out does not work for me; when I take him to his room and close the door, I always hear noise."</i> (4.20.54) → <u>Bedrooms should be avoided as spots for Time Out as children can be easily distracted there</u></p> <p><i>(TIME OUT) "(describing an upsetting moment) and he was screaming and calling names and I really wanted to go in there; gradually he started building something new with his Lego and eventually calmed down, and me and his father went in to see him but we didn't talk about it."</i> (4.23.73) → <u>Bedrooms should be avoided as spots for Time Out as children can be easily distracted there</u></p> <p><i>(TIME OUT) "I've applied Quiet Time in a more relaxing way like when there's tension, and he shouts I try to intervene but he doesn't understand me and I don't understand him; I can't seem to pass on the message so I just take him to his room, ask him to stay there for five minutes to relax and when that happens he's to come and let me know; it works, but it's quite what it says to do in the handouts."</i> (6.27.56) → <u>Strategies are confused; child's room as location for spot; the child seemed to be in control of the strategy</u></p>
Inconsistency	<p><u>Interparental</u></p> <p><i>"He doesn't disagree, but he won't sit down and help me decide what to do."</i> (1.16.138)</p> <p><i>"I don't think we have to be very strict with the routine; I see that it's working because her dad does it, to whom I have different perspectives in terms of the upbringing and this can't be solved."</i> (4.4.75)</p> <p><i>"I have to work on my partner's behaviour; all three of us have to get involved and he often doesn't stick to what we have agreed."</i> (4.16.67)</p> <p><i>"We have not tried it (T.O, Q.T) but it is something that I have learnt here and I will apply it in the future."</i> (5.21.65)</p>

External factors	
<i>Others involved</i>	<p data-bbox="505 239 1422 478">“I think that another factor is the grandparents, because we might be consistent but their grandparents are softer (flexible) than we are. It took us about a year to ‘train’ the grandparents (...) because we need help. And we punished the kid, but their grandfather was making faces to the kid and he was saying ‘It’s okay, I’ll come and rescue you from (the punishment)’ and things like that...” (2.25.79)</p> <p data-bbox="505 489 1422 814">“Once I had to leave them (two children) at my parents’ to go to the doctors with my husband, and they had to get some things from the house to pass their time at my parents’; G. was bored and he didn’t take anything with him. I said, ‘Aren’t you going to take anything with you? You’ll be bored!’ When we arrived my stepmother said, ‘Didn’t G. bring anything? Couldn’t the two of you bring something for the baby?’ I should have said that with this type of behaviour G. will behave like a baby even when he’s an adult!” (2.27.66)</p> <p data-bbox="505 825 1422 1276">“Time Out worked in the past. But gradually the child became neurotic; my husband punishes the children but indiscriminately, so there isn’t a system (...) and when the oldest child is in Time Out the youngest will try and grab his attention, shouting, ‘Come on, G.!’ (...) their grandmother also has a habit of taking them out of Time Out, so I’ve stopped using it as punishment because there are too many distractions to make it consistent and therefore effective. Also, it’s not easy because of my anger issues, and I’m going through a period of real stress (...) also, punishing them makes me feel bad (...) I really think before you start effective punishment of your children you need work on yourself so that you are calm when doing it.” (4.18.85)</p> <p data-bbox="505 1287 1422 1486">“When there’s another person in the house, such as a grandmother, and everything’s working well at home and you’re telling the child that he can’t have a sweet (...) but then you have someone else going, ‘Oh, let’s have an ice-cream!’ and then a cake will follow (...) Grandparents are there to spoil them.” (4.42.67)</p> <p data-bbox="505 1497 1422 1612">“My mother-in-law would listen to me maybe due to fear of causing any inconvenience and tension; my mum is very opinionated, does not listen to anyone, anyone ...” (4.45.85)</p> <p data-bbox="505 1623 1422 1864">“...because when he (the child) spends time with his grandparents, you can immediately see that it does not take long to be out of control; so then you try to ‘reset’ the child and make him distinguish that when he is at home, there are specific rules that he should follow, while somewhere else these rules can be more flexible.” (5.5.128)</p> <p data-bbox="505 1875 1422 1990">“As a parent, you can theoretically do it (planned ignoring); but in a different environment, like when grandparents are around, this system isn’t really going to work.” (6.42.125)</p>

<p><i>Impact of recession</i></p>	<p>“Many parents are unemployed (...) It will change, it is a general issue and it should change”- “It is not going to change (...) Parents should work less”- “The way things are now...”- “Maybe in another decade.” (2.30.95-66-79)</p> <p>“Theoretically, I have the whole day to spend with the kids, but end up spending my time doing chores while the kids play on their own; and it ends up with me not being happy with the state of the house because I’m quite anal with cleanliness, but neither have I spent time with the kids so that too makes me feel bad; I find it really hard to find a balance.” (4.8-9.87)</p> <p>“During difficult times it’s important to try and fight negative thoughts, and try and realise it won’t last forever and this is just a temporary situation.” (6.36.148)</p> <p>“Things are really bad and it makes you depressed, almost suicidal. But you just have to try to be rational and optimistic and surround yourself with people who make you happy, like your wife and kids, and look to the future.” (6.37.125)</p> <p>“At the moment I have some income, it may not be the income I had 5 years ago but I can feed her. If I suddenly ended up with no income, this would mean I would not be able to provide the basics for my kid, let alone me, so everything would change” (6.38.127)</p>
<p><i>Culture</i></p>	<p>“I told him to stop but he wouldn’t; then I ignored him completely; I’ve never seen him so upset; he grabbed me by the feet and was dragging himself beside me. He couldn’t accept that I was ignoring him (...) It was so upsetting for him that I can’t bring myself to do it again. The way he looked at me I was like, ‘Oh Christ!’ (...) he took it so hard, it was as if he was thinking, ‘Doesn’t he love me anymore? Why? What did I do?’ (...) I’ve done it a few times.” (3.31.96)</p>

CHAPTER 7

Chapter 7: Discussion

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7.1 Summary of results

This thesis is based on the MRC framework for the Development and Evaluation of RCTs for complex interventions to improve health (Campbell *et al.*, 2000). Based on the findings of a previous pilot study (Foskolos, 2010), a carefully phased approach was developed to assess: (1) whether child behavioural difficulties were an existing problem in Greece; (2) whether the implementation of a specific parenting programme was beneficial to Greek children and their parents; and (3) which aspects of this programme facilitated or impeded parenting practices. This thesis consisted of a systematic review on the prevalence of behavioural and emotional difficulties in Greek urban children aged 2 to 12 years, a literature review on Triple P universal parenting programmes, a pilot RCT on the efficacy of a brief parenting intervention, a moderator and mediator analysis of intervention effects in the pilot RCT and a qualitative analysis of parents' perceptions on the implementation of the programme.

The aim of the systematic review was to examine whether behavioural and emotional difficulties were a significant problem in Greece. To my knowledge, this was the first attempt to systematically review all the studies on the prevalence rates of behavioural problems in Greek children. The review identified prevalence studies, cross-cultural studies and clinical studies mainly on urban children aged from 6 to 12. The results suggested that, based on parental reports, a third of Greek children in the selected samples displayed behavioural problems and a quarter emotional difficulties, making Greece one of the countries with the highest prevalence of parent-reported child difficulties worldwide (Rescorla *et al.*, 2007).

An early-onset pathway in the development of these difficulties has been proposed, and for this reason, the main focus was on early detection and early

prevention programmes that have the potential to affect an entire population, regardless of their level of risk. A literature review on Triple P universal programmes was conducted; studies on universal self-directed and group Triple P were identified. All studies on universal group programmes showed improvements on parent outcomes over time but there were inconsistent results regarding child behaviours. There was also insufficient evidence on the effectiveness of brief universal Triple P programmes to draw any definitive conclusions.

The effectiveness of a brief Triple P parenting intervention (Level 2: Seminar Series) was investigated in a RCT, where Greek parents either attended three seminars on positive parenting or received health related information. Children whose parents attended the Seminar Series showed a significant reduction in behavioural difficulties compared to control children at post-intervention and at 6-month follow-up. Also, intervention parents showed a significant reduction in dysfunctional parenting practices at post-intervention, but not at follow-up. Another important finding was that children's difficulties associated with emotions, concentration, behaviour or being able to get on with other people greatly disrupted the child's and family's life, meaning that behavioural and emotional difficulties are recognised as a problem within this cultural context.

As there were some significant effects on child and parent behaviour, further research into the predictors of intervention effects was conducted. Moderator analyses were run to determine whether certain types of families were most likely to improve; however, no significant baseline characteristics were found to moderate the intervention effects on child outcome. This type of intervention was not particularly effective or less effective for any one type of parent and thus may be seen as useful across the general population. Mediation analyses were also run to identify potential

factors that may be associated with change. It was found that the reduction in parents' dysfunctional practices at post-intervention partially mediated the reduction in children's disruptive behaviours over time.

To gain a better understanding of the patients' insight into the mechanisms of change and explore possible moderators and mediators that contribute to change in child behaviour, six focus groups were organised, and data on parents' perceptions on the acceptability, feasibility, cultural relevance and usefulness of the Seminar Series were collected from parents who previously received the intervention. The analysis of parents' accounts led to a synthesis of themes and codes describing specific facilitators and barriers to implementing positive techniques. Specific strategies related to discipline and taking care of themselves were rated as useful but received lower ratings in terms of acceptability, feasibility and cultural relevance. Overall, based on parents' ratings all strategies were perceived to be highly acceptable and useful as well as feasible and culturally relevant.

7.2 General conclusions

In this thesis, a mixed method approach was used for purposes of achieving triangulation, complementarity, development, initiation and expansion (Rocco, Bliss, Gallagher, & Perez-Prado, 2003). Methodological triangulation was followed initially to gain a more comprehensive understanding of the possible effects of the intervention delivered (Denzin, 1978; Bloor, 1997), whilst increasing the validity and interpretability of the study's findings. Complementarity was used to manage effectively different but overlapping aspects of the parenting experience, such as the intervention effects on parenting skills and parents' perception on implementation, as well as to enable expansion by analysing different aspects of their experiences. For

this reason, quantitative data collected through questionnaires were instrumental for the development of focus group scripts (Appendix A). Lastly, initiation looked for contradictory findings in the hope of overcoming any threats to trustworthiness and explaining any inconsistencies in the data. Both quantitative and qualitative methods were conducted sequentially to provide clear, accurate and thus robust results required to inform policy and decision-making.

By combining the outcomes from quantitative and qualitative analyses, there were several inferences to be drawn. Initially, in this pilot RCT medium effects ($ES=0.74$) were produced on child behavioural difficulties, the primary child outcome, at post-intervention, and changes maintained at 6-month follow-up ($ES=0.47$). These outcomes were important in the context of preventive universal programmes where smaller effect sizes were expected in comparison to treatment programmes, because changes are harder to observe due to lower levels of child behaviour difficulties (Kaminski, Valle, Filene, & Boyle, 2008). These outcomes were mirrored in focus group discussions, too. Parents described how after applying certain positive strategies, their child, who had initially been disrespectful, aggressive, argumentative and attention-seeking, calmed down and became more obedient, cooperative, understanding, satisfied and confident in their skills. Nonetheless, conclusions should be drawn with caution, as significant differences were not established across all child behavioural difficulties measures; significant effects were found only in the Eyberg Child Behaviour Inventory, and not in Conners Parent Rating Scale. So, regarding the primary outcome, analyses provide some encouraging findings, but results were not robust across measures.

According to parents' reports, disruptive behaviours had a great impact on the child's life, family, home life and friendships but less influence on their school life

and entertainment. This was also depicted in their accounts where most of the incidents described emphasised their significant effects on one of the first four areas mentioned above. Also, there were only a few accounts on changes in child emotional difficulties, which was in line with the non-significant results found over time. Lastly, child factors such as child initial difficulties, child age and number of children in the family were not significant moderators of change in child behaviour; yet, these factors were identified as barriers to reducing dysfunctional parenting practices that was associated with changes in child disruptive behaviours.

Proactive and positive parenting strategies, which appeared to be effective for preventing early child disruptive behaviours (Gardner, Shaw, Dishion, Burton, & Supplee, 2007; Gardner, Sonuga-Barke, & Sayal, 1999), were included in the Seminar Series. Parents who participated in the focus groups showed a particular preference for these strategies over discipline strategies. However, this was not accurately reflected in their parenting scores or in the mediator results, as the parenting scale did not sufficiently measure positive parenting. The parenting scale (PS) only assesses dysfunctional discipline styles, which is only one component of parenting, while excluding changes in other main areas of parenting targeted in Triple P interventions, such as using positive strategies, family relationships or parent emotional adjustment. Although there are various different measures available for assessing parenting skills and attitudes (Duppong-Hurley, Huscroft-D'Angelo, Tout, Epstein, & Griffith, 2013), the PS was chosen as it has been used in previous Triple P studies allowing for outcome comparisons. A new measure that could be used in future research is the Parenting and Family Adjustment Scales (PAFAS) (Sanders & Morawska, 2010), which includes five different domains: (1) parenting practices for promoting child's positive and prosocial behaviour; (2) quality of parent-child relationship; (3) parental

emotional adjustment to the parenting role; (4) positive family relationships and (5) parental teamwork. At the time of our investigation its psychometric properties had not been examined and for this reason it was not included in our assessments. Initial validation studies have now shown that the measure is valid (Sanders, Morawska, Haslam, Filus, & Fletcher, 2013) and reliable (Mejia, Filus, Calam, Morawska, & Sanders, 2014).

Dysfunctional practices were significantly reduced in the intervention parents at post-assessment but not at 6-month follow-up. Several barriers identified in the focus groups, such as child, parent and external factors, could account for any failure to maintain these improvements. For instance, parental cognitions were identified as a facilitator and barrier to implementing positive strategies and reducing dysfunctional ones. Mental processes, such as being aware of the problems they face, thinking before acting and self-reflecting assisted their practices, while negative thinking before acting, negative schemas on child upbringing, unrealistic expectations and underestimating their own and their child's abilities obstructed them. Cognitive changes may occur more readily than behavioural ones (Albarracín *et al.*, 2003; Webb & Sheeran, 2006), but do not ensure changes in parenting behaviour, and in turn child outcomes (Chaffin & Valle, 2003). Reducing dysfunctional practices appeared to mediate the effects of the intervention over time. At the focus group discussion, behaving properly first by accepting and understanding the strategies, explaining them to the child, thinking which ones to choose and applying them correctly while being confident, consistent and flexible and using any previous knowledge they had, was identified as one of the main themes that facilitated the implementation of strategies. Parents described how they changed the way they talked to their children, behaved towards them and reacted to their disruptive behaviours by reducing dysfunctional

practices such as yelling, punishing, overreacting and being inconsistent and permissive, whilst increasing positive parenting such as talking with a calm voice, praising, giving clear instructions, remaining calm in upsetting moments, spending quality time with their child, following a routine and applying discipline strategies. As a result, they noticed positive changes in their children, supporting the significance of the potential mediator. Also, the initial level of dysfunctional parenting was not a significant moderator and this was reflected in parents' accounts, as for some parents changing dysfunctional practices proved to be challenging while less demanding for others.

Another theme that facilitated the parenting practices was parental confidence in their skills. Parents shared that the seminars boosted their confidence levels, as they now knew how to manage their child. Although parents considered the increase in their confidence as a salient aspect of their child's improvement, this variable did not show a significant difference between the allocation groups, possibly due to ceiling effects, nor was it identified as a moderator/mediator. Similar results have previously been reported in another RCT of "Incredible Years" (Gardner, Burton, & Klimes, 2006). Similarly, there were other parent factors such as marital status and initial level of distress that were not identified as moderators but hindered parenting practices.

The barriers and facilitators identified through the focus group discussions fit well-established psychological theories; for instance, parents frequently referred to social learning theory where children learn certain behaviours from their parents through observation, modelling, imitation and reinforcement (Bandura, 1977). They were also consistent with research findings on: (1) positive factors, such as increase in parenting skills and confidence, interparental support and cooperation, as well as risk factors in the development of conduct and behavioural difficulties, such as marital

status, negative perceptions, interparental inconsistency and disagreement, and weak parent-child bonds (Campbell, 1995; Pepler & Rubin, 1991; Yoshikawa, 1994); (2) parenting behaviour and parent-child interactions as parents recognised that their own behaviour could affect their child's behaviour and vice versa (Golding, 2000; O'Connor & Scott, 2007; Spitzer, Webster-Stratton, & Hollinsworth, 1991); (3) and continued engagement (Koerting *et al.*, 2013; Sanders, 2010). Lastly, they are in line with findings from other types of Triple P interventions and populations: (1) Australian parents of very preterm babies considered the infant's health and developmental status and the infant's age as barriers to programme acceptability (Ferrari, Whittingham, Boyd, Sanders, & Colditz, 2011); (2) Aboriginal parents and facilitators in Canada who attended Group Triple P indicated that changes in themselves and their children, self-evaluation, flexibility, inter-parental consistency and cultural factors facilitated the implementation of the programme (Houlding, Schmidt, Stern, Jamieson, & Borg, 2012) and; (3) South African women living in shelters also identified single parenthood and the lack of time and energy as barriers to implementation of strategies (Wessels, n.d.).

Satisfaction surveys may reflect positive response bias, as clients tend to be strongly positive regardless of the actual services provided (Bailey, Scarborough, & Hebbeler, 2003; Goldring & Shapira, 1993; McWilliam *et al.*, 1995; Mitchell-DiCenso *et al.*, 1996). Greek parents were highly satisfied with the intervention they received and this was evident in both their overall evaluation of the programme as well as their evaluations of each seminar, and in focus group discussions. The majority of parents found it “*very useful*”, “*very informative*”, “*insightful*” and “*practical*”, offering “*concise but dense and substantive knowledge*” and “*new perspectives*”. Parents saw the seminars as an opportunity to learn new skills, review

prior knowledge, clarify any concerns and receive support to deal with problems consciously rather than spontaneously. They also found the tip sheets very useful for immediate and future reference, and a practical way to share this information with other family members, as it has been found with other Triple P materials (Ipsos MORI Scotland, 2011). Since the facilitator of the Seminar Series was also the facilitator of the focus groups, parents' positive responses and feedback might have been provided to satisfy the researcher's expectations resulting in response bias (Adams & Cox, 2008).

There were also a few parents who thought that the programme offered more idealistic rather than realistic information, the theory was easy to understand but found it difficult to put it into practice, and there were topics that were not covered, such as divorced parents, having one child, child disorders and stress management due to recession. Parents who had children with severe difficulties often suggested small group sessions, with a maximum of ten parents, to be organised according to the child's age, so they can discuss issues on a similar basis.

Overall, the results of both quantitative and qualitative analyses are in line with Bronfenbrenner's Ecological Systems theory (Bronfenbrenner, 1979). In the RCT and mediator analyses it was found that the child's *microsystem*, and specifically their parents and their parenting practices, could have an impact on the child's behavioural difficulties. The parents' accounts also revealed how the *exosystem* (the child's or parent's experience at home) might be affected by the other parent's experiences at work, for example, where they suffered work-related stress. This is linked with both the *macrosystem* (the Greek culture) which could be a burden to their parenting practices, and the *chronosystem*, as the current recession seemed to have increased parents' level of distress, and to a certain extent the way they dealt with

family difficulties.

7.3 Implications for Practice

This thesis suggests that brief group parenting interventions, which are based on psycho-educational seminars and minimal therapist contact, may be effective for reducing dysfunctional practices at least in the short-term and, in turn, reducing child behavioural difficulties over time.

The group approach is the most common form of delivering a parenting intervention in communities (Dishion & Stormshak, 2007). As mentioned during the focus groups, as well as in other studies (Barlow & Stewart-Brown, 2001), in group-based programmes parents found social support and realised that other families had similar difficulties, and subsequently recognised that they should not put the blame on themselves as parents. In addition, brief interventions overcome barriers of time commitment, but may introduce barriers to implementation, as found in the results of both the pilot RCT where change in dysfunctional parenting practices slightly decreased at follow-up, and thematic analysis where lack of knowledge and familiarity with some techniques and incorrect application of the strategies, resulted in unsuccessful attempts and, possibly, in further discouragement. It is important to note that in brief interventions parents are aware that making changes in a system of response involves a conscious, consistent, flexible and confident effort on their behalf, as well as the likelihood of being discouraged and failing at their first attempts.

Maintaining changes in dysfunctional practices over time needs to be set as a priority, especially if it is associated with changes in child disruptive behaviour, as found in the present study. More time is required to cover the material adequately,

enhance core skill components and consistency and avoid any dissuasion or reversion to preconceptions (Baker-Henningham, 2011; Harrison & Proschauer, 1996). There were some parents who mentioned in the discussions that they needed more time to understand and absorb the information. Booster sessions at regular intervals, despite initial concerns (Martin, 1977), could potentially maintain the benefits of brief interventions (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995; Bradley *et al.*, 2003; Ducharme, 2014; Whisman, 1990). The use of discussion groups allows for understanding parents' progress, normalising their experiences and reactions, self-reflecting and realising the benefits from others' insight (King, 2012). As with other programmes where some strategies remained relatively unfamiliar to participants, the extension of initial training was suggested (Baker-Henningham, 2011). The seminars could be extended from 90 to 120 minutes so that parents have time to ask more questions, and also practise in role-plays the techniques they find most difficult. Alternatively, due to the rapid advancement in mobile and web-based technology, parents may also be interested in using highly interactive social media platforms where they could discuss and ask questions on parenting issues (Love, Sanders, Metzler, Prinz, & Kast, 2013; White & Dorman, 2001).

Ultimately, parenting programmes should aim to improve parental warmth, control, monitoring, communication and self-efficacy (Barber, Stolz, & Olsen, 2005). Based on self-efficacy theory (Bandura, 1989), parental knowledge and confidence in parenting practices would be key elements to altering parenting style, and maintaining changes over time. It has been found that parents with high level of knowledge reported less child behaviour problems, decreased reliance on dysfunctional parenting and had increased confidence (Sanders, 2006; Sanders, Montgomery, & Brechman-Touissant, 2000). Providing parents with detailed information about how and when to

use the strategies illustrated by explicit examples is likely to increase both their knowledge and their level of confidence in applying them successfully.

Also, parents' experiences with the learning process could be used to make adjustments for future delivery of the programme (Webster-Stratton, 2009). This information could be used to modify its 'surface' and design culturally relevant scenarios that will be presented in the Seminar Series and incorporated in the tip sheets, without compromising the fidelity of the intervention (Knerr, Gardner, & Cluver, 2013). Short role-plays, or videos with parents rehearsing the strategies, could be useful for large group presentations (Castro, Barrera, & Martinez, 2004; Houlding, Schmidt, Stern, Jamieson, & Borg, 2012), while parents practising with their own child during the sessions has found to predict large effect sizes in child and parenting outcomes and could be applied in smaller groups (Kaminski, Valle, Filene, & Boyle, 2008). Also, more emphasis should be placed on strategies that parents rated less acceptable, feasible and culturally relevant or found difficult to apply, and make them more appealing to parents. Therefore, understanding parents' experiences can be used to develop more responsive services and increase clients' satisfaction (Upshur, 1991). This level of intervention seemed to be appropriate for the needs of most parents, and all suggestions, especially of parents with children at a clinical range of behavioural problems, should be considered in policy decisions such as the design of services that would be tailored for high-risk families.

7.4 Implications for Research

To my knowledge, the Seminar Series has not been explored in a fully randomised controlled published study; furthermore, this is the first evaluation of an evidence-based parenting programme in an RCT in Greece. It was the first study to

investigate the maintenance of the effects of the Seminar Series on child behaviour and parenting six months after the intervention, and the first Greek study to examine the impact of child difficulties in different domains of everyday life. Also, there has been no published examination of the perceived impact of implementation of the Seminar Series with a general population, nor has the application of positive parenting strategies in the Greek setting been explored.

Overall, the studies had several strengths. To avoid common methodological problems of previous Triple P studies (Sanders *et al.*, 2012; Wilson *et al.*, 2012), this study was registered with an international trial registry and was independent of the developer and Triple P staff or licence holders. It also reported the mechanism of randomisation, pre-specified principal outcome measure, sample size and power calculations, and all analyses were reported regardless of significance of the findings. Also, focus groups with the key informants were established in conjunction with the pilot RCT and provided insights of the dynamics of how the intervention unfolded that had not been previously described with this level of intervention and this type of population (Goodman, Steckler, Hoover, & Schwartz 1993; Patton, 1982). Parents' perceptions of the strategies after having implemented them may be more useful than parents' perceptions of possible future implementation in terms of policy making, programme content and service delivery (Morawska *et al.*, 2010).

However, there were several limitations that need to be addressed, and future research needs to be conducted to increase the validity and reliability of these findings. Due to the small sample size, larger sample size RCTs need to be conducted especially with low-educated parents and low-income families, whose children are at a higher risk of cognitive and behavioural difficulties in most countries (Robbins, Stagman, & Smith, 2012) as well as rural samples, to detect intervention effects,

explore these effects more fully in moderation and mediation analyses and produce more generalisable outcomes. Although there was an indication that the reduction of dysfunctional practices was associated with the reduction in child behavioural difficulties over time, this mediator should be tested in a separate RCT to explore its effects. All subgroup hypotheses need to be tested separately for possible effects. As the results were entirely based on self-reports, data triangulation as well as observer triangulation, where self-reported and observational methods are combined and more than one coder analyses the qualitative data, are recommended to overcome potential measurement bias. Also, despite the manualised format of this intervention, the cultural and/or clinical competence of the practitioner could have positively or negatively influenced the effect of the treatment on identified outcome variables as it was the first time the practitioner delivered group seminars (Castro, 1998; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Shapiro, Prinz, & Sanders, 2012). The findings of this study could potentially be generalised to other seminar-based psycho-educational interventions addressing parent management training skills. Lastly, although parents were highly satisfied by the intervention they received, administrative and seminar logistics issues need to be considered carefully before implementing an intervention (Durlak & DuPre, 2008) or conducting a research study.

Overall, the Seminar Series was delivered as a brief, low-intensity, preventive intervention, which is easily replicable and potentially cost-effective (Sumargi, Sofronoff & Morawska, 2013). Small to moderate effects were found in child and parenting measures but much bigger effects might be produced in population-based studies. This type of intervention seemed to be useful to most parents for learning new parenting skills but also for refreshing previous knowledge. Understanding the

facilitators and barriers to actual implementation of the strategies can be used to hasten changes on parenting.

7.5 Implications for Policy

Owing to the acceptability and efficacy of the Seminar Series in improving dysfunctional parenting practices as well as child behavioural difficulties, this intervention may introduce a flexible method of parenting that can benefit parents with different needs, for example: 1) parents who may not have particular concerns about their child's development, but are receptive to child- and/or parent-related information to prevent potential child developmental difficulties; 2) parents who might have some concerns about their child's development, but are reluctant to approach child and family health services for fear of being judged or stigmatised by others as being weak or incapable of being good parents; and 3) parents who may not have access to such services either for financial or residential reasons (Connell, Sanders, & Markie-Dadds, 1997) or in cases when the health services do not offer any specific parenting programmes.

The Seminar Series could be applied as a prevention and intervention strategy by health professionals, teachers or school psychologists. The Seminar Series could potentially have an impact on population levels of emotional and behavioural problems (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009). Before any dissemination, the cost-effectiveness of this level of intervention should be carefully investigated through analysis, including all health-sector and family costs such as the providers' training and costs of printed material, as well as any other costs of providers or clients during the entire programme.

In addition, some of the measures used in this study could be further applied as screeners to identify children as well parents in need. Health professionals and teachers could use the SDQ as a screening tool in order to detect children who have, or at risk of developing, behavioural and emotional difficulties. The questionnaire is free, easy to use, can be scored online and completed for a child as young as two years. Because of its focus on child behaviours and its length, Greek psychologists might find the ECBI more appropriate, but its psychometric properties should be first examined in the Greek context. This questionnaire can also be used for children who are as young as two years. An early administration of these tools is essential for interrupting a developmental pathway that might otherwise have taken the wrong course, and so interrupting the progression from the normal little problems to the things that start to matter. They could also be used to target the children and their parents who are more likely to benefit from parenting interventions.

The PS may also be a useful tool for health professionals and practitioners to redress any inadequate discipline practices of parents of pre-school and school-aged children. It may be helpful for identifying early families at risk of developing dysfunctional parenting practices and may be clinically useful as it can specify the parenting skills that most need to be improved for individual parents (Prinz, Onghena, & Hellinckx, 2007).

7.6 Key Messages of Thesis

- Greek children appear to display a high prevalence of behavioural problems according to parental reports.
- The Seminar Series appears to be an efficient universal prevention strategy as child disruptive behaviours reduced over the assessment periods.

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- There were no significant baseline demographic characteristics or parent and child baseline measurements to moderate the effects of the Seminar Series.
 - There was a partial mediation of parents' dysfunctional practices at post-intervention for improving children's behaviour at the 6-month follow-up.
 - Parental perceptions on implementation of Triple P strategies through their parenting experiences were essential to understand how the programme works in practice.

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APPENDIX A. FOCUS GROUP SCRIPT** Open Questions*

- Please tell us your name and one thing you would like to share about your child.

** Introductory Questions*

- Think of Positive Parenting Program. What did you find easy about the Seminar Series and what did you find difficult?

**Transition Questions*

- Think about the strategies we talked about during the Seminar Series.
- Which strategies did you apply? Did you notice any changes?
- Why do you think you achieved this change?

**Key questions*

- Which strategies did you find the most difficult to apply?
- Think of a case where you tried to apply a strategy and it did not work. What did exactly happen and it did not work?
- How did you deal with this problem?
- Why do you think it did not work?
- What do you need so you can deal with such situations in the future?

** Final questions*

The aim of this focus group was to describe the benefits and the difficulties you faced in applying the strategies you learnt during the Seminar Series three months ago.

- Is there anything we did not refer to or anything you would like to add?