TRAINING NURSES TO DEAL WITH AGGRESSIVE ENCOUNTERS WITH THE PUBLIC

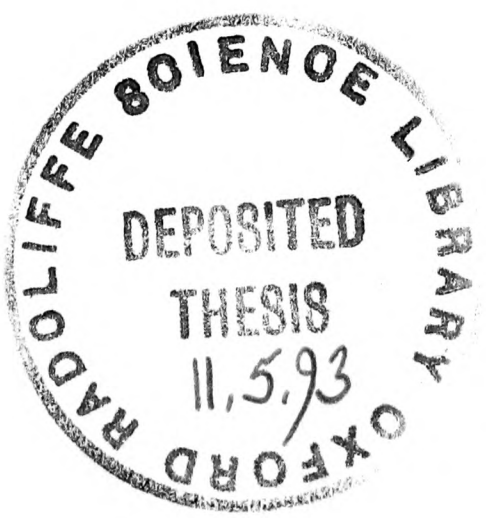
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Submitted for the degree of

Doctor of Philosophy



Trinity Term 1992

76500 words

ACKNOWLEDGEMENTS

Over the three and a half years it has taken to produce this thesis I have received a great deal of help and support from many different people. However, there are certain individuals who I would like to mention by name.

I would like to thank my supervisor, Michael Argyle, to whom I owe a great deal. He has always had an open door and been there when needed. He has also been an unfailing source of good humour. I would also like to thank Dianne Berry and Rosemary Stewart, who both helped me through the difficult early stages of the thesis, when I was deciding what direction to take. Sonia Argyle has taught me more about grammar than I knew was possible, and I thank her for her painstaking editing of chapter four of this thesis. Mansur Lalljee provided a stimulating and conscientious support when I was working on the attribution chapter.

Computing support has been provided by Paul Griffiths at the University Computing Service: at the back of my mind I always knew that when I felt a particular analysis was impossible I could talk to Paul and suddenly it would seem possible.

Because this was an applied project I worked extensively with staff both at the John Radcliffe Hospital in Oxford and the Stoke Mandeville Hospital in Aylesbury. They made this project possible. I would particularly like to thank Miss Harrison, the senior nursing officer from Stoke Mandeville, who has supported the project ever since I first took it to her in 1989, and motivated her staff to participate in the research. I owe a similar debt to Maggie Chamberlain at the John Radcliffe Hospital. I would particularly like to thank the nurses who gave a significant amount of their time to participate in the research.

On a personal note I would like to thank Peter Collett for his support, both intellectual and emotional; to Ann Lindsay who has taught me how to think creatively; and to Mrs Menzies Lyth whose seminal work on nurses has been an inspiration, and from whom I have received generous and insightful help.

And last, but by no means least, I would like to thank Kay Lattimore for being so efficient and reliable, and for all her hard work on making this thesis look presentable.

TRAINING NURSES TO DEAL WITH AGGRESSIVE ENCOUNTERS WITH THE PUBLIC

Jill Crossland, St. John's College, University of Oxford.
Submitted for the Degree of Doctor of Philosophy, Trinity Term, 1992.

SHORT ABSTRACT

Chapter one reviews the literatures on psychological studies of aggression, problems of aggression within the Social Services and the National Health Service, and nurse-patient communication. A number of issues are raised which are addressed by the current research.

In chapter two nurses' theories about what defuses and what aggravates aggression are explored. It was found that nurses believe that by remaining calm, gentle and firm they will defuse both physical and verbal aggression. In the case of physical aggression they believe it to be aggravated by being authoritarian, demeaning and defensive, while in the case of verbal aggression they believe it to be aggravated by becoming angry or attempting to deflect it.

In chapter three nurses' real-life experiences of what defuses and what aggravates physical and verbal aggression are compared with their theories. The nurses' experiences largely support their theories. It was also found that there are very few methods for dealing effectively with physical aggression, while there are a relatively large number of methods for dealing effectively with verbal aggression. Moreover, those nurses who believe themselves to be more capable of dealing with aggression suffer fewer emotional after-effects than those nurses who do not.

Chapter four examines individual differences between nurses and relates these differences to their ability to recover from the emotional aftermath of aggression. It was found that nurses who are highly stressed and who bottle-up their feelings of anger suffer emotionally after aggressive incidents. In contrast, nurses who are assertive, extravert and who exercise interpersonal control are not so distressed by aggressive incidents.

In chapter five nurses' attributions are related to their ability to select effective methods of dealing with aggression as well as their ability to recover from it emotionally. It was found that those nurses who have a tendency to blame themselves are both emotionally vulnerable and less capable of selecting effective methods of responding to aggression. In addition, a new method of measuring attribution was developed and tested, and was found to be preferable to the usual method of measuring attribution.

Chapter six presents the two-day aggression training programme. The training was designed to incorporate the findings of the current research as well as theoretical issues. The training was carefully evaluated with a control group, pre-post measures of both subjective and objective change, and a seven week follow-up. The aggression training group was no different to the control group before training, but was different on all measures after training. It was concluded that the training model has been shown to make a significant difference to objective skills and subjective evaluations, and that the causal influence of some of the findings described in chapters two to five has been demonstrated.

Chapter seven summarises the findings of the research, explores their theoretical and practical implications, and suggests directions for future research.

LONG ABSTRACT

This thesis sets out to provide a psychological analysis of the problem of aggression within the context of general hospitals. In particular, it explores how nurses deal with aggressive patients by examining their experiences of aggression, their perceptions of the strategies which will defuse or aggravate aggression, the relationship between nurses' personalities and aggressive incidents, including such factors as empathy, personal and interpersonal control, anger and assertiveness, the role played by nurses' attributions, and the effects of stress and self-evaluation on their ability to deal with aggression. All of these issues have been explored with the aim of producing a two-day training programme for general nurses which helps them to prevent aggression by teaching them to communicate more skilfully with patients and their relatives, deal more effectively with aggression when it does occur, and to cope better with the experience of aggression.

Chapter one presents the research literature which has underpinned the empirical research reported in the other chapters. The literatures on psychological studies of aggression, applied research into the problems of aggression at work within both the Social Services and the National Health Service, and Nurse-Patient Communication, are reviewed. A number of points which are addressed by the current research are raised by the review. They are: One, the psychological literature on aggression tends to examine the production of aggression, while this thesis sets out to examine responses to aggression: Two, many calls have been made for training staff to deal with aggression, but prior to the current research the effectiveness of aggression training has not been evaluated: Three, research has shown that a variety of responses inhibit or aggravate aggression, the research sets out to compare these findings with nurses' own experiences of the same: Four, age, experience, personality, negative affect, stress and attributions are all said to be related to the production of aggression, the current research examines how these factors are related to the ability to prevent, defuse and recover from aggression: Five, psychological studies

of aggression tend to be laboratory based while this thesis examines the problem of aggression at work with naturalistic methods such as self-report, interviews and scenarios derived from real-life incidents.

Chapter two examines nurses' theories about what defuses and what aggravates aggression. A series of twenty interviews revealed 31 strategies which nurses use when dealing with aggression. These strategies were subsequently rated for effectiveness by 53 nurses in relation to both physical and verbal aggression. The data were analyzed using factor analysis and discriminant functions analysis. It was found that nurses believe that the most effective strategies for dealing with both physical and verbal aggression are to remain calm, caring, and assertive. The nurses also felt that the strategies which aggravate verbal aggression are different from those that aggravate physical aggression. In the case of physical aggression they believe it to be aggravated by being authoritarian, demeaning and defensive, while in the case of verbal aggression they believe it to be aggravated by becoming angry or by attempting to deflect it. It was also found that older nurses, nurses who felt themselves to be good at dealing with aggression, and more experienced nurses held different theories about how to handle aggression than their younger, less confident and less experienced colleagues. The older, more experienced nurses favour gentle, less provocative responses to aggression. However, nurses who have been involved in a large number of physical incidents of aggression favour aggressive responses to both physical and verbal aggression.

In chapter three, nurses were asked to say what they did last time they dealt with a real incident of both physical and verbal aggression, and how effective their actions proved to be. The data were obtained from the same nurses who had taken part in the study reported in chapter two, but the sample was supplemented to get sufficient critical incidents of both physical and verbal aggression. A total of 61 nurses participated, providing 51 incidents of verbal and 51 incidents of

physical aggression. The data were analyzed using factor analysis and discriminant functions analysis. It was found that the nurses' real-life experiences of what defuses and aggravates aggression closely resembles their theories. In other words, remaining calm, softly spoken, and assertive was deemed effective with both verbal and physical aggression, while different responses were found to aggravate verbal and physical aggression. It was also found that there are many more ways of dealing effectively with a verbally aggressive than a physically aggressive person, and that nurses who believe themselves to be more capable of dealing with aggression suffer fewer emotional ill-effects that nurses who believe themselves to be less capable. It was concluded that nurses have conscious access to their theories about how to deal with aggression and act on them, that the best inhibitor of aggression is to remain calm, that aggression is generally aggravated by either becoming aggressive back or denying the aggressors anger, and that nurses should not experiment with different responses when dealing with physical aggression.

In chapter four individual differences between nurses were used to assess their ability to recover from the emotional aftermath of aggression. A total of 89 nurses were asked to describe an incident of verbal and physical aggression and measures were taken of their emotional responses to the reported incidents. On this basis they were categorised as either responding "adaptively" or "maladaptively". Nurses who bottle-up feelings of anger and who exhibit high levels of stress tend to be associated with the maladaptive emotional response to aggression. In contrast, nurses who are assertive, extravert and who exercise interpersonal control are more likely to associated with the adaptive emotional response to aggression. In addition, it was found that nurses' age and experiences of aggression are unrelated to their ability to recover from aggression. This suggests that using older, more experienced nurses may not be a useful role-model for younger nurses, but that both groups should be given the opportunity to undertake aggression training. The findings also emphasise the importance of interpersonal skills, stress control, coming to terms with one's

own feelings of anger, and open, assertive communication between nurses and patients when dealing with aggression.

In chapter five Weiner's attribution-affect-action pathway was indirectly tested by examining the relationship between nurses' attributions about aggressive behaviour and their emotional and behaviourial responses to it. In addition, a new method of measuring attributions was developed. The nurses rated five aggressive scenarios which represented the real-life experiences of a previous sample of nurses. It was found that nurses have identifiable styles of explaining and responding to events, which remain consistent across different circumstances. Moreover, nurses who use the self-blame attribution, who bottle-up feelings of anger, and who are associated with the "maladaptive" emotional syndrome described in chapter four, use less effective strategies for defusing aggression. It was concluded that training should pay attention to nurses' internal states, especially feelings of anger, stress and self-blame, as these factors appear to influence nurses' ability to deal with aggression. Furthermore, no support was found for the attribution-affect-attribution pathway proposed by Weiner, and the novel measure of attribution was found to be both more flexible and as efficient as the original measure.

Chapter six presents the training scheme. Twelve nurses participated in a two-day aggression training programme while a control group simultaneously participated in a two-day training programme on how to use a new computer system which was being installed on the wards. Pre and post training self-evaluation measures were obtained from both groups. In addition, after the training had taken place, both the experimental and control groups were interviewed and their skills at dealing with aggression assessed. Finally, the experimental group met for a follow-up session with the trainer seven weeks after training had taken place in which they provided further self-report measures. It was found that the experimental group was no different to the control group in terms of their ability to deal with aggression prior to the training. However, all post

training measures showed a significant difference between the two groups, including self-report, interview assessments and the seven week follow-up. It was concluded that the training not only helps nurses to feel more confident about their skills but also makes a demonstrable difference to their skills; that the causal influence of such factors as stress awareness and communication skills has been demonstrated; and that the training breaks new ground both in terms of evaluation methodology and also in terms of providing empirical support for the effectiveness of aggression training.

Chapter seven presents a summary of the findings and an evaluation of the theoretical and practical implications of the research. The research makes theoretical contributions to psychological studies of aggression, while also having practical applications for employment sectors in which staff are at risk of aggression from the public. A number of research ideas which are based on the current research are proposed before moving on to the final summary of the thesis.

PAGE NO.

CHAPTER ONE

INTRODUCTION . . . 1

(i) **General Introduction** . . . 1

(ii) **Psychological Studies of Aggression** . . . 2

(iii) **The Social Administration of the Problem of Aggression at Work** . . . 26

(iv) **Research into Aggression in the Social Services** . . . 29

(v) **Research into Aggression in the National Health Service** . . . 36

(vi) **Research into Nurse-Patient Interactions** . . . 45

(vii) **Summary and Aims of the Current Research** . . . 48

CHAPTER TWO

NURSES' THEORIES ABOUT DEALING WITH AGGRESSION . . . 52

1. INTRODUCTION . . . 52

2. METHOD AND PROCEDURE . . . 54

A. Subjects . . . 54

B. Materials . . . 54

3. RESULTS . . . 56

A. Factor Analyses of the Results . . . 56

(i) **Physical Aggression** . . . 57

(ii) **Verbal Aggression** . . . 63

(iii) **Comparing Responses to Physical Aggression with Verbal Aggression** . . . 70

B. Discriminating between the Nurses . . . 75

(i) **What predicts a Nurse's Theories about how to Handle Aggression?** . . . 75

(ii) **Age and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression** . . . 76

PAGE NO.

(iii) **Nursing Experience and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression** ... 80

(iv) **Self-Rated Effectiveness and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression** ... 84

(v) **Assault Rates and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression** ... 89

(vi) **Summaries of the Discriminant Functions Analyses in both Domains** ... 94

4. DISCUSSION ... 96

CHAPTER THREE

REAL-LIFE RESPONSES TO AGGRESSION ... 101

1. INTRODUCTION ... 101

2. GENERAL AIMS ... 102

3. METHOD AND PROCEDURE ... 103

A. Subjects ... 103

B. Materials and Method ... 103

4. RESULTS ... 105

A. The Behavioural Response Strategies ... 105

(i) **Describing the Behavioural Responses in both Domains of Aggression** ... 106

(ii) **Comparing Theoretical with Actual Effectiveness** ... 113

B. Individual Nurses and their Skill at Dealing with Aggression. ... 122

(i) **Can Nurses Predict how well they will deal with Aggression?** ... 123

(ii) **What Predicts Nurses' Effectiveness at Handling Aggression?** ... 129

PAGE NO.

5. DISCUSSION ... 136

CHAPTER FOUR

INDIVIDUAL DIFFERENCES AND RESPONDING TO AGGRESSION ... 141

1. INTRODUCTION ... 141
   - (i) **Assertiveness** ... 142
   - (ii) **Extraversion** ... 143
   - (iii) **Empathy** ... 144
   - (iv) **Control and Rigidity** ... 145
   - (v) **Own-Aggression** ... 147
   - (vi) **Stress** ... 148
   - (vii) **Training** ... 149
   - (viii) **Experience** ... 150
   - (ix) **Causal Explanations** ... 150
   - (x) **General Aims** ... 150

2. METHOD AND PROCEDURE ... 151
   - A. Subjects ... 151
   - B. Materials ... 151
     - (i) **The Aylesbury Nurses Questionnaire** ... 152
     - (ii) **The Aggression Questionnaire** ... 156
     - (iii) **The Control and Rigidity Questionnaire** ... 156
     - (iv) **The Empathy Questionnaire** ... 156
     - (v) **The Assertiveness Questionnaire** ... 156
     - (vi) **Summary of the Questionnaires** ... 156
   - C. Method ... 157

3. SUMMARISING THE VARIABLES ... 157
   - (i) **Factor Analysis of the Personality Variables** ... 158
   - (ii) **Factor Analysis of the Own Aggression Variables** ... 159
   - (iii) **Factor Analysis of the Experiences of Aggression Variables** ... 160
   - (iv) **Factor Analysis of the Causal Explanation Variables** ... 161

PAGE NO.

(v) Factor Analysis of the Negative Emotion Variables ... 166

(vi) Summary of the Factor Analyses ... 166

4. HYPOTHESES ... 166

A. Hypothesised Relationships Between Independent and Dependent Variables ... 167

(i) Nursing Experience, Age, Experience of Aggression ... 167

(ii) External Control ... 169

(iii) Internal Control ... 170

(iv) Empathic Personality ... 170

(v) Own Aggression ... 172

(vi) Aggression Training ... 173

(vii) The Role of General Stress ... 173

B. Relationships Among the Dependent Variables ... 174

5. RESULTS ... 174

A. Relationships Between the Independent and Dependent Variables ... 174

(i) Nursing Experience, Age, and Experience of Aggression ... 175

(ii) External Control ... 175

(iii) Internal Control ... 176

(iv) Empathic Personality ... 180

(v) Own Aggression ... 180

(vi) Aggression Training ... 181

(vii) Summary ... 181

(viii) The Role of General Stress ... 182

B. Relationships Among the Dependent Variables ... 185

C. Summary of the Findings ... 187

6. DISCUSSION ... 188

PAGE NO.

CHAPTER FIVE

ATTRIBUTIONS AND AGGRESSION . . . 198

1. INTRODUCTION . . . 198

2. GENERAL AIMS AND HYPOTHESES . . . 204

3. METHOD AND PROCEDURE . . . 205

A. Subjects . . . 205

B. Materials and Method . . . 205

(i) **The Attribution Questionnaire** . . . 206

4. RESULTS . . . 211

(i) **The Scenarios: Individual Differences or Circumstances?** . . . 211

(ii) **Behavioural Responses** . . . 220

(iii) **Attributional Style** . . . 220

(iv) **Comparing Attributional Style with Locus of Causality** . . . 225

(v) **Self, Other and Circumstances** . . . 233

(vi) **Controllability** . . . 242

(vii) **Emotional Responses** . . . 246

5. DISCUSSION . . . 253

CHAPTER SIX

TRAINING NURSES TO DEAL WITH ANGRY PEOPLE . . . 261

1. INTRODUCTION . . . 261

2. GENERAL AIMS . . . 272

3. METHOD AND PROCEDURE . . . 272

A. Subjects . . . 272

PAGE NO.

B. Materials ... 273

C. Method ... 274

4. RESULTS ... 275

A. Subjective Evaluations ... 275

(i) Pre-training measures ... 275

(ii) Difference measures ... 282

B. Seven Weeks Later ... 284

C. Independent Evaluations ... 285

(i) Interviewers' evaluations ... 285

D. Informal Feedback ... 289

5. DISCUSSION ... 290

CHAPTER SEVEN

DISCUSSION AND CONCLUSIONS ... 294

(i) Nurses' Theories about how to Deal with Aggression ... 295

(ii) Dealing with Aggression in Real Life ... 296

(iii) Individual Differences in Responding to Aggression ... 298

(iv) Nurses' Cognitions and Aggression ... 300

(v) Training and Evaluation ... 303

(vi) Extending the Current Research ... 305

(vii) Final Summary ... 308

REFERENCES ... 310

PAGE NO.

APPENDICES

Nurses' Questionnaire (Part 1)	. . .	i
Nurses' Questionnaire (Part 2)	. . .	xii
Nurses' Questionnaire Supplement	. . .	xxvii
Aylesbury Nurses Questionnaire	. . .	xxxvi
Aggression Questionnaire	. . .	xlvi
Control Questionnaire	. . .	l
Empathy Questionnaire	. . .	lii
Assertiveness Questionnaire	. . .	lv

CHAPTER ONE

INTRODUCTION

(i) General Introduction

During 1986, one in 200 staff within the National Health Service suffered an injury which required major medical intervention following a violent incident while at work. A further 1 in 10 required first aid. One in 20 were threatened with knives, broken bottles, and other weapons, and 1 in 6 received verbal threats of violence. Within the NHS certain occupational groups are more at risk than others, and student nurses are the most vulnerable group. Over the course of 12 months in 1986, as many as 1 in 3 student nurses required first aid treatment and almost 1 in 2 were verbally abused (Health Service Advisory Committee, 1987).

The statistics given above obscure the human costs of aggressive incidents. For example, in 1974 charge nurse Daniel Carey was stabbed to death by a psychotic patient in Tooting Bec Hospital and in 1978, again in Tooting Bec, Sister Elisabeth Carson was killed by a patient. Between 1976 and 1978 a general practitioner, a psychiatrist and a general physician were seriously injured by mentally disturbed patients. More recently, in 1991, two psychiatrists were found violently murdered in their offices after one of their patients became violent.

Clearly, the problem of aggression involving NHS staff is not only an extremely serious one; it is one which invites psychological analysis. In spite of this, very little research, psychological or otherwise, has been undertaken to examine the problem within the context of general hospitals, and the little research that has been done on aggression at work has focused almost entirely on the Mental Health Service and the Social Services.

This thesis sets out to provide a psychological analysis of the problem of aggression within the context of general hospitals. In particular, it explores how nurses deal with aggressive patients by

examining their experiences of aggression; their perceptions of the strategies which will defuse or aggravate aggression; the relationship between nurses' personalities and aggressive incidents, including such characteristics as empathy, personal control, anger and assertiveness; the role played by nurses' attributions; and the effects of stress and self-evaluation on nurses' ability to deal with aggression. All of these issues have been examined with the aim of producing a two-day training programme for general nurses which will enable them to prevent aggression by teaching them to communicate more skillfully with patients and their relatives, deal more effectively with aggression when it does occur, and to cope better with the experience of aggression.

The research which is described in this thesis was designed to have both theoretical and practical implications. On one hand, it was intended that the research would provide insights into the dynamics between nurses and their aggressors by looking at the role played by the nurse as well as the aggressor. Ultimately, this information could be applied practically to help nurses develop the necessary skills to recognise, deal with, and adjust to the experience of aggression. On the other hand, the research was designed to have theoretical implications, addressing the important question of individuals' responses to real-life incidents of aggression. To date, the psychological literature has largely focused on the production of aggression rather than the role of responses to it.

In this chapter the relevant literature will be presented in three categories: firstly, psychological studies of aggression; secondly, previous research on the problem of aggression at work; and finally nurse-patient communication.

(ii) Psychological Studies of Aggression

Psychological studies of aggression will be reviewed with the intention of examining what can be learned about the nature of aggressive incidents within the NHS. The literature in this area is vast and as a result the review is necessarily selective, covering what causes aggression and what

inhibits it, and the ecological validity of laboratory-based research. Some studies have been included because they describe factors which are likely to increase the probability of aggressive outbursts in hospitals, and therefore have implications for its prevention, while other studies have been included because they raise interesting hypotheses in relation to nurses.

The Causes of Aggression

Age, Gender and Experience

There is some evidence to show that age, gender and experience can predispose an individual to aggress. While the literature only pertains to the generation of aggression, it raises the question of whether or not these variables have a role to play in a nurse's ability to deal with aggressive incidents.

There does seem to be some agreement that physically assaultive patients within psychiatric hospitals tend to be relatively young, usually under 40 (Shader et al., 1977; Fottrell, 1980; Tardiff and Sweillam, 1980), although Tanke and Yesavage (1985) found no relationship between age and assaultive behaviour amongst the psychiatric population. There is, however, considerable evidence of a link between youthfulness and aggression in the general population (Geen, 1990). The possible reasons for this relationship are several - it may be that older people are more aware of retaliatory action which might result in injury to themselves, or that younger people are more physically vigorous, or there may be an interaction between gender and age. Whatever the explanation, there does seem to be a consensus that younger people are more physically aggressive than older people. There is little evidence, however, to suggest any differences between younger and older people in terms of verbal aggressiveness.

Studies have provided mixed findings about whether men or women are more aggressive. Eagly and Steffan (1986) reviewed a large sample of evidence from the psychological literature and concluded that males are more likely to be aggressive than females, but that the difference is

really quite small and more apparent in some contexts than others. They also found that both sexes are slightly more aggressive against male targets than female targets. Men certainly describe themselves as being more aggressive than women and show a greater potential for aggressive acts in interpersonal conflicts (Reinisch and Sander, 1986).

There is also evidence to suggest that men engage in more physical aggression than women, but that the tendency to engage in verbal aggression is similar for the sexes (Shope et al., 1978; Eagly and Steffen, 1986; Barrett, 1979)). Statistics show that men commit more crimes of murder, armed robbery and aggravated assault, and that these sex differences are present in a number of different cultures besides our own (Whiting and Edwards, 1973). In spite of this, White (1983) cautions that the evidence about sex differences in preferred modes of aggressing (that is, physical or verbal aggression) does not provide a sufficient empirical base from which to draw firm conclusions.

In a review of the field, Hyde (1984) examined over 140 studies, and concluded that sex differences in aggression decrease with age. In contrast, Feshbach (1970) has suggested that aggression in women is repressed as they get older because of socialisation, while in males aggressive behaviour is often regarded as appropriate and therefore sanctioned throughout their life-span. Tardiff and Sweillam (1982) stratified psychiatric patients in terms of age, and they found that the majority of assaultive patients under 25 years of age were female, the majority of those between 25-64 were male, and that there were no gender differences for the assaultive patients over 65 years of age.

In general, then, it seems that younger males are more likely to be physically aggressive than older females, although sex and age differences are not at all clear in relation to verbal aggression. In other words, although the evidence suggests that young males will resort to physical violence more readily than females of any age, there is no reason to suppose that males will be more verbally aggressive than females. There are, however, many other important factors to take into

consideration, such as life experiences, which have been shown to exert a strong influence over aggressive behaviour.

Social learning theorists suggest that aggression is learned, released and maintained by the environment (Bandura, 1973). In this model the emphasis is on the role of the individual's life experiences and what has been learned from them. A series of studies by Bandura and his colleagues suggest that aggression can be learned from observation or 'modelling'. The prototypical study in this tradition was performed by Bandura et al. (1963). In one condition young children watched an adult confederate enter a room containing toys, among which was a large inflated plastic doll, called a "Bobo" doll. After playing with the other toys for a while the confederate started to attack the doll with a bat, at the same time as being verbally aggressive to it. In another condition children observed the same adult playing with the toys non-aggressively. Children in both conditions were then let into the room to play. Those children who had observed the confederate being aggressive were more aggressive than the children in the other condition. This finding has been replicated many times, and it shows that children will copy and learn from adults.[1] Eisenberg (1980) has also found that if children watch aggressive television programmes with an adult who shows approval and enjoyment, they are more likely to subsequently act aggressively than children who watch with an adult who shows disapproval.

Bandura and other researchers have also looked at how learned behaviour is facilitated and maintained. In the laboratory, Bandura (1965) has shown that children who watch a film of an adult, being either rewarded or punished for being aggressive, will act more or less aggressively as a result. In a similar vein, Geen and Stonner (1971) found that subjects who were given verbal approval by the experimenter for delivering electrical shocks to another person increased both the intensity and duration of those shocks over time.

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[1]However, the research does not determine whether the children are learning to be "aggressive" as opposed to more physically playful.

There is also considerable evidence that violence is learned within the context of the family, and that children who come from families which commonly use aggression with one another are, in their turn, more likely to use aggressive responses (Patterson, 1980; Straus, 1980; Loeber and Dishion, 1984). Patterson (1980) has also found that training parents from disturbed families to use less aggressive methods of child-rearing has a direct impact on the anti-social behaviour exhibited by the children themselves.

In summary, then, there is evidence that age, gender and experience all have a part to play in the generation of violence. The important question, however, is how this relates to the problem of aggression within general hospitals. The age research suggests that there is likely to be a relationship between a nurse's age and her ability to deal with aggression. The role played by age is examined in chapters 2 and 4, where it is related to the sorts of strategies that nurses use, their theories about how to deal with aggression and, finally, its mediation between a range of individual differences measures and nurses' ability to cope with aggression.

The issue of gender has not been examined in this thesis, simply because the majority of nurses are female and this makes it extremely difficult to assess sex differences. However, the literature is worth considering because it indicates that males are more likely to be physically aggressive than females. In addition, the literature provides evidence that both females and males are less likely to be aggressive towards females than towards males. This question has not been directly addressed by the current research, but it is the case that most nurses are female and, in spite of this, the numbers of assaults against them are relatively high. This may, therefore, form the basis of a real-life finding that contradicts laboratory-based findings.

The issue of experience is a complex one. Certainly, the literature cited above indicates that people learn from life experiences, and that if they have experienced a lot of aggression they are more likely to be aggressive themselves. But is it therefore the case that nurses who experience

a lot of aggression find it easier to handle? And do nurses benefit from watching their experienced colleagues, learning which are the effective and the ineffective strategies for preventing and dealing with aggression? The most important question, however, is whether or not there is a straightforward relationship between experience and the ability to handle aggression - or is this relationship mediated by factors such as stress and empathy? It might be the case that there is no relationship between experience and ability to handle aggression, or that such a relationship only exists in the presence of a mediating variables; for example, experience may help nurses to handle aggression provided they are empathic and not too stressed. These are empirical issues, and they are examined in chapter four.

Interpersonal Provocation

One of the most powerful elicitors of overt aggression is a verbal or physical attack from another person (Buss, 1963; Geen, 1968; Geen & Berkowitz, 1967). The effects of provocation have been compared with those of frustration and it has been found that provocation is an even more powerful source of arousal than frustration (Diamond et al., 1984). Moreover, when we are victims of some form of aggression we have the tendency to reciprocate by returning as much, if not more, aggression (Dengerink et al., 1978; Ohbuchi & Ogura, 1984). Baron (1988) examined the effects of aggressive and non-aggressive criticism about a piece of work produced by subjects. Those subjects who had been the victims of aggressive criticism were significantly more likely to avoid or compete with the person who had criticised them than were the subjects in the non-aggressive criticism condition.

It does appear that interpersonal provocation is a major elicitor of aggression, and one which nurses should be aware of for two reasons. Firstly, if a patient or relative is being aggressive it is usually advisable for the nurse to try and establish the cause of his or her aggression. In order to do this effectively, the nurse should be aware of the role played by interpersonal provocation. Secondly, nurses can be helped to become more skilled when they interact with patients or their

relatives, so that they do not themselves become the source of provocation. This research is particularly relevant to the training of nurses which is described in chapter six.

Personality

Individual differences between nurses are examined in chapter four with the aim of finding out what predisposes nurses to deal more or less effectively with aggression, particularly in terms of their ability to defuse aggression and their emotional adjustment after it. But what does the psychological literature contribute to our understanding of individual differences and aggression? The first thing to note is that research on this topic has been almost exclusively concerned with individual differences in relation to the aggressor rather than the victim. In other words, the research has concentrated on those factors which relate to the production of aggression, rather than people's ability to cope with or handle it.

As Geen (1990) notes, it has been claimed that there are solid empirical grounds for inferring the existence of an "aggressive personality". However, he goes on to suggest that it is best to think of personality as a moderator of situational influences rather than the cause of aggressive behaviour. There is evidence for cross-situational consistency of aggressive responses and that approximately 5% of young males actually initiate aggression (Olweus, 1979). However, there is also evidence that situations may account for more of the variance than personality (Campbell et al., 1985). Campbell et al. found that when students were asked to predict their responses to hypothetical situations of conflict, the situations themselves were the best predictors of the students' behaviour.

Other researchers have found evidence for the consistency of aggressive behaviour in different situations. For example, Endler and Hunt (1969) found that the variance accounted for by individuals in provoking situations was about 18%, whereas the situations themselves only accounted for 5% of the variance. Deluty (1985), too, found that young boys manifested the same

aggressive behaviours in a diverse set of naturally occurring situations, whereas the same consistency was not found for girls overall. In 1979 Olweus reviewed a large number of longitudinal studies of aggressive behaviour amongst children, involving methods such as direct observation, teacher ratings, clinical ratings and peer judgements. He concluded that there was considerable evidence for a stable trait of aggressiveness, with clear indications of individual differences emerging by the age of three. Like Geen (1990), however, Olweus (1979) suggests that individual differences contribute to aggression in concert with a host of other factors such as the circumstances, cognitions, inhibitions against aggression, and so on.

A number of researchers have examined the internal controls that individuals exercise in response to provoking situations. That is, how people differ in their propensity to be aroused or to inhibit arousal in response to stressors. For example, Hynan & Grush (1986) found that male subjects who scored high on impulsivity were more likely to aggress against an experimental partner than were subjects who scored low on impulsivity. Both Toch (1969, 1980) and Megargee (1966) have used in-depth interviews to examine the personality correlates of highly violent individuals. Megargee (1966) proposed that assaultive persons may be classified into two groups, the under controlled and the over controlled. The under controlled group inhibit any normal expression of aggression, appearing quiet, polite and soft-spoken, until circumstances are such that they can no longer control themselves and they explode with rage. In contrast, under controlled types lack inhibitory mechanisms against aggression, becoming aggressive at the slightest provocation. Toch (1969) found three main types of aggressive personality: (1) the "self-indulgent compensator", who has both a low opinion of himself and fears that others feel the same way - aggression is used as a defense against these feelings; (2) the "self-indulger" who believes that others exist to satisfy his needs and wants, and who becomes aggressive when they do not; (3) and the "self-defender" who is frightened of other people and who attacks in order to stop them from attacking him.

People have also been categorised as "Type A" and "Type B". Type A's are extremely competitive, always in a hurry, irritable and aggressive, and Type B's are not like this (Glass, 1977). A number of studies have found that Type A's are more likely to engage in both hostile and instrumental aggression than Type B's (Baron et al., 1985; Carver and Glass, 1978), and recently it has been found that Type A's are more likely to engage in spouse and child abuse (Strube et al., 1984), and that they are more likely to experience conflict with work colleagues (Baron, 1989).

The research on personality and the production of aggression has a bearing on the training scheme described in chapter six, because, as Olweus (1979) has noted, the research can be used to illustrate the mediating role of personality, without in any way undermining the role played by cognitive or situational variables. This perspective may help nurses to reassess their attitudes about "aggressive types" by providing a balanced view about the causes underlying the production of aggression.

The psychological literature, then, does provide some evidence for the mediating role of personality in the generation of aggression. But what bearing does this have on the problem of aggression in general hospitals? It raises the question as to whether or not there are individual differences between nurses, and if so whether these differences relate to their ability to defuse aggression and to deal with its emotional aftermath. Chapter four examines this issue by looking at individual differences between nurses and their ability to deal effectively with aggression.

The Role of Frustration and Negative Affect

Perhaps the best known explanation of what elicits aggression is provided by the frustration-aggression hypothesise, originally formulated by Dollard et al. (1939) and later reformulated by Miller (1941). The fundamental tenet of the theory is that frustration produces an instigation to aggress. A whole host of laboratory-based studies in the 1950's and 1960's were oriented towards the issues raised by this hypothesis, and there is an enormous amount of empirical data which link

frustration with aggressiveness (Berkowitz, 1958, 1962; Buss, 1961). However, nowadays it is widely recognised that aggression may be caused by many factors other than frustration (Buss, 1966; Buss, 1963; Rule and Percival, 1971).

Berkowitz (1989) proposes a major reformulation of the frustration-aggression hypothesis. He claims that frustration only causes aggression to the extent that it produces negative affect, and that negative affect can in turn be caused by a wide range of stimuli, such as, pain, insults and attack. Thus, the fundamental root of emotional aggression and experienced anger becomes negative affect in its many forms and with its many causes. To underline this point, Berkowitz (1989) quotes Anderson's (1989) finding that people can become angry because they are feeling sad. In his most recent discussion of aggression Berkowitz (1992) reinterprets many of the old empirical findings in the light of his new model. For example, he points out that Walters and Brown (1963) found that children who were stopped from doing something they were enjoying (watching an exciting film) were even more aggressive than children who had been reinforced for aggressive behaviour. This finding was not examined by Walters and Brown in their conclusions, but Berkowitz uses it to illustrate how the negative affect which was associated with the children's frustrated attempts to watch the film made them aggressive.

Berkowitz (1989, 1992) also claims that all negative affect, including anger, is pre-cognitive. That is, it happens without conscious thought on the part of the individual, and it is not under conscious control. Berkowitz claims that an aversive event will produce negative affect, which the organism is programmed to respond to with either fight or flight, long before cognitive appraisal of the situation occurs. In his model, attributions only matter to the extent that they influence how unpleasant the circumstances are in which people find themselves. Therefore, if an individual perceives that he or she is being deliberately frustrated, this might affect his or her level of arousal, but it will not determine whether he or she decides to become aggressive in response to the frustration. At the same time, this explanation of the role of cognition also challenges the

notion that the most important mediator of retaliatory aggression is the victim's interpretation of the intention of the provoking person.

Epstein and Taylor (1967) and Dodge et al. (1984) have concluded that perceived intent to harm is a more accurate predictor of retaliation than is the intensity of an attack. Moreover, Zillmann and Cantor (1976) found that an attacker who is perceived as having an "absence of malice" is less likely to become a victim of retaliatory attacks. An extremely complex cognitive model has been proposed by Ferguson and Rule (1983), in which intent, foreseeability and the norms of the situation are all incorporated into the victim's attributions about the aggressor. According to Berkowitz, such cognitive interpretations do not precede an aggressive response, and the choice between fight or flight is determined by a combination of factors such as genetics and learning as well as the current circumstances long before cognitions come into play.

The negative affect model proposed by Berkowitz incorporates the notion that any significant change for the worse in a person's situation may be sufficiently aversive to cause increased stress and arousal, which in turn may energize aggressive responses. Thus, the new model can accommodate a wide range of antecedents of aggression. For example, excessive stress can be classified as negative affect, and it is well established that both major life events and "daily hassles" place people under stress (Holmes and Rahe, 1967; Kanner et al., 1981). In the hospital context both staff and the people they are treating are under stress, either because they are facing major life events, such as being ill, or, in the case of nurses, because they are dealing with the sick and dying. Both patients and nurses are also exposed to daily hassles. In the case of patients this may take the form of waiting for nursing attention, and in the case of the staff, it may mean having too many demands made on their time. It is therefore likely that both nursing staff and patients are likely to be suffering from stress and negative affect and, following Berkowitz, that they will therefore be primed for fight or flight. In the case of nurses such stress could render them less able to communicate with patients, make it more difficult for them to deflect and deal with

aggression, and render them less capable of coping with the emotional consequences of aggressive encounters. The role of stress when dealing with aggression has been examined in chapter four.

Berkowitz's model invites us to think of aggression as being elicited by something outside the individual, either in the environment or in the shape of another person. Within this framework it is possible to locate the influence of the nurse-patient interaction and to hypothesise that the nurse may either aggravate or ameliorate the aggressive process. In addition to this, Berkowitz claims that emotions are pre-cognitive. Whether or not this is the case, it raises the question as to whether the nurses' responses to aggressive patients are consciously determined and whether or not they are based on notions about the relative effectiveness of various response strategies. This issue is examined in chapters 2 and 3.

In summary, the literature on frustration and negative affect is important in several ways. Firstly, it raises the question of nurses' awareness about the role of frustration in relation to aggression. Secondly, it suggests that nurses are likely to be suffering from negative affect and stress because of the circumstances surrounding their role, and that this in turn is likely to have repercussions for their ability to handle aggression. Thirdly, the model locates the source of negative affect in the environment rather than the individual, thus incorporating the influence of the nurse-patient interaction in the genesis of aggression. These issues have been taken up in chapters three, four and six.

Attributions and the Aggressive Response

The theory of cognitive labelling suggests that the way in which a person interprets events plays an important role in determining how he or she will react. The premise of cognitive labelling is that emotions are the product of a physiological state of arousal which is explained and labelled by cognitions. In terms of aggression, the relevance of the theory lies in its explanation of the origins of anger. Anger is thought to arise when an individual becomes aroused and then

attributes the arousal to some anger-related cognition, such as the perception of provocation. This notion was tested by Schachter and Singer (1962), who induced physiological arousal with drugs and then manipulated the cognitions of aroused subjects. They found that subjects labelled their arousal as discrete emotions according to the manipulated cognitions. That is, when they were given reason to be angry they labelled their emotions as that of anger, and when they were given reason to be sad they labelled them as sadness, and so on.

The original cognitive labelling approach has been developed by a number of different researchers, most notably by Zillmann and his colleagues. In 1978 Zillmann developed the idea of excitation transfer. The principle of excitation transfer is that irrelevant arousal may be transferred to a provoking situation, thereby intensifying any feelings of anger which had been associated with that situation in the first place. The temporal arrangement of events in excitation transfer is absolutely critical to the process. Some time, but not too much, must intervene between the first (irrelevant) source of arousal and the second (emotional) event. If too much time elapses, the excitation will dissipate. If not enough time elapses, the aroused person will still link their feelings to the first source of arousal and "know" to what it is attributable. Bryant and Zillmann (1979) have also shown that once arousal has been labelled as anger, it can influence aggressive behaviour far beyond the time when the original arousal has subsided.

Zillmann (1978) explains the notion of excitation transfer in the following way: "When are such effects most likely? First, they are most likely to occur when we are unaware of residual arousal - a common event as small increases in arousal are difficult to detect subjectively. Second, they are most likely to occur when we recognise the presence of arousal but attribute it to events occurring in the current situation". It is easy to imagine a situation in hospital where excitation transfer might occur. The stress of being in hospital and dealing with illness is very arousing - a stress which is probably repressed from consciousness by patients, relatives and staff. In addition, there are all the daily hassles associated with being a patient or a member of staff in the NHS - long

waits, shortages of staff and other resources, and so on. Given these background stressors, the arousal levels of all concerned is likely to be relatively high. Within such a context it is possible to understand how the nurse not coming back to see to you when she said she would, or waiting for hours in Accident and Emergency, might lead to aggression.

The literature has addressed a number of issues in relation to the notion of cognitive labelling. First, anger is assumed to intervene between arousal and aggression, even though anger is not independently demonstrated by any of the studies which support it. It is this issue that Berkowitz (1989, 1992) addresses and to which we will shortly return. Second, several studies have shown that certain types of arousal energize happy behaviour rather than aggressive behaviour. Bandura (1973) has argued that arousal produced by joyful experiences makes people feel happy, even with people who reported feeling angry before the experiences. Baron and Ball (1974) found that subjects who had been made to feel angry by a research confederate were significantly less hostile and did not retaliate so much once they had been exposed to humorous cartoons. In addition, Baron (1978) found that sexually humorous films inhibited aggression. There is good reason to suppose, then, that certain types of arousal actually inhibit aggression. This can be linked to Zillmann's claims about the sources of "irrelevant arousal". Clearly not all arousal can be confused with feelings of anger.

As mentioned above, the central assumption is that the experience of anger intervenes between a state of arousal and aggressive behaviour. Berkowitz (1983, 1989), however, argues against this by suggesting that an individual does not create an emotional experience in the "deliberate and thoughtful way which attribution theorists describe. Emotion, using Leventhal's model (1980), is a rapid, involuntary, and quickly developing process.....Anger as a conscious experience does not cause aggression. The person does not have to label their state of arousal in order to experience it as anger - the anger is independent of the person's awareness of it" (Berkowitz, 1983).

In summary, the attribution and cognitive labelling literature is relevant to this thesis in two ways. First, it raises the question of how nurses' explanations relate to aggressive incidents. Does the way a nurse explains aggression play a role in how she reacts to is, and, if so, what effect does it have? Secondly, what are nurses' theories about the causes of aggression? Do nurses think of aggression as a pre-cognitive event which cannot be controlled, or do they believe that the individual's cognitions play a role in his or her aggression and can therefore be influenced? Certainly, the nurses' theories about this issue have serious implications for the way in which they deal with aggression. This issue will be addressed in the chapter on nurses' attributions (chapter 5).

Social Construction of Anger

Averill (1980, 1982, 1983) has described emotions as socially defined and constructed syndromes made up of affect, cognitions, and physiology. Averill's social constructivist model rests on four assumptions. First, emotions are responses of the whole person, including physiological components, expressive reactions, cognitions and subjective experiences. Second, emotions are integral experiences which cannot be broken down into their constituent parts. Third, the rules that govern emotions are primarily social. And, four, emotions have an adaptive social function. The novel component of this model is that if emotions are to be understood at all they should be examined in their social framework. In addition, Averill is one of the few to suggest that anger can be positive and adaptive.

The idea that emotions are constructed in a social context is a powerful one, because it suggests that emotions are the product of social rather than physiological evolution. In its turn, this has implications for how aggression is evaluated differently in different cultures, and this is particularly the case with non-physical forms of aggression (Kornadt, 1974). Within this model aggression is expressed and interpreted interpersonally and the victim has to attribute to it an aggressive motive, otherwise it will have a different meaning.

Nurses have to make subjective judgments about whether or not certain behaviours are normatively appropriate: these norms are derived from the social structure surrounding the nurse, both at the time and also from previous experience. This observation leads to several important questions. First, what do the nurses consider to be aggressive behaviour? Second, what do the nurses consider to be appropriate responses to aggression? And third, how easy is it for them to make these judgements? Answers to these questions will be presented in chapters two and three.

The Role of Alcohol and Drugs

There is a large body of research on the effects of alcohol on aggressive behaviour, but surprisingly little on the role of either illegal or legal drugs. Meyerscough and Taylor (1985) point out that there is only anecdotal evidence to link drugs, such as heroine, with increased aggression. However, there are a large number of experimental studies which have linked alcohol to aggressive behaviour.

Subjects who have been given substantial quantities of alcohol in the laboratory are subsequently more aggressive than subjects who have not had any alcohol or who have been given a placebo (Shuntich and Taylor, 1972). The effects of alcohol also seem to vary with the dosage consumed. Subjects who are given smaller doses of alcohol will become increasingly less aggressive during the course of the experiment, whereas subjects who are given larger doses of alcohol become more aggressive during the course of the experiment (Taylor and Gammon, 1975). Alcohol also appears to sensitise individuals to perceived threats and to enhance the effects of social pressure either to be more or less aggressive (Taylor and Gammon, 1976).

Taylor and Leonard (1983) suggest that alcohol works directly on the Central Nervous System (CNS), thereby disrupting normal cognitive functioning. This renders the inebriate less able to attend to subtle cues in the environment, although his or her ability to focus on dominant cues remains. According to this model, alcohol will facilitate aggression when instigational cues are

strong, such as provocation, peer support for aggression, and so on, and inhibitory cues are weak, such as subtle changes in the victims behaviour. However, when strong inhibitory cues are present, such as a clear statement of an anti-aggression norm, alcohol can reduce aggression. It also appears that alcohol can affect the inebriate's ability to decode affective cues from other people (Borrill et al., 1987), and that this inability could contribute to aggressive behaviour because of misattributed emotions. In addition, pain and distress cues from a victim can also inhibit aggression, and if the inebriate is less able to decode these cues this is unlikely to happen.

Nurses often have to work with drunk patients, alcoholics, drug addicts and with patients displaying the side-effects of prescribed drugs. As Geen (1990) points out, alcohol mediates between the environment and aggression, but other variables such as the circumstances and cognitions need to be taken into account. For a busy nurse, however, this may be difficult to achieve. For example, giving an alcoholic a clear understanding about the medical treatment they are about to receive may seem to be a fruitless task in a busy schedule. However, failing to do so may lead to aggression in much the same way as it would in the case of a non-alcoholic patient. In this way, the nurses' understanding of the causes of aggressive behaviour play a crucial role in their ability to deal with it, and this issue will be examined in the current research by finding out what nurses believe to be the most common causes of aggression (see chapter four).

The Physical Environment

Other variables which are thought to evoke an aggressive response may be found in the physical environment. For example, Mueller (1983) has proposed that environmental stressors are linked to affective aggression in four ways: they produce arousal, stimulus overload, negative affect, and they interfere with on-going behaviour. Environmental stressors include heat, noise, crowding, air pollution, violation of personal space and the experience of physical pain. A large number of studies attest to the fact that such factors can predispose people to react aggressively (Baron,

1972; Rule et al., 1987; Glass and Singer, 1972; Geen and McCown 1984; Griffitt and Veitch 1971; Rotton et al. 1979; Zillmann et al. 1979; Berkowitz et al. 1983).

The issue of environmental stressors is particularly relevant to hospitals, where individuals are often exposed to unattractive, overheated surroundings which are noisy and overcrowded. Moreover, patients are often in pain. All of these situational variables can predispose individuals to aggression. Once again, the relevance of this to the research in hand lies in nurses' understanding of the role of environmental stressors in eliciting aggression. This issue will be addressed by asking nurses to express their understanding of what causes aggression (chapters four and five).

Summary of the Causes of Aggression

So far the review has presented psychological studies which have examined the causes of aggression. Some of the research is relevant because it provides theoretical and empirical models which may help nurses to develop a broad and balanced view of what causes aggressive behaviour in hospitals. This is particularly pertinent to the training scheme described in chapter six. In addition to this, some of the research has been used to generate new hypotheses which will be tested during the course of this thesis.

The next section of the review will turn to examine the psychological aggression literature in terms of what inhibits aggressive responses. Such models may be of direct practical use to staff who have to deal with aggressive individuals.

Inhibition of the Aggressive Response

The psychological literature shows that certain factors inhibit aggression, such as fear of retaliation, pain cues from the victim, apologies, and so on. Most of this research has been conducted in the laboratory rather than the field. The literature will be reviewed below because

(a) it provides some empirical basis for the prevention and control of aggressive incidents which can be tested in the field, and (b) it will be useful to compare the laboratory based findings with the nurses' own experiences of effective methods of handling aggression (see chapter three).

Even if an individual is angry and about to become aggressive there seem to be a number of restraining influences. For example, if the victim shows signs of distress, such as wincing or crying out, this can decrease the aggression expressed by a provoked subject (Geen 1970; Baron, 1971). However, other studies have shown that signs of suffering from the victim actually increase the expressed aggression (Feshbach et al., 1967). One explanation of these contradictory findings comes from Bandura (1971), who found that the intensity of the provocation is correlated with the effects of the victim's pain cues: those subjects who are intensely provoked by the victim become more aggressive towards them when they show distress, while subjects who are mildly provoked become less aggressive when the victim shows distress.

Another explanation for the differential response of aggressors to victims' signs of suffering is provided by Baron (1977), who has proposed that empathy for the victim will decrease aggression. In this model it is proposed that an empathic response is more likely if the aggressor sees the victim as similar to him- or herself (Feshbach and Roe, 1968), and therefore pain cues produced by a victim who is similar to the aggressor will be more inhibitory than pain cues produced by a victim who is less similar to the aggressor. A number of training programmes have been developed which utilise the role of empathy in inhibiting aggression. For example, Feshbach and Feshbach (1982) taught aggressive children to be empathic towards their victims and found that this reduced their aggressive behaviour. The question to be addressed in relation to this thesis, however, is whether or not the expression of empathy by nurses will inhibit aggression. This has been studied in chapter four.

Fear of punishment or retaliation is another factor which can sometimes inhibit aggression (Dengerink, 1976; Shortell, Epstein and Taylor, 1970). It seems to be helpful if punishment for aggression is intense, prompt and probable (Bower and Hilgard, 1981), but only rarely are all three conditions met. In the case of hospitals, nurses represent authority, and are therefore more likely to be seen as occupying a powerful position in relation to the patient or relative. In spite of this, the statistics show that this is not sufficient to inhibit the high levels of aggression against them.

It also appears that aggressive responses may be influenced by the aggressor's understanding of the situation, although this has only been shown indirectly by examining retaliatory aggression. One of the most influential mediators of retaliatory aggression is the victim's interpretation of the intent of the provoking person. Zillmann and Cantor (1976) reported that an attacker who is seen as having an "absence of malice" is less likely to become a victim of retaliatory aggression. In addition, Zillman and Cantor found that excuses given prior to provocation not only inhibited anger, but also reduced the tendency to retaliate against the provoker. Johnson and Rule (1986) studied the effect of the strength of excuses, either before or after provocation, on physiological arousal as well as retaliatory aggression. They found that the excuse only mattered if it was given prior to provocation, when a strong excuse was more effective than a weak one. The model proposed by Ferguson and Rule (1983) also emphasises the role of cognitions in the generation of aggression, with individuals making extremely complex judgements about what kind of behaviour 'deserves' an aggressive response. If cognitions do play a role, it is clearly important within the hospital context to keep both patients and relatives informed about everything that is happening or may happen to them so that there is no room for misunderstanding. This has been taken up in the training chapter.

Several other strategies for dealing with aggression have been examined empirically. For example, humour, apologies and even mild sexual arousal have all been found to be incompatible with an

aggressive response (Baron and Richardson, 1991). Once again, this is particularly relevant to the research in hand, where nurses were asked to rate the effectiveness of a number of different strategies for dealing with aggression. Amongst the strategies examined are the use of humour and placatory responses.

In summary, a number of factors seem to inhibit aggressive responses, such as fear of retaliation, the use of humour, excuses, apologies and mild sexual arousal. During the course of the current research the strategies that nurses have found to be most effective when dealing with aggression - those that inhibit it - will be examined. This will provide an opportunity to compare them with the above.

The External Validity of Laboratory-based Research

The psychological literature on aggression is largely based on laboratory research, a fact that has caused considerable controversy over the last few years. The validity of such research has been repeatedly called into question by a number of authors, who claim, amongst other things, that laboratory findings have little validity outside the laboratory. Others have claimed that laboratory research plays a valuable role, and have pointed to weaknesses in the methodologies employed in applied settings.

Aggression is a difficult phenomenon to study because it is both sporadic and because people may be ashamed of it, failing to acknowledge that they have been involved in aggressive incidents. Moreover, physical aggression is punishable by law, providing yet another motive to hide it. To circumvent these problems researchers have tried to study aggression within the laboratory where causal hypotheses can be clarified and tested, independent variables can be isolated and manipulated, and the effects on dependent variables can be easily and accurately measured. However, there are serious methodological problems with laboratory studies of aggression (Archer, 1989).

Laboratory based researchers need to choose an appropriate aggressive response which can be used to measure aggression, and they need to define appropriate conditions which will lead to the response. Baron (1977) has categorised the measures of aggression used in the laboratory as those that involve verbal reports about and evaluations of the provoker, the attacking of inanimate objects (such as bobo dolls); the use of toy guns, sponges or bricks; and the administration of pain to another (such as through the medium of the Buss machine, 1961). Konecni (1984) describes laboratory measures of aggression as "essentially direct or indirect physical aggression, aggression towards inanimate objects, and direct or displaced verbal aggression". He goes on to say "Many of the....dependent variables are so esoteric as to strain both credibility and the logic that links them to the theoretical ideas being tested in the experiment in question". In response to this criticism, Berkowitz and Donnerstein (1982) argue that it is the meaning that subjects impose on their behaviour which determines the laboratory measure's external validity..."Whether they are punishing someone else with electric shocks, unpleasant blasts of noise, or unfavourable evaluations, they realise that they are deliberately injuring this individual. Interpreting their responses in this manner, they might well act toward the target person much as they act towards other possible victims in the outside world" (Berkowitz, 1989b). This, of course, is particularly true of those studies involving deception, where, for example, the subject is led to believe that he or she is applying increasingly painful electric shocks to an experimental confederate, who often cries out in 'pain' during the course of the experiment. In spite of this, it has been argued that by taking part in an experiment the subject will be influenced by the experimental situation, and that this could, for example, undermine the subject's belief in the 'pain' which he or she is 'inflicting' (Orne, 1968). This ties in with the criticism that subjects are complying with the demand characteristics of laboratory studies. That is, they are complying with what they expect is required of them, and that they suspend their disbelief for the duration of the experiment. To meet this criticism, Berkowitz and Donnerstein (1982) manipulated subjects' understanding of the reasons for a laboratory experiment without effecting their aggressive responses.

It has also been argued by the defenders of the laboratory method, that individuals who are aggressive in the laboratory are also aggressive outside it; and therefore that the findings generated inside the laboratory are likely to be similar to those that would be obtained outside it. For example, Gully and Dengerink (1983) and Wolfe and Baron (1971) found that individuals with a prior history of violent behaviour outside the laboratory tended to choose higher levels of aggressive response in the laboratory. It has also been argued that laboratory measures of aggression are correlated with other measures of aggression, derived from questionnaires and rating scales (Berkowitz and Donnerstein, 1982). However, when Edmunds and Kendrick (1980) tried to validate several questionnaire measures of aggression using the Buss aggression machine, they found no relationship between the two types of measures.

A number of authors have called for a more interactive approach to the study of aggression, which can only be obtained in natural settings. By examining aggression as it occurs in the real world it would be possible to study both the social relationships of participants, as well as the setting, rather than seeking to isolate the person or the situation in the laboratory (Hinde, 1979; 1983). Archer (1989) has also criticised laboratory measures because they are isolated from the "complex web of social structures, relationships and interactions that provide them with a setting which must be considered to understand their meaning".

The methods that can be used in field or applied studies are outlined by Archer (1989). He defines three types of research method: indirect (such as surveys, reports about individuals, and so on); direct (such as questionnaires about the self, interviews, diaries, and so on); and observation. Clearly, although observation can provide very rich material it is extremely difficult to study aggression through observation because it is so sporadic. The direct and indirect methods suggested by Archer can, however, go some way towards providing a description of the circumstances surrounding aggression, and the dynamics of the relationships in which aggression develops.

It is clear from the above that the debate about the external validity of laboratory versus field research into aggression is far from resolved. However, it is helpful to keep in mind that laboratory research does help to clarify theoretical issues by "defining the independent variables and the intervening processes, and by linking both to aggressive outcomes in theoretically meaningful ways" (Geen, 1990). If, as Berkowitz (1989b) suggests, the limitations of laboratory research are kept firmly in mind, then it is possible to extract what the laboratory has to teach us about human aggression and to test this in applied settings. Indeed, the theoretical approach taken in this thesis has been partially informed by laboratory findings, while seeking to extend it to an applied setting.

Summary of the Review on Psychological Studies of Aggression

Some of the psychological studies of aggression have been reviewed with the aim of establishing their relevance to the research in hand. The causes of aggressive behaviour have been examined, keeping in mind how this might help to increase nurses' understanding, and also to introduce theoretical ideas within the context of the thesis. A number of themes have emerged, such as the need to examine the role of responses to aggression rather than the production of aggression, the role of stress and nurse-patient communication; the actual effectiveness of various strategies designed to defuse aggression, and the role of nurses' theories, attributions and personality in the development of aggression.

In addition to this, the validity of field versus laboratory based research has been examined, and it has been concluded that laboratory based research may generate ideas which can be tested in applied settings. Moreover, this sets the scene for the current research, which relies largely on self-report material.

The review will now move on to examine the applied research which has been done into the problem of aggression at work.

(iii) **The Social Administration of the Problem of Aggression at Work**

In 1983, the Health and Safety Commission set up a committee to study violence which ultimately led to the establishment of the Department of Health and Social Security (DHSS) Committee on Violence to Staff in 1987. Both committees were charged with integrating the growing body of research and recommendations which was coming out of the personal social services, the NHS and the social security departments, all of which had been working at both a local and a national level to find out more about the problem of aggression at work.

The DHSS committee was chaired by Lord Skelmersdale and its stated aims were to assess and disseminate the initiatives being taken in the field of violence against staff, to promote communication between national and local initiatives, to advise government about matters relating to violence to staff, and to review the need for centralised guidance in combating the problem. Four sub-committees were established to examine in more detail issues relating to: 1) reporting systems and standards 2) training for managers and staff 3) home visiting, and 4) victim support and counselling. Overall, the DHSS committee stressed the desire to develop local awareness and strategies for assessing, reporting, and preventing violence, to encourage them to develop clear strategies for responding to violence when it did occur and to develop methods of support for victims after it had occurred. The committee summarised concrete guidelines on how to implement these changes in a report (DHSS, 1988).

The committee set up by the Health and Safety Commission in 1983 had, meanwhile, been attempting to find out what positive action could be taken to help employees, and to this end had commissioned research from the Tavistock Institute of Human Relations. As a result two reports were published (Poyner & Warne, 1986; 1988). The 1986 report defined the area of research and made some preliminary recommendations to help employers take positive action. As the report stated:

> "It is because the problem of violence is often associated with the main purpose of an organisation - providing a service to the public - that the task of prevention or of control is seen as an integral part of the management of a service or enterprise".

The final report (1988) emphasises the need to utilise a systematic approach to the design and monitoring of preventative measures. It is based on nine studies of nine different employment sectors, namely: the personal social services; education; London underground; buses; British Rail; London ambulance service; community nursing; housing; and, finally, the brewing industry. Poyner and Warne made use of research which had already been undertaken in each of these sectors (Department of Transport, 1986; Hope, 1985; National Association of School Masters/Union of Woman Teachers, 1986; Rose, 1976; Strathclyde Social Work Department, 1986; The Contemporary Violence Research Centre, 1979). They used the results from these reports together with their own observations to illustrate good practice in the prevention and management of violence.

The Poyner and Warne (1988) report presents an elaborate model of the factors that influence the outcome of aggression. The model postulates that the assailant's characteristics (personality, expectations, age), the employee's characteristics (appearance, age, sex, personality), the work environment (job location, working alone, waiting times) and the context of the interaction (caring, giving a service, asserting control, money transactions) all combine to influence the likelihood of an assault occurring. The model is used to guide employers through a variety of fundamental rules which should underpin the prevention of aggression against staff. Because the report is aimed at a broad range of employment sectors it lays down very general guidelines for the prevention of aggression against staff. These include recommendations that employers should recognise that there may be a problem, make an effort to record and classify incidents, design prevention strategies, implement them and then monitor whether or not they work. Poyner and Warne go on to suggest what employers should focus on when developing a preventative policy.

For example, they should become aware of the work environment and whether staff are being asked to undertake dangerous tasks, they should undertake to train staff, offer personal protection and warning systems, and so on. The message is similar to that of the DHSS committee. They both recommend that organisations should become aware of any problem that does exist and should seek to solve it through changes in the organisation, working practices and through training.

As a direct result of the work done by Poyner and Warne, the Health and Safety Executive funded the publication of an 11 page information booklet called "Violence to Staff" (Health and Safety Executive, 1989), which was widely distributed throughout the country and many employment sectors. The booklet addresses the issues of who is at risk of assault, why staff should be concerned with this issue, and steps that can be taken by employers to help prevent assaults on their staff. The Poyner and Warne formula is distilled in this little booklet into seven steps: 1) find out if there is a problem 2) record all incidents 3) classify all incidents 4) search for preventative measures 5) decide what to do 6) put the measures into practice, and 7) check that the measures work. The distribution of the booklet was an attempt to raise awareness amongst both staff and management about issues of aggression at work, and it also provided a very basic point of departure for those organisations which were interested in prevention. There has not been, however, any research to monitor the impact of the booklet.

Throughout the late 1970's and 1980's, then, there has been a growing awareness of the problems that some staff have when dealing with members of the public as part of their duties. Unions, employers and government have pursued initiatives in an attempt to increase awareness and to provide crude guidelines from which other groups can derive their own policies. The more influential of the research surveys which underpinned the recommendations of the various committees described above will be examined below in relation to the social services and the

NHS. Although other research has been carried out within the sectors of public transport, education and the brewing industry, the field is too wide to cover in this review.

(iv) Research into Aggression in the Social Services

The research reported in this thesis has been designed to look at how nurses can be trained to prevent and deal with aggression. However, much of the research into aggression at work has examined the problem within the context of the social services and the mental health sector of the NHS, with very little research within the context of general hospitals. Because of this research bias, this introductory chapter includes reviews of the work done within both the social services and mental health hospitals.

In what is often referred to as the "personal social services", 300,000 staff are employed in the departments of local government. The authorities manage numerous offices and provisions, ranging from children's and community homes to day and residential accommodation for the elderly, all of which are inspected by the DHSS. The DHSS (1988) has identified four common denominators among the employees who staff the diverse offices of the social services: they all have contact with the public; they work either from official premises or in the community; they are perceived as figures of authority by the public; and they are bound by rules of confidentiality.

The most comprehensive research on violence against social workers was conducted by Rowett (1986). This research used a quasi-experimental approach consisting of three stages. In the first stage, all of the 132 local authorities in England, Wales, Scotland, and Northern Ireland were contacted by post. These authorities employed a total of 68,000 social workers. The directors and their senior staff provided details about the levels of violence which they believed to be experienced by their staff. Thirty-one per cent of the authorities which were approached responded to the postal survey, representing over 25,000 social workers. In the second stage of the research, all the social workers employed in one county were asked to complete a postal

survey, and out of the 728 social workers approached 450 responded (62%). In the third and final stage of the research, 120 of the social workers who had returned questionnaires from the single county were given in-depth interviews. They were split into two groups - those who had been assaulted and those who had not. The two groups represented fieldworkers as well as residential workers, and were matched on variables such as age, length of work experience, qualifications and geographical location of work. The survey was restricted to those incidents of aggression which led to physical harm and was not designed to examine any other type of aggressive incident.

The figures for the national survey were provided by the managers of the local departments using such resources as official records of incidents, whereas the figures for the survey of the single county were provided by the social workers themselves. The national survey revealed that 90 social workers were physically harmed by clients every year. This is equivalent to 1 assault per 259 social workers. Over the period 1978-1982, 2% of social workers were physically assaulted. Metropolitan workers were more likely to be assaulted than shire workers (1:130 as opposed to 1:434), and residential workers were more likely to be assaulted than field workers (1:228 as opposed to 1:372). The survey of a single shire county revealed that 25% of the social workers had been attacked between 1987 and 1982. This figure does not match the national figure of 2%, and could point to the under-reporting of incidents over this period, with social workers not making official reports about the less serious attacks and injuries. There was certainly a wide variation within the social service departments in the methods they used to record, collate and disseminate the data. Some departments admitted that they had no means of obtaining data on assault statistics.

The single county survey obtained information on the situational factors which the social worker victim considered important to the attack, the characteristics of the assailant, and the personal characteristics of the victim. The social workers were asked to express their beliefs about what

characterised the "typical" assailant, where violence usually occurs, what types of violence are typically involved, and the sort of person who is likely to be assaulted.

Rowett (1986) found that 89% of social workers had no clear memory of the events leading up to the assault which they reported to him. In 42% of the reported incidents, social workers thought it had been preceded by verbal abuse, and in 25% of cases by verbal threats. In 10% of the cases social workers remembered the assailant picking up a weapon shortly before the attack and in 19% of cases the assailant either damaged property, blocked the exit to the room, or was considered to be in the middle of a psychotic episode. Some 30% of the social workers attempted to reason with the would-be assailant, and 5% admitted to being abusive to them. The circumstances (or "precipitants", as Rowett calls them) most commonly associated with attack were when the social worker was upholding agency rules (25%), or acting as an agent of the court (10%). At the time of the assault, 92% of the clients were considered by the relevant social worker to have been experiencing a significant life stress, 60% of them had been known to the social worker for more than six months, and 47% of the relationships were rated as either "excellent" or "good" at the time of the attack. Only 9% of the clients were considered to be under the influence of drink or drugs, while 21% were considered to be mentally ill.

The majority of the assaults were in a one-to-one situation, there were no on-lookers, and there was no outside help available to the social worker. In over 86% of cases the assault took place in what Rowett has called the client's "primary" or "secondary" territory, and in only 9% of cases did an assault take place on the social worker's territory. The most common kinds of assault were punching (34%), using a weapon (13%), pulling (13%) and kicking (14%). Over 50% of social workers felt the incident had been "completely unpredictable", and yet 70% also felt that it had been "completely understandable". In 40% of cases the social worker felt that the incident had been entirely the client's fault, while only 0.3% felt it was their own fault, and 56% felt that both

they and the client were partly to blame. Even though the social workers were fully trained, over 56% of them felt the need for extra training to help them deal with future incidents.

The social workers who were interviewed were asked about their beliefs in relation to a variety of issues. In particular they were asked which characteristics they attributed to social workers who had been assaulted. These stereotypes were obtained by asking the social workers to rank-order eight descriptive accounts covering each of five topics. The interviewees believed that assaulted social workers were more provocative, incompetent, authoritarian and inexperienced. They were also thought to confront and challenge clients unnecessarily and to seek out risky situations. In addition to this they were believed to be more demanding, insensitive to the cues preceding dangerous incidents and less flexible. What is of particular interest is that the social workers who had been assaulted shared these beliefs with the social workers who had not been assaulted, while also claiming that the incident which they had reported had not been their own fault. Moreover, all social workers completed a test of hostility, and not one of them was outside the normal range, nor were there any differences between the assaulted and the non-assaulted workers. In summary, the stereotype of the assaulted social worker is extremely negative, and may account for why up to 20% of the social workers in this sample did not report incidents to the proper authorities. Breakwell (1989) has also suggested that it may go some way towards explaining why managers failed to provide proper support for victims, as was the case in 33% of the cases reported to Rowett.

Rowett's data provided a comprehensive survey of the problem of aggression within the social services at a national level. However, a few local authorities felt the need to look at what was happening in their particular district. One of the most influential of these local research projects was undertaken by Surrey Social Services Department, the findings of which are reported in "Safe and Secure in Surrey?" (Surrey Social Services Department, 1987). Although Surrey County Council was not the first local authority to examine the issue of violence towards its staff it was

unusual in that it was the first to approach all of its front-line employees who had to deal with the public as well as their managers and supervisors. In addition, it adopted a much wider definition of violence than had been used in other studies, including verbal abuse and threats as well as physical aggression. The findings from this study provided general support for Rowett's findings.

The Surrey research team concluded that violence was more prevalent than had been thought - occurring within all workbases, in all types of job, to all age groups and to both sexes. Violent incidents seemed to occur in certain work contexts more than others, particularly community homes for the elderly, and in hostels and day centres for the mentally ill and handicapped (SSSD, 1987). The most vulnerable staff overall were those who were in constant contact with clients, such as social workers and care staff. Surprisingly, it was concluded that field social workers are less at risk than residential workers. This finding is particularly interesting because much of the interest in the subject had been sparked by the violent deaths of a number of field social workers. It appears, therefore, that although residential workers experience a greater number of violent incidents, their consequences are less serious than those of an attack on a field worker.

Using a very different research perspective to any discussed so far, Millham, Bullock and Hosie (1978) examined 394 recorded incidents of violence over a 36 month period in four community homes. The authors examined the intakes to three large secure special units in the child care system (with an average annual turnover of 339 boys per unit). Three variables were identified and examined: first, concern about troublesome behaviour which had been expressed to the research team by members of staff during interviews, second, the proportion of boys defined as violent or aggressive during assessment, and third, the number of violent incidents of all kinds reported in the school records.

Millham et al. (1978) found the overall incidence of violence in the units was low, with most assaults taking place between boys, and with attacks on staff a rare occurrence. In fact, it was felt that staff were more likely to assault the boys than vice versa. They also found that the levels of staff anxiety about violence were unrelated to the actual incidence of aggressive behaviour or the number of violence-prone boys in the institution. On the basis of this it was postulated that staff ideas about violence reflect their own underlying fears and insecurities rather than the external reality.

Evidence was also found to suggest that certain members of staff were more likely to be involved in violent incidents than others, that staff were responsible for provoking violence in over 66% of the incidents recorded and that they tended to be selective about what they put into any formal reports following an incident (Millham et al., 1978). Moreover, it was felt that nearly all the incidents of staff-boy conflicts which did take place would have been entirely avoidable if the staff had received training on how to deal with potentially difficult situations.

The impact of the labelling of the boys was also examined during the course of the study and it was found that 50% of the boys who were involved with an incident of aggression went on to be involved in more incidents, and that staff were labelling boys as "trouble makers" or as "aggressive", even before they entered the institution. Millham et al. (1978) concluded that such labelling could be a contributory factor in repeated bouts of violence, with the labelling of boys acting as some sort of prophesy to which the boys conformed.

Further data on incidents of aggression in the social services were gathered by Brown, Bute and Ford (1986). They carried out a postal survey of 560 social staff in Wessex in 1979. From the 60% of staff who replied they found that 29% had been physically assaulted at least once, and 40% had been threatened at least once. In total, 53% of respondents had, on at least one occasion, been either physically threatened or their families, close friends or possessions had been subjected

to violence over the previous three years. Brown et al. (1986) concluded that the residential workers in their sample had expressed a strong desire to receive more guidance from management and for the provision of training. It was also felt that a pattern of attacks had emerged in relation to field social workers, in which they were far more at risk when placing children in care or when sectioning clients under the Mental Health Act than when performing any other duty.

A growing number of social services departments are becoming aware of the need to develop local policies to help their staff cope with the problems of aggression at work. This is a change from the attitudes and policies of the late 1970's. As Brown, Bute and Ford (1986), point out there was very little guidance available for staff ten years ago and although the situation is improving, there are still a number of authorities which do not recognise that there is a problem to be tackled. In his Bristol survey (Bute, 1979), Bute requested information about training provisions for staff, and found that not only was no training available, but that there was little management awareness that there was a problem. This impression was confirmed by the Wessex data, gathered in 1979. On the basis of this data Brown, Bute and Ford (1986) concluded that : "Training is crucial to the successful prevention of violence...but there is still insufficient provision for it".

In conclusion, research into the problem of aggression within the social services is interesting but limited. A number of large-scale surveys have been completed, some at the national level, others at the local level. These surveys have provided some descriptions of who is being assaulted, where and when. In addition Rowett's (1986) study has provided some data on what leads up to aggression, and attitudes towards social workers who have been assaulted. There is, however, a need to find out more about the role of the organisation and members of staff in the development of aggression, so that this information can be used to inform staff training and organisational change.

The review will now turn to look at the research done into the mental health sector of the NHS.

(v) Research into Aggression in the National Health Service

The NHS is three times larger than the personal social services. It has over one million staff working for 200 autonomous health and special health authorities in over 2,500 hospitals, other premises and in the community. Policies, guidance and funding are obtained from the Department of Health and Social Security (DHSS). Further health services are available from self-employed practitioners such as opticians, general practitioners, dentists and pharmacists. These self-employed practitioners contract themselves out to the Family Practitioner Committee and a vast majority of them work from their own premises and are responsible for their own staff.

It is within the context of this huge and sprawling structure that research has been conducted to establish the extent of violence to NHS staff at work. Unlike the social services very little survey work has been undertaken apart from the study described below (Health Services Advisory Committee, 1987), and it was not as detailed as the Rowett (1986) study already reported. There is, however, a lot of data about the problems of patient-staff violence in psychiatric facilities (De Felippo, 1976; Tardiff, 1989; Noble and Rodger, 1989; Fottrell, 1980). Apart from this some local health authorities have attempted to provide general guidelines for the management of violent patients, but once again, most of this literature deals with psychiatric patients. The Royal College of Nursing (RCN) has also been instrumental in encouraging local training courses for nurses who work outside the mental health service, and a training video became available in 1991. In addition, the Confederation of Health Service Employees (COHSE) has undertaken some research, but only on incidents of violence against ambulance staff. It has also issued a booklet for its members on the management of violent or potentially violent patients. In spite of these initiatives, however, there is very little empirical research on either the incidence or the nature of aggression against staff working within the NHS outside the mental health field.

Growing concern about violence within the Health Service led the Health and Safety Commission to set up a working party charged with assessing the extent of the problem and suggesting ways for coping with it. The findings from this questionnaire survey formed the basis of the HSAC (1987) report. Over 5,000 staff were approached from five District Health Authorities (Fife, Birmingham, Newcastle, Exeter and Croydon). Those staff not directly employed by the health authorities were approached through the appropriate bodies and included general practitioners and their staff, ambulance staff, consultants and senior registrars. Of those approached 3,000 returned their questionnaires, giving a 60% response rate. Violent incidents were broken down into four categories: those requiring major medical assistance; those requiring first aid; those involving threat with a weapon; and those involving verbal abuse. Interestingly, threat and verbal abuse were included because "...of their potential to escalate and because of the serious effect of prolonged exposure to threat and verbal abuse on staff morale and efficiency". This made clear from the outset that the committee regarded 'lesser' forms of aggression as a serious problem.

The survey revealed that 1 in 200 staff had suffered a major injury following a violent incident during the preceding year. A further 1 in 10 required first aid, 1 in 20 had been threatened with knives and broken bottles, and 1 in 6 had received verbal threats. Psychiatric facilities had higher rates of serious incidents than any other area of the health service, with 1 in 4 respondents reporting minor injury during the year. Similarly high rates of assault which required first aid treatment were reported in geriatric and mental handicap units (1 in 5). Within the general hospital the two danger spots were Accident and Emergency, where 1 in 2 staff were threatened and 1 in 5 required first aid treatment, and medical wards, where 1 in 4 staff required first aid treatment.

When the sample was examined in terms of occupational group, it was found that student nurses were by far the most vulnerable group, with as many as 1 in 3 requiring first aid treatment as a result of physical assault and almost 1 in 2 having been verbally abused. The other high risk

occupational groups were staff nurses, ambulance staff and charge nurses, of whom 1 in 5 required first aid treatment. In addition to this, 40% of ambulance staff had been verbally abused.

The survey revealed that staff were under-reporting incidents, as they had in the social services. In the case of major injury, 30% of incidents went unrecorded. This figure is startlingly high, considering that incidents within this category required major medical intervention to treat the injury resulting from the assault. In the case of minor injury 65% of incidents went unreported, and 69% and 82% of incidents went unreported in cases of threat with a weapon and verbal abuse, respectively. As Dr. Colin Mackay told the BPS Conference (1988) "Reported violence in the National Health Service has increased dramatically in recent years, although many people who work in the health service look upon it is an occupational hazard". Only 12% of staff who took part in the survey had received any form of training which could even be loosely connected with dealing with violence, and most of these were staff working in the mental health services.

The recommendations made by the committee are very similar to the guidelines which emerged in relation to the personal social services. The recommendations were subdivided into: the *working environment*, such as waiting rooms and reception areas with attention to lighting, space, noise, colour, and so on; *information systems and organisational procedures* such as, the flow of information between departments about patients, as well as the provision of information for patients about waiting times, and so on; *staffing* - ensuring that there are adequate levels of trained staff so that they are not over-worked or isolated; *training* - for all staff, not only those in high-risk areas; *policy* - the development of policy on what to do when violence does occur; *security* - including the use of personal alarms and panic buttons; *support for staff* after a violent incident, including such things as counselling and legal assistance; and finally, *police* - recognition of the role they can play. The committee stressed that these guidelines were, literally, guidelines, and that local authorities should undertake their own research to identify local needs using the Poyner and Warne booklet (1988) to guide them. Moreover, the report stated that "while

identifying problems and remedial action is largely for managers and staff within local health authorities, there is a need for central coordination of training provision. The health departments, the professional bodies, the NHS Training Authority and the HSAC have a role to provide a pool of information on the availability of effective training and relevant course material".

The report by the HSAC (1987) is the only large scale survey material available about aggression within the National Health Service. Unlike the social services, there is no information about what leads up to incidents, what circumstances surround incidents, how victims feel afterwards, the role played by the member of staff, and so on. Once again, as in the case of the social services, there is no research on the effectiveness of the guidelines even if they were implemented. In particular, there is no research with which to judge the effectiveness of staff training. However, the HSAC report does show that an unreasonably high number of NHS staff are being verbally or physically assaulted by members of the public, and that many incidents go unreported to the appropriate authorities. The guidelines produced by the HSAC are very like those advocated within the social services and seem to be based on encouraging local initiatives to define the local problem, to develop preventative policies and to monitor and assess their effectiveness.

The lack of research in the NHS in general can be contrasted to the intense research activity into the problem of aggression within psychiatric facilities. Although not of direct relevance to this thesis, a number of principles can be extracted from the psychiatric research. For this reason, a short review of the major research findings and issues that they raise will be presented below.

Aggression within Psychiatric Facilities

More studies of violence by psychiatric patients have been published in the past decade than in the previous century (Whittington and Wykes, 1991), but the results of this extensive body of research have produced contradictory and confusing findings (Haller and Deluty, 1988). Certainly, mental health workers have become more anxious about being physically attacked by patients

(Tardiff, 1984), and they are also resigned to the belief that such assaults are an "occupational hazard" (Soloff, 1983).

There is considerable evidence that assaults on staff have increased since the 1970's (Noble & Rodger, 1989; Adler, Kreeger & Zeigler, 1983). In fact, it is likely that the actual incidence of physical aggression by patients on staff is being seriously underestimated. Apart from the HSAC (1987) finding that, generally, NHS staff have a tendency not to report violent incidents, Lion, Snyder and Merrill (1981) compared the formal incident reports of assaults on staff working in several different psychiatric hospitals with the assaults noted in the daily ward reports and found that five times as many assaults occurred as were formally reported. The impression that violence is on the increase in psychiatric facilities has been confirmed by the register of violent incidents set up in the Bethlem Royal and Maudsley Hospitals in 1976, which shows a marked increase in incidents since its inception. However, in spite of the increase in violence, it is interesting to note that a number of studies indicate that between 90% and 93% of psychiatric patients are non-violent (Tardiff & Sweillam, 1979; 1982; Ionno, 1983) and that, therefore, most of the incidents are associated with a small minority of the psychiatric in-patient population.

The research into the problem of violence within psychiatric units can be associated with three aims: 1) to define the problem 2) to find out what characterises the aggressive patient, and 3) to identify the context associated with the assault. Perhaps the most common motivation of researchers has been to describe the correlates of aggressive behaviour in the hope that such knowledge will enable the mental health professional to predict aggression and so to prevent it from happening. Such research usually focuses on the patient, examining such variables as his demography, diagnosis, behaviour and so on.

The research which has examined the correlations between individual variables and aggressive behaviour has produced widely divergent findings. Rossi, et al. (1986) have pointed out that "the

accumulated results in the literature to date present inconsistent findings on just about every demographic variable that has been studied". In a review of the area, Haller and Deluty (1988) presented the research under six headings: age; race; gender; diagnosis; context surrounding the assault; and nature of the assault and injuries. Within these categories many of the findings are diametrically opposed to one another. For example, Fottrell (1980) found that females predominated in his physically assaultive patient group, while Tardiff (1981) and Tardiff and Sweillam (1979) found no difference between the sexes and Noble and Rodger (1989) found a preponderance of male aggressors in their sample. Some researchers have found that their sample are 'acutely psychotic' or 'manic' (Lion, Snydder and Merrill, 1981), while Ionno (1983) reported that a majority of his physically assaultive patients had a character disorder; whereas Fottrell (1980), Hodgkinson, McIvor and Phillips (1985) and Pearson, Wilmott and Podi (1986) noted that the majority of their assaultive subjects were schizophrenic.

Kay, Wolkenfeld and Murrill (1988a) developed a scale which measures overt aggression in the psychiatric population and subsequently analyzed the scale in relation to external variables in an attempt to find out what predicts aggression. They developed the 39 item Aggression Risk Profile (ARP) with which to "characterise the aggressive patient and to determine which personality variables can be used to predict future acts of aggression in order to arrive at an objective method for flagging high-risk patients". They believed that ultimately such information would lead to the implementation of the "prevention strategy" advocated by Katz, Cohen, and Stockman (1985) in their analysis of how to deal with psychiatric in-patient violence. The ARP combines demographic, historical and diagnostic variables in an effort to predict aggression, although, as Kay et al. (1988a) admit, it was beyond their scope to take account of contextual variables. This kind of research probably derives from Monahan's (1984) call for the development and use of "actuarial" techniques to assist in clinical judgements.[2]

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[2]Holt (1971) defined an actuarial prediction as one that uses objective data to make predictions using multivariate techniques.

Kay, Wolkenfeld and Murrill (1988b) found that aggressive behaviour was correlated with such factors as male gender, alcoholism and substance abuse disorder, and organic brain syndrome, and that it was characterised by anger, over-arousal and volatility. These findings are in keeping with some previous research (Rossi, et al. 1986; Tardiff and Koenigsburg, 1985; Tardiff and Sweillam, 1982). Using multivariate statistics, Kay et al. (1988b), found that the correlations between aggression, sex and psychiatric diagnosis were replaced by a number of other predictor variables, such as being younger, feeling hostile and angry, difficulty in delaying gratification and having been ill for fewer years. These findings conform to those made by Tardiff (1987) and Steadman, Cocozza and Melick (1978). In addition, Kay et al. (1988b) found that agitation and feelings of depression were also significant predictors of aggression.

There have been a number of criticisms of the approach adopted within the field of mental health towards the problem of increased violence. As we have seen, the emphasis is almost entirely on explaining events in terms of the patient. In other words, if general laws about the type of patient who will become violent are established, then such patients can be contained by applying "preventative strategies". There are several difficulties with this approach. First, it has to be assumed that general laws about an individual's behaviour can be described and then applied to all other patients. But the literature to date provides conflicting evidence about the correlates of aggressive behaviour. Second, the location of the problem within the patient means that little can be done to prevent violence except the application of strategies such as restraint, sedation or isolation. As Lion and Reid (1983) ask, when does the use of seclusion become a punitive exile and when is it 'therapeutic' and when does the use of anti-psychotic medication become a sedative for non-psychotics? And finally, the powerful influences of both the environment and the relationships between patient and staff are ignored.

Some researchers have moved away from trying to describe correlates of patient behaviour and have attempted to take the interaction between the patient and staff into account. Levy and

Hartocolliss (1976) found that nursing staff sometimes provoke violence, perhaps unconsciously, by the way in which they behave with patients. Depp (1986) claims that patient-staff aggression is clearly linked to transactions between them which precede the aggressive outburst - during the course of provoking transactions patients might be threatened with such things as seclusion, their requests might be denied or their privileges withheld. Often such measures are taken by nurses in an attempt to get the patient to conform to expected behaviours such as drug taking. Depp (1986) also found that aggression tends to occur in particular settings, such as emergency rooms, where "chaos and tension often reign and urgent needs meet limited resources". A number of studies confirm the finding that aggression occurs within certain settings, usually locked wards and admission areas (Fottrell, 1980; Lion et al., 1981; Hodgkinson et al., 1985). Lion et al. (1981) also found that of all patient assaults on staff, the largest percentage are seclusion or restraint-related.

These findings can be interpreted in two ways. Some researchers might suggest that the nurse withholds privileges because the patient has already become aggressive, or that only acute and aggressive patients are kept in locked wards, and that staff are therefore more likely to be injured when dealing with patients of that sort. There is, however, an alterative explanation of the findings. It could be that patients object to being kept in locked wards with staff who expect them to be "acting mad", and that they also object to being forced to take drugs, and to the multitude of rules that they are obliged to conform to when they enter psychiatric hospital. In other words, it is possible that the psychiatric patients are reacting normally to abnormal circumstances and interactions. This latter explanation moves the emphasis from the patient to the structure of the organisation and also places considerable importance on the interactions between staff and patients. Certainly, such an explanation allows far greater scope in terms of preventative strategies than does one which locates the difficulty solely within the patient.

Whittington and Wykes (1991) used a transactional approach to study the problem of violence in the Maudsley and Bethlem Royal Hospitals. Using Lazarus and Folkman's (1984) cognitive

theory of appraisal, they examined incidents of aggression in terms of the interaction between the victim, the assailant and the environment. Data on 100 patient-nurse assaults were obtained. The nurse victims were interviewed within 72 hours of the incident and an attempt was made to interview the assailants within the same time-span, though not always successfully. Following Lion et al. (1981), all wards were contacted on a daily basis to encourage accurate reporting of any incidents which resulted in "physical contact with an apparently aggressive intent". Interestingly, when Whittington and Wykes used content analysis to examine the nurses' interview material, they found that in over 60% of the incidents the nurses admitted that the patient had become aggressive when they were either prohibiting the patient from doing something (such as leaving the ward), or when they were trying to encourage them to do something (such as take their medication). In only 18% of the cases did the nurses cite mental illness as a cause of the incident.[3] The patients in the Whittington and Wykes study cited the major cause of their assaultive behaviour as "nurse-patient conflict" and a large number of them said that they had felt angry or frightened at the time of the assault.[4]

Drinkwater (1982) adopted a social learning approach and concluded in her review of the literature on violence in psychiatric hospitals that there was a "high probability that the numbers and content of staff-patient interactions plays an important part in developing and maintaining violent behaviour on psychiatric wards". If Drinkwater is correct, the increase in incidents of violence is not due to more violent patients, but can instead be linked to more violence-inducing staff-patient interactions.

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[3]In fact, Monahan and Steadman (1983) concluded that mental illness does *not* predict violence once controls have been applied for demographic variables such as age and sex, social class and life history.

[4]The fact that patients might become angry as a result of interactions with the staff is nicely illustrated in a study by Hope (1973), in which a 57 year old male patient with a mental age of 2.5 years became aggressive towards a new member of the nursing staff. Prior to the incident he had been withdrawn, but not previously violent. He did not have any close friendships, seeming to sublimate his affection through the medium of a tatty old teddy bear. For no apparent reason he took a dislike to the new nurse which culminated in a physical attack. A staff meeting failed to define why the patient had become aggressive, until "the meeting was on the verge of breaking up when the Nursing Officer said she had not seen the dirty old teddy bear lately...most of the nurses did not know anything about its whereabouts but the new nurse in question said that because the doll was dirty and unhygienic she had taken it away from him...q.e.d.".

In summary, most of the research into the problems of violence in the NHS is to be found in the literature on the psychiatric services. Researchers in this field have tended to examine correlates of aggressive behaviour in the hope that such knowledge will enable staff to predict violence and therefore to contain or prevent it. The research findings on the correlates of aggression are at best interesting and at worst contradictory and confusing. Moreover, this approach leads to prevention strategies such as sedation, restraint or seclusion. Research which has illustrated the role of staff in the antecedents to aggression has also been examined and it has been suggested that patients may sometimes become angry as the result of interactions with staff. This perspective leads to preventative strategies which include organisational changes and the enhancement of interactional skills in staff.

The role of the nurse in the development of aggressive episodes is also related to the literature on nurse-patient interactions. A brief review of this literature and its relevance to the current research is presented below.

(vi) Research into Nurse-Patient Interactions

Menzies (1960) stated "the core of the anxiety situation for the nurse lies in her relationship with the patient. The closer and more concentrated the relationship the more likely the nurse is to experience the impact of the patient's anxiety". If this is true, there is a considerable incentive for both the individual nurse and the nursing structure to maintain a distance between nurse and patient. In fact, this is partly borne out by a substantial body of research which indicates that nurses are seriously deficient when it comes to communicating with patients. Fabricius (1991) argues that the attempts to incorporate the nursing of the mind, body and emotions into nursing practice over the last years have occurred in such a way as to leave untouched many of the organisational defenses which are "used to avoid psychotherapeutic closeness with patients". What does the empirical literature tell us about the nature of nurse-patient interactions?

It appears that nurses, when asked, believe that relationships with patients are an important component of nursing care (Moult, Melia and Pembray, 1978; Field, 1984). In fact, nurses rate "talking with patients" as the second most importance nursing role out of a choice of ten (Anderson, 1973). Over 60% of nurses approached in general hospitals in Scotland said that they would like to be able to spend more time talking to patients, listening to them, and communicating in general.

Feedback from patients indicates that nurses do not manage to achieve what they would like to. A majority of the patients approached by Anderson (1973) said they felt frightened, lonely and confused while in hospital, and, in addition, over 66% of them reported being upset by discourteous staff and communication problems with staff. When Cartwright (1964) surveyed over 700 people who had been hospital patients in the previous six months, she also found that they were critical of the care which they had received. Sixty per cent of them said that they had had difficulty getting information from staff about their illness, treatment or tests, and 70% of them said they got no information at all from the nurses. Similar findings have been made by other researchers (McGee, 1961; Levitt, 1975; and Franklin, 1974), suggesting that patients are not satisfied with the communications skills of either doctors or nurses within general hospitals.

There is also a large body of evidence which indicates that nurse-patient interactions are limited both in terms of time and also content. As Chapman (1976) has concluded, nursing often seems to consist of routines based on physical skills and care, with little regard to psychological or emotional support. Much of the research lends support to this statement. The research in this area tends to be conducted using observational methods, taking recordings of interactions, and sometimes through the medium of interviews and questionnaires. In general, the researchers have developed increasingly sophisticated methods of recording, transcribing and analysing nurse-patient interactions. Macleod Clark (1981; 1982) found that nurses interacted with patients for an average of 1.1 minutes and that they spent less than 14% of their time with patients. Moult et al. (1978)

reported that when nurses are not undertaking a nursing task, their interactions with patients last for less than 60 seconds, and Adams and MacIlwraith (1963) found that less than 1% of a nurse's time was spent "communicating" with patients. Stockwell (1972) has also confirmed that interactions between nurses and patients are infrequent and of brief duration.

So what do nurses and patients talk about when they do talk - it may be the case that they don't spend long talking but that what they discuss is highly valuable? The literature, unfortunately, does not support this. Stockwell (1972) used interviews supplemented with observation and found that nurse-patient interactions tended to be centred around physical care tasks and that nurses tended not to spend time with patients unless physical care was needed. The nurses admitted to feeling guilty about the time they spent talking to patients as they did not regard such interactions as part of their work. This picture of interactions between nurses and patients being largely task-centred has been repeatedly confirmed (Moult et al. (1978); Faulkner, 1980; Macleod Clarke, 1982). Moreover, Melia (1981) has argued that student nurses are taught early in their training that their primary role is physical care, and that this forms the basis for the evaluation of their nursing skills.

Although it is the current trend when training nurses to encourage a more holistic approach to patient care which includes treatment of the psychological, there is as yet no evidence that this is being achieved, nor is there any evidence that such an approach has been accepted on the wards by older, more 'experienced', nurses. In fact, it appears that such attempts to change nursing practice are scratching the surface without making significant changes to the psychotherapeutic function of nurses (Fabricius, 1991).

In summary, the brief review given above of the literature on nurse-patient interactions indicates that it is difficult for nurses to communicate with patients. Far from providing a secure, understanding environment in which patients' anxieties about their illness may be contained, it

appears that both nurses and doctors avoid communication with patients about such fears. In addition, the research indicates that there are also deficiencies in communication about the physical condition of the patient - as has been seen, patients' feel that they are given insufficient information about their treatment, test results, and so on.

That nurses avoid fulfilling their psychotherapeutic function is understandable. For, as Fabricius (1991) states, the sheer quantity, as well as the force, of the anxieties which nurses could potentially be exposed to, are "too much for any ordinary human unless she herself has a supporting, containing structure" - and which, she goes on to say, is largely lacking in the NHS. As part of the training described in chapter six of this thesis, nurses are taught how to "look after themselves" and also how to seek-out supporting structures for themselves.

As a result of the apparent communication deficiency between staff and patients, it is likely that the patients' stress levels are higher than they would be if their emotional needs were being catered for. Borrowing from the psychological literature on aggression, heightened stress is potentially going to lead to increased readiness for aggression. This provides another rationale for the need to train nurses in communication skills, not only in terms of physical care but also in terms of their sensitivity to the patients' psychological needs.

(vii) Summary and Aims of the Current Research

This review chapter has examined psychological studies of aggression, applied research into the problem of aggression within the Social Services and the National Health Service, and nurse-patient interaction. A number of issues have been raised by the literature which are summarised below:

1. The psychological literature on aggression has primarily examined the production of aggression. The aim of the current research is to examine the influence of responses to aggression.

2. All of the government enquiries into the problems of aggression at work have called for training to help staff to deal more effectively with aggression. This has been echoed by researchers examining the problem within the Social Services and the National Health Service. The primary aim of this thesis was to design and evaluate a two-day training course for nurses.

3. A number of issues were raised by the literature on the psychology of aggression which stimulated questions in relation to the nurses, they are as follows:

   i) Research suggests that such factors as excuses, humour, and so on, may inhibit aggression. Is this confirmed by nurses' experiences of the strategies that defuse aggression?

   ii) Age and experience are thought to be related to the production of aggression. Do they also have a role to play in the nurses' ability to prevent, defuse or recover from aggression?

   iii) A potential aggressor's attributions are said to influence whether or not he/she becomes aggressive. Do attributions have a role to play in the way in which nurses respond to aggression?

   iv) Negative affect and stress are implicated in the production of aggression. Is it the case that nurses' who are suffering from stress are less able to prevent, deal with, and recover from aggression?

   v) A variety of personality variables are thought to be related to the production of aggression. Do such factors as the nurses' levels of anger, empathy and control influence their ability to respond to aggression?

   vi) It has been argued that emotions are pre-cognitive. Is it also the case that nurses' respond to aggression pre-cognitively, or are their conscious theories about how to deal with aggression reflected in their actions?

   vii) The literature indicates that a number of variables might provoke aggression. The training described in this thesis makes use of some of this

research to help nurses to develop an open and balanced view of the causes of aggression.

4) Psychological studies of aggression tend to be either laboratory-based or field-based, and the issue of methodology has attracted considerable debate. The current research has been partially stimulated by laboratory findings, but has utilised naturalistic methods such as interview, self-report questionnaires, critical incidents and scenarios derived from real-life incidents.

In addition to the above, some concluding comments will be made about the training scheme which is described in chapter six. As has been seen from the literature review, there is evidence that overt aggression is a low frequency response to the subjective experience of anger (Averill, 1982), and that where it does occur, it may be thought of as the product of an escalating sequence of social exchanges between the potential aggressor and victim (Toch, 1969, 1985; Patterson, 1985). As Archer (1989) puts it:

> "...violence may be an interactional or transactional problem with attention needing to be paid in clinical settings to the contribution of the victim to the chain of behaviour that culminates in violence...What behaviours escalate anger to behavioural violence are not known, although it is likely that very aggressive reactions to internal anger will provide an aversive stimulus for others in the environment, who in their turn may escalate their level of aversive behaviour".

In this quote Archer suggests that one of the major provocations to an aggressive response is aggression. In fact, this has found some support in the empirical literature. As reviewed earlier, there is considerable evidence to suggest that one of the most powerful elicitors of overt aggression is physical or verbal attack from another person (Buss, 1963; Geen, 1968). This points to the interactive nature of aggressive sequences and the role which is played by the victim.

The sequence of events which lead up to aggression may extend over a long period of time. Indeed, as has already been shown, a number of factors reaching back into an individuals childhood may predispose him or her to react aggressively to stressful or provoking circumstances. What is of more relevance to this thesis is what constitutes those provoking circumstances. Clearly, there will be occasions when an individual becomes a victim even when he or she has had no previous contact with the aggressor. However, it is to be hoped that in most cases nurses have either been looking after the aggressor for a while or, at the very least, have had some time with the aggressor. It is this time prior to overt aggression that may be crucial, and during which nurses may increase or decrease the likelihood of an aggressive outcome. It is hoped that the training scheme described herein will help nurses to choose appropriate strategies, so that they may positively influence the outcome of potentially aggressive interactions.

The dynamic nature of events which lead up to aggression is an important issue in relation to nurses because it allows for prevention through the medium of nurse training. This is not, however, to place the burden of responsibility at the feet of the nurses, but it does provide an alternative method of prevention than that derived from studies which focus on the production of aggression. The role of organisational change is also extremely important, and will be more fully addressed in the concluding chapter.

CHAPTER TWO

NURSES' THEORIES ABOUT DEALING WITH AGGRESSION

1. INTRODUCTION

As we saw in the introduction to this thesis, a growing body of research provides survey data on the demography of aggression within hospitals. In contrast to this, very little research has addressed what happens during aggressive interactions and, to our knowledge, no-one has examined nurses' ideas about how to deal with aggression. It was therefore decided to break new ground by asking nurses to rate the effectiveness of 31 different methods of handling aggression. They rated these methods separately for physical and verbal aggression, so that the two domains of aggression could be distinguished from one another and compared with one another. In addition to this, various demographic details about the nurses were gathered, such as their age, how long they had been nursing, how many times they had experienced aggression, and so on, and these data were used to distinguish between nurses' theories of how to handle aggression. Using the same sample of nurses, the opportunity was also taken to compare their theories about how aggression should be handled with what they actually did last time they were involved in an aggressive incident and how well their actions worked; but these data and analyses are presented in the next chapter and this chapter will concentrate on nurses' theories about aggression.

Because no previous research has been done on nurses' theories of how to deal with aggression, no literature has been referred to in this introduction. However, there are several reasons why this research was undertaken, and these will be presented below.

The primary aim of the research presented in this thesis was to develop, run, and assess a training course designed to help nurses handle aggression. One of the objectives of such a course was deemed to be to enable nurses to reassess their beliefs about the causes of aggression and how

best to handle it. Indeed, such a course should help the nurses to assess the circumstances of any aggressive incident as they arise and to do so with an open mind so that they can react to the particular rather than the stereotypical. It was therefore felt to be of great importance to understand nurses' theories about "successful" and "unsuccessful" ways of responding to aggression. Certainly such information would help nurses to understand their own 'models' of how to deal with aggression and would be a useful place from which to develop new ideas and new approaches during the training course.

In addition to this, the present study aimed to examine the relationship of certain sub-groups of nurses to theories about how to handle aggression. For example, do older nurses have different theories from those of the younger nurses? Or do those nurses who have experienced a great deal of aggression during their careers differ from nurses who have not? Once again, it was felt to be of importance for the trainer to have some evidence of the differences between nurses, so that nurses undertaking training could be helped to become aware of the styles of dealing with aggression associated with different groups of nurses.

One final rationale for the present study was to compare nurses' theories about how to handle aggression with what they did last time they were involved in an aggressive incident and how effective their actions proved to be. In other words, by learning more about nurses' theories it would be possible to make some empirical assessment of the relationship between their theories and the effectiveness of their actions. Once again, it was felt that such data would prove useful during the training course. As mentioned earlier, however, these comparisons will not be made until the next chapter.

To summarise the reasons for undertaking the current study. No previous research has examined the theories that nurses hold about the most successful and unsuccessful ways of dealing with

aggression. Nor has the relationship between such demographic details as a nurse's age, nursing experience, and so on, and the theories she holds about dealing with aggression been explored. Moreover, gathering information about the nurses' theories means that these theories can be subsequently compared with the actual effectiveness of strategies used in real-life incidents of aggression, and thereby providing some insight into the relationship between fantasy and reality. In short, all the data were gathered with the aim of informing the development of a training programme on how to handle aggression. In particular, it was felt to be valuable to obtain this information so that nurses participating in the planned training programme could use it to help them develop their own ideas about how to deal with aggression.

2. METHOD AND PROCEDURE

A. Subjects

Fifty-one female and two male nurses from the JR2 District General Hospital in Oxford took part in this study. Their average age was 29.5 years. The mean nursing experience in the sample was 8.2 years. Seven of the nurses were in paediatric wards, 19 in medical, 15 in surgical, two in short stay admissions, five in intensive care, two in coronary care, two in outpatients, plus one in an unknown ward.

B. Materials

The materials for the study consisted of The Nurses' Questionnaire (NQ1 - see Appendix 1). The number of questionnaires distributed to each of the wards in the JR2 reflected the proportional size of that ward. That is, larger wards received more questionnaires than smaller wards. Nurses were asked to participate by the senior nurse on each ward. A total of 150 questionnaires were distributed and 53 were returned, giving a response rate of 35%.

The NQ1 obtained ratings from nurses' to reflect their theories about the efficacy of a range of 31 response strategies when dealing with verbal and physical aggression. The 31 response strategies were derived from intensive interviews with 20 senior nurses in the JR2. The nurses were given a semi-structured interview during which they were asked to assess the problems of aggression within the hospital and the various strategies which nurses use to deal with such problems. They were asked to provide strategies that were used rather than those that they considered to be "correct". The 31 strategies were selected as the strategies which were most commonly referred to by the senior nurses. In addition, the NQ1 gathered demographic information (e.g. age, status, work history and current job).

Nurses rated the 31 response strategies on a bi-polar five-point scale ranging from "Guaranteed to fail" through to "Guaranteed to succeed". The same 31 response strategies were common to both the physical and verbal domains of aggression. Physical aggression was defined as "Aggression involving physical contact, ranging from pushing or slapping to physical assault resulting in physical injury" and verbal aggression was defined as "Aggression not involving physical contact, ranging from mildly unpleasant language to seriously threatening behaviour".

The 31 response strategies were: raise your voice; threaten the patient with higher authority; show the patient that he/she is making you angry; listen carefully to what the patient is saying; become angry; talk softly to the patient; scold the patient for his/her behaviour; look busy; match the patient's tone and manner; remain calm but firm; turn the incident into a joke; walk away from the situation; try and include whoever else is around in the incident; jolly the patient along; show sympathy to the patient; become indignant; look friendly and catch his/her eye; become matter-of-fact; let the patient know that his/her behaviour will get him/her nowhere; hide your feelings; treat the patient like a naughty child; let the patient blow-off steam; call another nurse for help; make a joke at the patient's expense; act as though nothing unusual is happening; give the patient your full attention; look authoritative and stern; gently ask the patient to explain why he/she is angry;

let the patient know that you are on his/her side; make it clear you will not stand for any nonsense; remain calm and collected. (Note. Because some of the response strategies are quite long descriptions, they will be referred to throughout the rest of the chapter in shortened forms for the sake of brevity).

The NQ1 referred to the aggressors throughout as "patients", but it was made clear that this was merely a short-hand and should be thought of as including aggression from relatives, visitors and other members of the public. Once again, for the sake of brevity the same short-hand has been applied through this chapter, and so please read "patient aggression" as including aggression from the sources stated above.

3. RESULTS

A. Factor Analyses of the Results

The results section has been divided in such a way as to aid understanding of an otherwise complex series of analyses. The major distinction is between the factor analyses which were used to examine the typology of nurses' theories about how to handle aggression, and discriminant function analyses which were used to examine the effects of such things as nursing experience, age, and so on, on the theories held by nurses about how to handle aggression. The first series of analyses to be presented are the factor analyses, and these provide a rich description of the structural relationships between the response strategies in both the physical and the verbal domains of aggression. They also provide information about nurses' theories about 'successful' and 'unsuccessful' approaches to dealing with aggression. The second series of analyses to be presented are the discriminant functions analyses. The results from the discriminant functions analysis will be presented after the factor analyses. The domain of physical aggression will be examined before moving on to look at the domain of verbal aggression.

(i) Physical Aggression

Distinguishing Between Successful and Unsuccessful Physical Response Strategies.

The means for the 31 strategies were rank ordered from highest to lowest. Table 2.1 contains the means of all 31 response strategies (some of the response strategy labels have been abbreviated). The means have been ranked from the response strategy with the highest mean down to the response strategy with the lowest mean. The Table also divides the response strategies according to whether the mean was above the mid-point of the scale (i.e. deemed to be successful) or below the mid-point of the scale (i.e. deemed to be unsuccessful). 14 of the response strategies emerged as successful and 17 as unsuccessful.

Relationships between the Physical Response Strategies

Ideally, the next step would have been to factor analyse all 31 response strategies to get an idea of the relationships between them. However, this was not possible because of the ratio of subjects to variables. Factor analysis requires at least 2.5 as many subjects as variables, and in this case there were only 53 subjects to 31 variables. For this reason, it was decided that two separate factor analyses would be performed on the 14 successful response strategies and on the 17 unsuccessful response strategies, respectively. Before proceeding, however, some preliminary analyses were done on both the physical and verbal data to see if splitting the data into unsuccessful and successful response strategies could be justified. The preliminary analyses consisted of cluster analysing all the response strategies in each of the domains of physical and verbal aggression as well as performing factor analyses on a selection of both unsuccessful and successful response strategies in each domain of aggression. In all cases the preliminary analyses revealed a natural grouping of the unsuccessful and successful response strategies. This meant that nothing would be lost by only examining the relationships within the unsuccessful and successful groupings, rather than examining the relationships between them. On this basis, it was decided that splitting the data into successful and unsuccessful groups for subsequent analyses could be justified.

(*Note 1*: Although the splitting of the data could seem like splitting something dimensional, to all intents and purposes the data is dichotomous, because an action either is or is not successful. *Note 2*: The details of the preliminary analyses are available on request.)

TABLE 2.1

Ranked Means of Physical Response Strategies

Successful Responses	Means	Range
Calm & collected	1.17	3-5
Calm but firm	1.08	2-5
Ask for explanation	0.92	1-5
Give full attention	0.77	2-5
On their side	0.66	2-5
Listen	0.62	2-4
Let them blow off steam	0.49	1-5
Talk softly	0.36	1-5
Show sympathy	0.34	1-5
Call for help	0.21	2-5
Hide feelings	0.21	1-5
Show they'll get nowhere	0.21	1-5
Look friendly	0.13	1-5
Stand no nonsense	0.04	1-4

Unsuccessful Responses	Means	Range
Become matter-of-fact	-0.13	1-5
Look authoritative & stern	-0.23	1-5
Include others	-0.45	1-4
Walk away	-0.57	1-5
Raise your voice	-0.57	1-3
Act as though nothing is wrong	-0.57	1-4
Threaten with higher authority	-0.66	1-4
Jolly them along	-0.70	1-4
Scold them	-0.77	1-5
Show anger	-0.85	1-4
Match their manner	-1.00	1-4
Turn it into a joke	-1.02	1-3
Become indignant	-1.11	1-3
Look busy	-1.26	1-3
Become angry	-1.32	1-4
Treat them like a naughty child	-1.36	1-3
Make a joke at their expense	-1.72	1-5

Factor Analysis of the Successful Physical Response Strategies

The 14 successful response strategies were submitted to SPSSX's Principal Components Analysis with varimax rotation and revealed five significant factors, accounting for 68% of the variance. Using the usual criterion the eigenvalues were scree plotted and produced a dog-leg after the fifth factor. Table 2.2 presents the loadings of the 14 response strategies on the first five factors (the significant loadings are highlighted in bold print).

TABLE 2.2

Factor Analysis of the 14 Successful Physical Response Strategies

RESPONSES	Factor 1 Nurturance (29%)	Factor 2 Assertiveness (13.3%)	Factor 3 Permissiveness (9.1%)	Factor 4 Reactivity (8.2%)	Factor 5 Concealment (7.3%)
Give full attention	**0.74**	0.78	0.03	0.02	0.18
Listen	**0.74**	-0.03	0.04	0.41	-0.07
On their side	**0.70**	0.26	-0.07	-0.28	-0.05
Calm & collected	**0.67**	0.30	0.25	0.04	0.44
Ask for explanation	**0.62**	-0.01	0.40	0.22	0.03
Talk softly	**0.53**	0.17	0.30	-0.18	-0.40
Look friendly	**0.47**	-0.14	0.36	0.33	-0.10
Stand no nonsense	0.04	**0.85**	-0.15	-0.06	-0.02
They'll get nowhere	0.14	**0.74**	0.05	0.31	-0.05
Calm but firm	0.45	**0.53**	0.26	-0.01	0.42
Let them blow off	-0.01	0.15	**0.84**	0.11	-0.01
Show sympathy	0.26	-0.28	**0.75**	-0.09	0.04
Call for help	0.05	0.18	0.03	**0.86**	0.02
Hide feelings	0.04	-0.03	-0.01	-0.03	**0.81**

Table 2.2 provides a summary of the successful response strategies which define the five factors. The first factor consists of the items "Give full attention", "Listen", "Show you are on their side" and "Talk softly". These items combine to suggest an approach which is caring and attentive, they are all calming, attentive and supportive items. This contrasts with the second factor which is made up of items such as "Stand no nonsense", "Show they'll get nowhere" and "Remain calm but firm". These items combine to form what may be regarded as an Assertiveness factor. All the items have something to do with standing one's ground, setting limits and adopting a firm manner. The third factor is made up of the items "Let them blow-off steam" and "Show sympathy", and was, for obvious reasons, labelled the Permissiveness factor. Factor four, is comprised of the item "Call for help" and has been labelled the Reactivity Factor. Finally, factor five, with the item "Hide one's feelings" has been labelled the Concealment factor.

In summary, the factor analysis of the nurses' theories about successful strategies has revealed five typologies for dealing successfully with aggression. The factor which accounts for most of the variance (29%) is the Nurturance factor, whilst the second most important factor, accounting for 13% of the variance, is the Assertiveness factor. The remaining three factors were the Permissiveness factor, the Reactivity factor and the Concealment factor.

Factor Analysis of the Unsuccessful Physical Response Strategies

The 17 unsuccessful response strategies were submitted to SPSSX's Principal Component Analysis with varimax rotation and returned a seven factor solution which accounts for 72% of the variance. Again, the eigenvalues were scree plotted and produced a dog-leg after the seventh factor. The loadings of the response strategies are presented in Table 2.3 and the significant loadings are highlighted in bold print.

TABLE 2.3

Factor Analysis of the 17 Unsuccessful Physical Response Strategies

RESPONSES	Factor 1 Authoritarian (19%)	Factor 2 Demeaning (12%)	Factor 3 Defensive (10.6%)	Factor 4 Denial (8.9%)	Factor 5 Defusion (7.7%)	Factor 6 Humour (7%)	Factor 7 Displacement (6.7%)
Threaten with higher authority	**0.79**	0.12	0.19	-0.14	0.21	-0.25	0.09
Match their manner	**0.77**	-0.13	0.00	0.02	-0.17	0.16	-0.01
Look authoritative & stern	**0.63**	0.15	0.48	0.01	-0.01	0.25	0.02
Show anger	**0.44**	0.25	-0.34	-0.39	-0.18	0.03	0.26
Treat them like a naughty child	0.03	**0.87**	-0.10	-0.10	0.01	-0.08	0.07
Scold them	0.11	**0.81**	0.22	0.16	0.01	0.10	-0.13
Make a joke at their expense	0.07	**0.43**	0.40	0.42	0.21	-0.30	0.33
Raise your voice	0.16	-0.03	**0.75**	-0.23	-0.05	-0.03	0.00
Become indignant	0.09	0.42	**0.56**	-0.01	0.09	0.27	0.17
Walk away	0.04	0.10	-0.15	**0.75**	-0.05	0.02	0.24
Become angry	0.38	0.11	0.23	**-0.64**	0.20	-0.17	0.18
Act as though nothing is wrong	0.42	0.00	0.03	**0.48**	0.46	0.10	-0.20
Become matter-of-fact	-0.15	0.00	-0.02	-0.04	**0.82**	-0.09	0.16
Include others	0.24	0.14	0.24	-0.06	**0.53**	0.21	-0.49
Turn it into joke	0.02	0.00	0.21	0.16	-0.19	**0.85**	0.01
Jolly along	0.06	0.04	-0.16	-0.07	0.47	**0.68**	0.10
Look busy	0.13	0.02	0.12	0.07	0.13	0.12	**0.84**

Table 2.3 shows that the first factor, which consists of the items "Threaten with higher authority", "Match their manner", "Look authoritative and stern" and "Show Anger", can be regarded as an Authoritarian factor. All of these items have something to do with standing one's ground and being antagonistic. The second factor, the Demeaning factor, is somewhat similar, in that it is a tough approach, but in this case it is made up of items such as "Treat them like a naughty child" and "Make a joke at their expense". Unlike the Authoritarian factor, these items suggest an approach which is damaging to the face of the aggressor. Both the Authoritarian and Demeaning factors are controlling factors, unlike the third factor, which suggests a loss of control on the part of the nurse. This factor is called the Defensiveness factor and is loaded with the items "Raise your voice" and "Become indignant". Factor four, the Denial factor, is made up of items such as "Walk away" and "act as though nothing is wrong". These items have something to do with removing oneself from the situation and attempting not to be involved. This contrasts strongly with factor five, the Defusion factor, made up of the items "Become matter-of-fact" and "include others". These items describe active attempts on the part of the nurse to deal with the patient's anger. Factor six, the Humour factor, has the items "turn it into a joke" and "Jolly them along". And finally, the Displacement factor (factor seven), with the item "look busy", is similar to the Denial factor in terms of being an avoidance strategy.

In summary, the unsuccessful strategies for dealing with physical aggression fall into seven distinct typologies, and they all involve quite different approaches towards dealing with the angry patient. The three typologies which account for the most variance are the Authoritarian (19%), Demeaning (12%) and the Defensive (11%) typologies. The remaining four typologies consist of Denial, Defusion, Humour and Displacement.

Comparing Successful and Unsuccessful Physical Response Strategies

The two factor analyses described above reveal the structural relationships between the successful response strategies and the structural relationships between the unsuccessful response strategies in the domain of physical aggression. In the case of the successful response strategies, the factor analysis returned five significant factors, and in the case of the unsuccessful response strategies, the factor analysis returned seven significant factors. This suggests that the different types of responses are more variegated for unsuccessful strategies than they are for successful strategies. In other words, the data suggest that there are fewer options when it comes to getting it right than there are for getting it wrong when it comes to dealing with physical aggression.

(ii) Verbal Aggression

When the subjects were given the 31 response strategies to rate for physical aggression, they were also given a second task, that of rating the same 31 response strategies, but this time in relation to verbal aggression. This section deals with the results of nurses' ratings of the response strategies to verbal aggression.

Distinguishing Between Successful and Unsuccessful Verbal Response Strategies

The means for the 31 response strategies in relation to verbal aggression were rank ordered from highest to lowest. Table 2.4 contains the mean ratings for all 31 response strategies. These have been ranked from the response strategy with the highest mean down to the response strategy with the lowest mean. The Table also divides the response strategies according to whether the mean was above the mid-point of the scale (i.e. deemed to be successful) or below the mid-point of the scale (i.e. deemed to be unsuccessful). Thirteen of the response strategies emerged as successful and eighteen as unsuccessful.

TABLE 2.4

Ranked Means of Verbal Response Strategies

Successful Responses	Means	Range
Calm but firm	1.13	3-5
Ask for explanation	1.11	2-5
Calm & collected	1.11	3-5
Give full attention	0.93	3-5
Listen	0.91	3-5
Show sympathy	0.59	2-5
Talk softly	0.57	1-5
On their side	0.57	1-5
Let them blow off steam	0.47	1-5
Hide feelings	0.26	2-5
Look friendly	0.15	1-5
Show they'll get nowhere	0.11	1-5
Stand no nonsense	0.00	1-5

Unsuccessful Responses	Means	Range
Become matter-of-fact	-0.03	1-4
Call for help	-0.17	1-4
Look authoritative & stern	-0.23	1-4
Act as though nothing is wrong	-0.51	1-4
Threaten with higher authority	-0.53	1-4
Show anger	-0.66	1-4
Include others	-0.66	1-5
Jolly them along	-0.66	1-4
Raise your voice	-0.37	1-3
Walk away	-0.90	1-3
Become indignant	-0.92	1-5
Scold them	-0.96	1-4
Match their manner	-1.06	1-4
Turn it into a joke	-1.06	1-5
Look busy	-1.24	1-4
Become angry	-1.28	1-3
Treat them like a naughty child	-1.41	1-3
Make a joke at their expense	-1.57	1-5

Relationships between the Verbal Response Strategies

Once again, as for the physical analyses, the ideal next step would have been to factor analyse all 31 response strategies to get a picture of the relationships between them. However, as for the physical analyses, this was not possible because of the ratio of subjects to variables (53 and 31, respectively). The solution to this problem was the same as before, and two separate analyses were performed on the successful and unsuccessful response strategies, respectively.

Factor Analyses of the Successful Verbal Response Strategies

The 13 successful response strategies were submitted to SPSSX's Principal Components Analysis with varimax rotation and returned a six factor solution, accounting for 74% of the variance. A scree plot of the eigenvalues revealed a dog-leg after the sixth factor. Table 2.5 presents the loadings of the 13 response strategies on the first six factors, with the significant loadings highlighted in bold print.

TABLE 2.5

Factor Analysis of the 13 Successful Verbal Response Strategies

RESPONSES	Factor 1 Fostering (26.8%)	Factor 2 Fact-finding (14.9%)	Factor 3 Assertiveness (10.1%)	Factor 4 Empathy (7.7%)	Factor 5 Permissiveness (7.4%)	Factor 6 Professionalism (7.2%)
Hide feelings	**0.80**	0.04	0.10	0.12	-0.04	-0.05
Listen	**0.56**	-0.39	0.16	0.04	0.27	0.14
Talk softly	**0.56**	0.49	-0.06	0.05	0.22	0.06
Ask for explanation	0.00	**0.91**	-0.05	0.12	0.19	-0.01
Give full attention	0.01	**0.64**	0.02	0.30	0.34	0.13
Stand no nonsense	-0.02	-0.17	**0.80**	0.33	0.13	0.09
Show they'll get nowhere	0.28	0.07	**0.79**	-0.26	-0.05	0.01
Calm & collected	0.11	0.11	0.24	**0.87**	-0.06	0.01
On their side	0.09	0.13	-0.19	**0.74**	0.17	0.13
Show sympathy	0.00	0.15	-0.13	0.18	**0.79**	0.18
Let them blow off steam	0.18	0.27	0.24	-0.09	**0.76**	-0.01
Look friendly	-0.02	0.02	-0.01	0.09	0.14	**0.90**
Calm but firm	0.43	0.24	0.37	0.12	-0.02	**0.47**

Table 2.5 shows that the first factor, which consists of the items "Hide feelings", "Listen" and "Talk softly", can be regarded as a Fostering factor. All the items that load on this factor have something to do with taking care of the patient and his or her problem; they are attentive and supportive items. The second factor is made up of the items "Ask for explanation" and "Give full attention". These items suggest a concerned and kindly effort to establish why the patient is angry, and the factor has been labelled the Fact-finding factor. This contrasts with the third factor, the Assertiveness factor, on which the following items load "Stand no nonsense" and "Show they'll get nowhere". These items have something to do with standing one's ground, setting limits and adopting a firm manner. The fourth factor, the Empathy factor, comprises the items "Calm & collected" and "On their side", both of which suggest a professional but sympathetic approach to the problem. The fifth factor, the Permissiveness factor, is made up of the items "Let them blow-off steam" and "Show sympathy". This approach allows the patient his or her head, while the nurse remains sympathetic. The items loading on factor six are "Look friendly" and "Calm but firm", and the factor has been called the Professionalism factor because it is characterised by a friendly but boundary-setting approach.

In summary, the successful verbal response strategies fall into six typologies. The most important factors are the first three, the Fostering (27%), Fact-finding (15%) and the Assertiveness (10%) factors. Between them they account for 53% of the overall variance. The remaining three factors are the Empathy, Permissiveness and Professionalism factors.

Factor Analysis of the Unsuccessful Verbal Response Strategies

The 18 unsuccessful response strategies were submitted to SPSSX's Principal Component Analysis with varimax rotation and returned a seven factor solution accounting for 66% of the variance. Again, the eigen values were scree plotted and produced a dog-leg after the sixth factor. The loadings of the response strategies are presented in Table 2.6 with the significant loadings highlighted in bold print.

TABLE 2.6

Factor Analysis of the 18 Unsuccessful Verbal Response Strategies

RESPONSES	Factor 1 Deflection (24.5%)	Factor 2 Anger (11.6%)	Factor 3 Timidity (9.7%)	Factor 4 Denial (8.3%)	Factor 5 Avoidance (6.3%)	Factor 6 Defensiveness (5.7%)
Make a joke at their expense	**0.86**	-0.06	0.02	-0.02	-0.04	0.15
Become indignant	**0.73**	0.38	-0.17	0.01	0.09	-0.14
Turn it into a joke	**0.65**	0.13	0.16	0.19	0.43	-0.11
Include others	**0.56**	-0.01	0.41	0.20	0.11	0.25
Look busy	**0.56**	0.18	0.46	0.32	0.05	-0.03
Treat them like a naughty child	**0.33**	-0.19	0.17	-0.28	0.16	-0.02
Become angry	-0.05	**0.89**	-0.13	0.06	0.02	0.10
Look authoritative & stern	0.02	**0.69**	0.20	-0.26	-0.11	0.13
Match their manner	0.25	**0.69**	0.27	0.23	0.18	-0.15
Show anger	0.39	**0.57**	0.37	0.04	-0.19	0.30
Jolly along	0.08	0.02	**0.83**	0.18	0.00	-0.02
Threaten with higher authority	0.02	0.27	**0.73**	-0.14	0.21	0.24
Walk away	0.09	-0.06	-0.08	**0.81**	-0.05	-0.20
Act as though nothing is wrong	0.04	-0.03	0.24	**0.59**	0.12	-0.04
Become matter-of-fact	0.10	0.11	0.11	**0.50**	-0.42	-0.20
Scold them	0.10	0.05	0.00	-0.05	**0.79**	0.24
Call for help	0.20	-0.08	0.36	0.03	**0.62**	-0.25
Raise your voice	0.06	0.15	0.12	0.07	0.12	**0.88**

Referring to Table 2.6 it can be seen that the first factor is comprised of items such as "Make a joke at their expense", "Become indignant" and "Treat them like a naughty child". This factor was labelled the Deflection factor because it seems to represent an approach which distances the nurse from the patient's anger rather than dealing with it. All the items are attempts to reject, undermine and devalue the legitimacy of the patient's anger. Factor two, the Anger factor, is comprised of items such as "Become angry", "Look authoritative & stern", "Match their manner" and "Show anger". These items suggest a hard-line approach, stamping out the patient's anger by matching it. Again, these items combine to suggest a devaluation of the patients feelings or of the causes for his/her anger. These factors contrast with the third factor, which has the items "Jolly them along" and "Threaten with higher authority". This factor has been called the Timidity factor, and is suggestive of someone who is rather at a loss, who is not capable of either confronting the patient or of dealing with the real issues that lie behind the incident. Factors one, two and three all involve on-going interaction between the nurse and the patient, whereas factor four, the Denial factor, does not. This factor is about trying to avoid becoming involved. Items such as "Walk away", "Act as though nothing is wrong" and "Become matter of fact", suggest an ostrich-like approach to what is happening. The Avoidance factor, factor five, has the items "Scold them" and "Call for help". These items suggest a nurse who is interacting with the patient, but who wants to extricate herself from the situation by seeking outside help. And finally, factor six, the Defensiveness factor, is defined by the item "Raise your voice".

In summary, the unsuccessful strategies for dealing with verbal aggression fall into six typologies. The first factor, the Deflection factor, is particular strong, accounting for 25% of the variance. The remaining factors account for approximately similar amounts of variance, although the second factor, the Anger factor, accounts for slightly more (12%) than the remaining four factors. These factors are the Timidity, Denial, Avoidance and Defensiveness factors.

Comparing Successful and Unsuccessful Verbal Response Strategies

In the case of the physical aggression response strategies the factor analyses revealed that fewer factors were needed to describe the successful response strategies than were needed to describe the unsuccessful response strategies. In the case of the successful responses five factors were sufficient whereas seven factors were needed for the unsuccessful responses. In other words, there are fewer approaches to choose from when dealing effectively with physical aggression than there when dealing ineffectively with physical aggression. This does not seem to be the case for verbal aggression. In the case of both successful and unsuccessful responses to verbal aggression the factor analyses returned a six factor solution. It therefore seems to be the case that there are as many ways to get it right when dealing with verbal aggression as there are to get it wrong.

(iii) Comparing Responses to Physical Aggression with Responses to Verbal Aggression.

Ranking the Response Strategies.

Although there is no necessary reason why the response strategies that are regarded as successful or unsuccessful in the case of verbal aggression should be regarded as successful or unsuccessful in the case of verbal aggression, it was thought to be highly likely that they would be. In fact, this was born out by the data. Table 2.7 displays the rank order position of each of the 31 strategies in each of the two domains of aggression. The only strategy that is not the same in both domains is the "Call for help" strategy, which is rated as successful in the case of physical aggression, but unsuccessful in the case of verbal aggression. The remaining 30 response strategies are all consistently rated as either successful or unsuccessful in both domains of aggression.

TABLE 2.7

Ranked Positions of Response Strategies for both Domains of Aggression

Successful Strategies	**Rank Physical**	**Rank Verbal**
Calm & collected	1	3
Calm but firm	2	1
Ask for explanation	3	2
Give full attention	4	4
On their side	5	8
Listen	6	5
Let them blow off steam	7	9
Talk softly	8	7
Show sympathy	9	6
Call for help	10	--
Hide feelings	11	10
Show they'll get nowhere	12	12
Look friendly	13	11
Stand no nonsense	14	13

Unsuccessful Strategies	**Rank Physical**	**Rank Verbal**
Call for help	--	15
Become matter-of-fact	15	14
Look authoritative & stern	16	16
Include others	17	20
Walk away	18	23
Raise your voice	19	22
Act as though nothing is wrong	20	17
Threaten with higher authority	21	18
Jolly them along	22	21
Scold them	23	25
Show anger	24	19
Match their manner	25	26
Turn it into a joke	26	27
Become indignant	27	24
Look busy	28	28
Become angry	29	29
Treat them like a naughty child	30	30
Make a joke at their expense	31	31

Comparing the Factor Analyses for Successful Response Strategies in both Domains.

Table 2.8 displays the factors from the physical and verbal factor analyses of successful response strategies. The Table also shows the amount of variance accounted for by each of the factors together with the factor labels used to describe them.

TABLE 2.8

Factors for Successful Response Strategies in both Domains

FACTOR LABELS	Physical Domain	% Variance	Verbal Domain	% Variance
Nurturance	Yes	29.0%	No	--
Assertiveness	Yes	13.3%	Yes	10.1%
Permissiveness	Yes	9.1%	Yes	7.4%
Reactivity	Yes	8.2%	No	--
Concealment	Yes	7.3%	No	--
Fostering	No	--	Yes	26.8%
Fact-finding	No	--	Yes	14.9%
Empathy	No	--	Yes	7.7%
Professionalism	No	--	Yes	7.2%

By using Table 2.8 in conjunction with the original factor analyses of the successful responses in both domains (Tables 2.2 and Table 2.5) it is possible to build-up a picture with which to distinguish the similarities and differences between nurse's theories about how to deal successfully with verbal aggression and how to deal successfully with physical aggression. It can be seen that the response strategies which comprised the first factor, the Nurturance factor, in the case of physical aggression (refer to Table 2.2) are very similar to those items that comprised the first and

second factors, the Fostering and Fact-finding factors, in the case of verbal aggression (refer to Table 2.5). These observations are represented in Table 2.8, above. It can be seen that the Fostering and Fact-finding factors both appear in the domain of verbal aggression (note the "yes" under the Verbal Domain column), and that they accounted for 26.7% and 14.9% of the variance, respectively. The Nurturance factor in the Physical domain accounts for 29% of the variance. In addition to this, the factor structures in both domains of aggression produced an Assertiveness and a Permissiveness factor. Bearing all of this in mind it is possible to observe that the factor structures of the successful response strategies in the physical and verbal domains have a substantial amount in common. Indeed, adding together all the variance which is common to both domains produces a total of 51.4% in the case of physical and 59.2% in the case of the verbal domain.

Comparing Factor Analyses for Unsuccessful Response Strategies in both Domains.

Table 2.9 displays the common factors from the physical and verbal factor analyses of unsuccessful response strategies. Once again the Table should be used in conjunction with the Tables which display the results of the factor analyses of the unsuccessful strategies in both the Physical and Verbal domains of aggression (Tables 2.3 and 2.6, respectively).

TABLE 2.9

Factors for Unsuccessful Response Strategies in both Domains

FACTOR LABELS	Physical Domain	% Variance	Verbal Domain	% Variance
Authoritarian	Yes	19.0%	No	--
Demeaning	Yes	12.0%	No	--
Defensive	Yes	10.6%	Yes	5.7%
Denial	Yes	8.9%	Yes	8.3%
Defusion	Yes	7.7%	No	--
Humour	Yes	7.0%	No	--
Displacement	Yes	6.7%	No	--
Deflection	No	--	Yes	24.5%
Anger	No	--	Yes	11.6%
Timidity	No	--	Yes	9.7%
Avoidance	No	--	Yes	6.3%

Unlike the factor structures of the successful response strategies, the factor structures of the unsuccessful response strategies do not seem to have much in common across the two domains of aggression. There are two typologies which are common to both physical and verbal aggression, namely the Defensiveness and the Denial factors. However, these are lower order factors and do not accounts for more than 19.5% of variance in the physical domain and 14% of variance in the verbal domain. The remaining factors all seem to be unique to each domain.

Conclusions about the Successful and Unsuccessful Response Strategies in both Domains

The fact that the common factors in the case of successful strategies account for far more variance (51.4% for physical and 59.2% for verbal) than the common factors in the case of unsuccessful response strategies (19.5% for physical and 14% for verbal), suggests that the factor structures for the successful strategies are more similar than the factor structures for unsuccessful strategies. It would seem, therefore, that those strategies which are thought to be successful are likely to be successful irrespective of domain, whereas those that are thought to be unsuccessful are likely to be domain-specific.

B. Discriminating between the Nurses

The factor analyses described above gave some insight into the complex relationships which exist between the strategies for dealing with aggression. What they have not provided, however, is any clue to the differences between nurses and how these might relate to their judgements about aggression management. In order to pursue this issue the relationship between nurses' ratings of the response strategies, on the one hand, and their age, nursing experience, self-rated competence and exposure to aggressive incidents, on the other, was examined.

(i) What Predicts a Nurse's Theories about how to Handle Aggression?

It was hypothesised that four variables might affect the theories a nurse holds about handling aggression. First, her age - it is likely that older nurses have different ideas about aggression management than younger nurses. Second, her nursing experience - a nurse with more years' experience may differ from a nurse with less experience. Third, her self-image, it is possible that nurses who think of themselves as effective handlers of aggression choose different strategies than do nurses who think of themselves as poor handlers of aggression. And, finally, a nurse who has been frequently exposed to aggression might differ from a nurse who has never experienced aggression.

These hypotheses were tested using SPSSX discriminant functions analysis, using each variable mentioned above (age, nursing experience, self-rated effectiveness and assault rate) as the grouping or dependent variables and the 31 response strategies as the independent or predictor variables. Due to the large number of predictor variables (31), stepwise regression was used to select out those predictor variables with a sufficiently high f to enter (Wilks' Method). (Note. The correlations between the 31 predictor variables and the discriminant functions have not been provided because they would take up too much space. However, they are available on request). The default f to enter on SPSSX is set at one, which is appropriate only when there are a lot of subjects. For this reason, the default f to enter was altered to three. Prior probabilities were also applied, to weight the scores according to group size. In other words, differences in group size do not affect the results.

As discriminant functions analysis will only deal with one grouping variables per analysis, four separate analyses (one for each of the grouping variables) were performed for the physical aggression data and four separate analyses (one for each of the grouping variables) were performed for the verbal aggression data.

(ii) **Age and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression**

Subjects were split into two groups on the basis of their median age. Those nurses of 27 years of age or more were classified as old for the purposes of this analysis (Group 2, N=23), and those nurses who were less than 27 years of age were classified as young (Group 1, N=30).

Physical Analysis

Using the grouping variable of age (old vs young), as described above, and the ratings for the 31 physical response strategies as the independent variables, the data were submitted to SPSSX stepwise discriminant functions analysis. The initial stages of the analysis selected two of the

response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Give full attention" (Wilks' Lambda .88, $p<.01$) and "Show anger" (Wilks' Lambda .83, $p<.009$). None of the remaining 29 response strategies were eligible for entry into the analysis. A highly significant discriminant function was revealed (function 1 = $p<.009$, eigenvalue .21, d.f. 2). The standardised canonical discriminant function coefficients are displayed in Table 2.10 together with the canonical discriminant function evaluated at the group means. As the Table shows, the nurses can be discriminated in terms of the response strategies "Give full attention" and "Show anger". Both of these strategies are positively associated with the discriminant function. Moreover, as the coefficients evaluated at the group centroids indicate, the old nurses (group 2) are negatively associated with the discriminant function and the young nurses (group 1), are positively associated with the discriminant function. In other words, young nurses are significantly different from old nurses in that they think it is effective to respond to physical aggression with angry attention while the old nurses do not.

TABLE 2.10

Age by Physical Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Give full attention	0.605
Show anger	0.895

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Young (1)	0.51
Old (2)	-0.39

Discriminant functions analysis not only allows discrimination between groups of subjects but also predicts which group each subject belongs to. This procedure is known as the 'Classification' stage of the analysis. Table 2.11 shows the percentage of nurses correctly and incorrectly classified. Overall, 66% of cases were correctly classified. However, closer examination of the Figure reveals that group 1, the young nurses, are correctly classified in only 43.5% of cases, with 56.5% of cases being classified into the old nurses group. The old nurses, on the other hand, can be predicted correctly in 83.3% of cases, with only 16.7% of cases misclassified. The predictive power of this model is, then, particularly effective when classifying old nurses on the basis of their relationship to the predictor variables.

TABLE 2.11

Age by Physical Response Strategy Classification Table

Actual Group	**Predicted Group Membership**	
	1	**2**
Young (1)	**43.5%**	56.5%
Old (2)	16.7%	**83.3%**

% correctly classified = **66.04%**

Verbal Analysis

Once again, using the grouping variables of age (old vs young), and, this time, the ratings for the 31 verbal response strategies as the independent variables, the data were submitted to SPSSX stepwise discriminant functions analysis. In this analysis only one of the response strategies was eligible for entry into the analysis, namely, "Listen" (Wilks' Lambda .93, $p<.05$). The discriminant

function just reached significance (function 1 = $p<.05$, eigenvalue .08, d.f. 1). From this it can be concluded that it is possible to discriminate between nurses on the basis of their ratings of the response strategy "Listen". The standardised canonical discriminant function coefficient is displayed in Table 2.12 together with the canonical discriminant function evaluated at the group means. The coefficients evaluated at the group centroids show that the old nurses (group are negatively associated with the function, whilst the young nurses (group 1) are positively associated with the function. In other words, young nurses are significantly different from old nurses in that they think it is a good idea to listen to the verbally aggressive patient, whilst old nurses do not.

TABLE 2.12

Age by Verbal Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Listen	1.00

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Young (1)	0.31
Old (2)	-0.24

TABLE 2.13

Age by Verbal Response Strategy Classification Table

Actual Group	Predicted Group Membership	
	1	2
Young (1)	**21.7%**	78.3%
Old (2)	6.7%	**93.3%**

% of cases correctly classified = **62.26%**

The classification stage of this analysis was disappointing. As Table 2.12 shows, the canonical function coefficients (which serve as a basis for assigning cases to groups), do not provide a good predictive model. Over 78% of young nurses are misclassified, although 93.3% of old nurses were correctly classified, giving an overall classification rate of 62.6%.

(iii) **Nursing Experience and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression.**

Subjects were split into two groups on the basis of their median nursing experience. Those nurses with 84 months nursing experience or more were regarded as high experience (Group 2, N=23), and those nurses with less than 84 months nursing experience were classed as low experience (Group 1, N=30).

Physical Analysis

Using the grouping variables of nursing experience (high vs low experience), as described above, and the ratings for the 31 physical response strategies as the independent variables, the data were

submitted to SPSSX stepwise discriminant functions analysis. The initial stages of the analysis selected two of the response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Give full attention" (Wilks' Lambda .88, $p<.01$) and "Calm but firm" (Wilks' Lambda .81, $p<.005$). None of the remaining 29 response strategies were eligible for entry into the analysis. A highly significant discriminant function was revealed (function 1 = $p<.005$, eigenvalue .24, d.f. 2). The standardised canonical discriminant function coefficients are displayed in Table 2.14 together with the canonical discriminant functions evaluated at the group means. As Table shows, the nurses are discriminated on the basis of the response strategies "Give full attention" and "Calm but firm". "Calm but firm" is negatively associated with the function, and "Give full attention" is positively associated with the function, producing a bi-polar function. This combination of response strategies suggest an approach of emotional attention, or, on the other hand, calm inattention. The high experience nurses are negatively associated with the function, as can be seen from the coefficients evaluated at the group centroids, whilst the low experience nurses are positively associated with the function. In other words, low experience nurses are significantly different from high experience nurses in that they think it is effective to respond to physical aggression with emotional attention whilst the high experience nurses tend to favour calm inattention.

TABLE 2.14

Experience by Physical Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Calm but firm	-0.76
Give full attention	1.12

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Low experience (1)	0.55
High experience (2)	-0.42

TABLE 2.15

Experience by Physical Response Strategy Classification Table

Actual Group	**Predicted Group Membership**	
	1	**2**
Low experience (1)	**78.3%**	21.7%
High experience (2)	40.0%	**60.0%**

% of cases correctly classified = **67.9%**

Table 2.15 gives the percentage of nurses correctly and incorrectly classified. Overall, 67.9% of cases were correctly classified. Closer inspection reveals that 78.3% of low experience nurses were correctly classified and 60% of high experience nurses were correctly classified.

Verbal Analysis

Once again, using the grouping variables of nursing experience (high vs low), and, this time, the ratings for the 31 verbal response strategies as the independent variables, the data were submitted to SPSSX stepwise discriminant functions analysis. In this analysis only one of the response strategies was eligible for entry into the analysis, namely, "look busy" (Wilks' Lambda .90, p<.0. The discriminant function was significant (Function 1 = p<.02, eigenvalue .11, d.f. 1). Table 2.16 gives the standardised canonical discriminant function coefficient together with the canonical discriminant function evaluated at the groups means. From the Table it is possible to see that the low experience nurses (group 1) are negatively associated with the function and the high experience nurses (group 2) are positively associated with the function. It is therefore possible to discriminate between the low and high experience nurses on the basis of whether or not they think it is a good idea to "Look busy" during a verbally aggressive incident. The high experience nurses think it is a good idea whilst the low experience nurses do not.

TABLE 2.16

Experience by Verbal Response Strategies

Standardised Canonical Discriminant Function Coefficient

	Function 1
Look busy	1.00

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Low experience (1)	-0.37
High experience (2)	0.28

TABLE 2.17

Experience by Verbal Response Strategy Classification Table

Actual Group	Predicted Group Membership	
	1	2
Low experience (1)	**60.9%**	39.1%
High experience (2)	23.3%	**76.7%**

% of cases correctly classified = **69.8%**

As Table 2.17 shows, over 60% of low experience nurses are correctly classified and over 76% of high experience nurses are correctly classified, giving an overall predictive value of 69.8%.

(iv) **Self-Rated Effectiveness and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression.**

Subjects were split into two groups on the basis of their median self-rated effectiveness at handling aggressive incidents. Those nurses with a rating of three or less were regarded as low effectiveness for the purposes of this analysis (Group 1, N=36), and those nurses with a rating of more than three were classed as high effectiveness (Group 2, N=17).

Physical Analysis

Using the grouping variable of self-rated effectiveness at handling aggression (high vs low effectiveness), as described above, and the ratings for the 31 physical response strategies as the independent variables, the data were submitted to SPSSX stepwise discriminant functions analysis.

The initial stages of the analysis selected four of the response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Turn into a joke" (Wilks' Lambda .76, p<.001), "Show anger" (Wilks' Lambda .90, p<.001), "Calm & collected" (Wilks' Lambda .64, p<.000), and "Talk softly" (Wilks' Lambda .69, p<.000). None of the remaining 28 strategies were eligible for entry into the analysis. A highly significant discriminant function was revealed (function 1 = p<.000, eigenvalue .56, d.f. 4). The standardised canonical discriminant function coefficients are displayed in Table 2.18 together with the canonical discriminant function evaluated at the group means. As the Table shows, the high effectiveness and low effectiveness nurses can be discriminated on the basis of their scores on the response strategies "Turn into a joke", "Show anger", "Calm & collected" and "Talk softly". It can be seen from the coefficients how each of these response strategies load onto the discriminant function. "Turn into a joke" and "Show anger" both had high positive loadings, whilst "Calm & collected" had a lower positive loading. Finally, "Talk softly" is negatively loaded onto the function. The discriminant function, then, seems to have something to do with aggressive humour, although, the item "Calm & collected" is somewhat anomalous. Given the other three items it should load negatively onto the function, instead of which is has a positive loading. However, the high effectiveness nurses (group 2) are negatively associated with the function, as can be seen from the coefficients evaluated at the group means, whilst the low effectiveness nurses (group 1) are positively associated with the function. In other words, low effectiveness nurses are significantly different from high effectiveness nurses in that they believe it is a good idea to respond with aggressive humour to physical aggression, whilst the high effectiveness nurses do not.

TABLE 2.18

Effectiveness by Physical Response Strategy

Standardised Canonical Discriminant Function Coefficients

	Function 1
Turn into a joke	0.92
Show anger	0.82
Calm & collected	0.54
Talk softly	-0.85

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Low effectiveness (1)	0.51
High effectiveness (2)	-1.07

TABLE 2.19

Effectiveness by Physical Response Strategy Classification Table

Actual Group	**Predicted Group Membership**	
	1	**2**
Low effectiveness (1)	**86.1%**	13.9%
High effectiveness (2)	23.5%	**76.5%**

% of cases correctly classified = **83.02%**

Table 2.19 gives the percentage of nurses correctly and incorrectly classified. Overall, more than 83% of nurses can be correctly classified. Closer inspection reveals that 86.1% of low effectiveness nurses can be correctly classified and 76.5% of high effectiveness nurses can be correctly classified.

Verbal Analysis

Once again, using the grouping variable of self-rated effectiveness at handling aggression (high vs low effectiveness), and, this time, the ratings for the 31 verbal response strategies as the independent variables, the data were submitted to SPSSX stepwise discriminant functions analysis. The initial stages of the analysis selected two of the response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Show anger" (Wilks' Lambda .81, $p<.001$), and "Call for help" (Wilks' Lambda .75, $p<.000$). None of the remaining 30 strategies were eligible for entry into the analysis. A highly significant discriminant function was revealed (function 1 = $p<.000$, eigenvalue .33, d.f. 2). The standardised canonical discriminant function coefficients are displayed in Table 2.20 together with the canonical discriminant function evaluated at the group means. As the figure shows, the high effectiveness and low effectiveness nurses can be discriminated on the basis of their scores on the response strategies "Show anger" and "Call for help", both of which load positively onto the discriminant function. The discriminant function, then, seems to have something to do with a loss of control both over emotions and over the situation. Moreover, the high effectiveness nurses (group 2) are negatively associated with the function, as can be seen from the coefficients evaluated at the group means, whilst the low effectiveness nurses (group 1) are positively associated with the function. In other words, low effectiveness nurses are can be associated with a sense of loss of control while high experience nurses cannot.

TABLE 2.20

Effectiveness by Verbal Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Show anger	0.91
Call help	0.54

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Low effectiveness (1)	0.38
High effectiveness (2)	-0.82

TABLE 2.21

Effectiveness by Verbal Response Strategy Classification

Actual Group	**Predicted Group Membership**	
	1	**2**
Low effectiveness (1)	**80.6%**	19.4%
High effectiveness (2)	41.2%	**58.8%**

% of cases correctly classified = **73.58%**

Table 2.21 gives the percentage of nurses correctly and incorrectly classified. Overall, 73.8% of nurses can be correctly classified. Closer inspection reveals that 80.6% of low effectiveness nurses can be correctly classified and 58.8% of high effectiveness nurses can be correctly classified.

(v) Assault Rates and Nurses' Ratings of Response Strategies for Physical and Verbal Aggression

Subjects were split into three groups on the basis of how many times they had been assaulted over the previous twelve months or since starting their present job, whichever occurred more recently. Before grouping the nurses a measure had to be found which was comparable across nurses. So, for instance, if a nurse had been working in a particular ward for less than six months, she had less chance of being physically assaulted than a nurse who had been on that same ward for a year or more. To circumvent this problem a proportional score was calculated using data obtained from the question "How many times have you been [physically/verbally] assaulted at work in the last 12 months, or since starting your present job if this occurred more recently?" These data were then divided by the amount of time they had worked on their present ward, setting a maximum of 12 months, because nurses had only been asked to provide the number of times they had experienced either physical or verbal aggression over the previous 12 months or less. The resulting proportional score controls for exposure to potential aggression and allows comparisons between otherwise incomparable groups. Nurses were then allocated to one of three possible groups on the basis of their proportional score. Had the nurses been placed in one of two groups instead of in one of three groups, the verbal analysis would have been unbalanced, with only 9 nurses in one group and 28 in the other.

Physical Analysis

Using the grouping variable of proportional physical assault rates, as described above, nurses were allocated to one of three possible groups: Those nurses who had no incidents of physical aggression (Group 1, N=16), those nurses who had between >0 and <.25 incidents to report

(Group 2, N=10), and those nurses who had reported >.25 incidents (Group 3, N=11). This gives a total of 37 nurses who had experienced some form of physical aggression over the previous twelve months or less. The remaining 17 nurses who make up the total sample of 53 did not complete the critical incidents of physical aggression part of the questionnaire, and therefore had to be excluded from this analysis.

The initial stages of the analysis selected three of the response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Hide feelings" (Wilks' Lambda .81, p<.03), "Raise your voice" (Wilks' Lambda .63, p<.004) and "Match their manner" (Wilks' Lambda .53, p<.00. None of the remaining 29 strategies were eligible for entry into the analysis. The number of discriminant functions calculated is number of groups (in this case three), minus one. For this analysis, it therefore follows, two discriminant functions were calculated to explain group differences. However, although a highly significant first function was revealed (function 1 = p<.002, eigenvalue .79, d.f. 6, accounting for 93.9% of the variance), the second function was non-significant (function 2 = p<.44, eigenvalue .05, d.f. 2, accounting for 6.01% of the variance). This means that the first function was sufficient to explain the differences between the three groups, and that the second function had little to add in terms of discriminating power. The standardised canonical discriminant function coefficients for the first function are displayed in Table 2.22 together with the canonical discriminant function evaluated at the group means. As the Table shows, the nurses can be discriminated on the basis of their ratings of the strategies "Hide feelings", "Raise your voice" and "Match their manner". All of these strategies are positively loaded onto the first discriminant function. It seems, therefore, that this function has something to do with controlled aggression on the part of the nurse. As the group centroids reveal, both the zero assault nurses (group 1) and the low assault nurses (group 2) load negatively onto this function, but the high assault nurses (group 3) load positively onto the function. It seems, therefore that the high assault nurses can be discriminated from the zero and low assault nurses in that they are more in favour of responding to aggression with aggression.

TABLE 2.22

Physical Assault Rate by Physical Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Hide feelings	1.09
Match their manner	0.68
Raise your voice	0.67

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Zero assault (1)	-0.48
Low assault (2)	-0.66
High assault (3)	1.33

TABLE 2.23

Physical Assault Rate by Physical Response Strategy Classification Table

Actual Group	**Predicted Group Membership**		
	1	**2**	**3**
Zero assault (1)	**87.5%**	6.3%	6.3%
Low assault (2)	80.0%	**20.0%**	0.0%
High assault (3)	27.3%	0.0%	**72.7%**

% of cases correctly classified = **64.8%**

Table 2.23 displays the percentage of nurses correctly and incorrectly classified. Overall, 64.86% of the nurses can be correctly classified. Closer inspection reveals that over 87% of the zero assault nurses can be correctly classified, and 72.7% of the high assault nurses can be correctly classified. However, the low assault nurses are misclassified as zero assault nurses in 80% of the cases, with only 20% correctly classified.

Verbal Analysis

Using the grouping variable of proportional verbal assault rates, as described above, nurses were allocated to one of three possible groups. Those nurses who had no incidents of verbal aggression (Group 1, N=9), those nurses who had between >0 and <.25 incidents to report (Group 2, N=14), and those nurses who had reported >.25 incidents (Group 3, N=14). This gives a total of 37 nurses who had experienced some form of verbal aggression over the previous twelve months or less. The remaining 17 nurses who made up the total sample of 53 did not complete the critical incidents of verbal aggression part of the questionnaire, and therefore had to be excluded from this analysis.

The initial stages of the analysis selected two of the response strategies using the minimization of Wilks' Lambda with a default value of three. The variables selected were "Match their manner" (Wilks' Lambda .84, p<.05) and "Give full attention" (Wilks' Lambda .71, p<.0. None of the remaining 30 strategies were eligible for entry into the analysis. A significant first function was revealed (function 1 = p<.02, eigenvalue .37, d.f. 4, accounting for 91.3% of the variance), but the second function was non-significant (function 2 = p<.29, eigenvalue .03, d.f. 1, accounting for 8.7% of the variance). Once again, this means that the first function was sufficient to explain the differences between the three groups, and that the second function had little to add in terms of discriminating power. The standardised canonical discriminant function coefficients for the first function are displayed in Table 2.24 together with the canonical discriminant function evaluated

at the group means. As the Table shows, the nurses can be discriminated on the basis of their ratings of the strategies "Match their manner" and "Give full attention". These strategies are both positively loaded onto the discriminant function. It seems, therefore, that this function has something to do with focused aggression on the part of the nurse. As the groups' centroids disclose, the high assault nurses (group 3) have a high negative loading onto this function, the low assault nurses (group 2) have a moderate negative loading, and the zero assault nurses (group 1) have a high positive loading onto the function. It seems, then, that nurses who have not been verbally assaulted sympathise with a focused aggressive approach to verbal aggression, low assault nurses are moderately against it, and high assault nurses believe it is a bad idea to show focused aggression in response to verbal aggression.

TABLE 2.24

Verbal Assault Rate by Verbal Response Strategies

Standardised Canonical Discriminant Function Coefficients

	Function 1
Match their manner	0.84
Give full attention	0.74

Canonical Discriminant Function Evaluated at Group Centroids

Group Membership	
Zero assault (1)	0.93
Low assault (2)	-0.02
High assault (3)	-0.57

TABLE 2.25

Verbal Assault Rate by Verbal Response Strategy Classification Table

Actual Group	Predicted Group Membership		
	1	2	3
Zero assault (1)	**55.6%**	44.4%	0.0%
Low assault (2)	21.4%	**42.9%**	35.7%
High assault (3)	14.3%	14.3%	**71.4%**

% of cases correctly classified = **56.76%**

Table 2.25 displays the percentage of nurses correctly and incorrectly classified. Overall, 56.76% of nurses can be correctly classified. Closer inspection reveals that over 71% of high assault nurses, 55.6% of zero assault nurses, and 43% of low assault nurses can be correctly predicted. As would be expected from the coefficients, the low assault nurses are not so clearly related to the function, and they are therefore misclassified in 57.1% of cases.

(vi) Summaries of the Discriminant Functions Analyses in both Domains

Summary of the Age Analyses

In the case of physical aggression younger nurses favour an angry and attentive approach to the aggressor, whereas in the case of verbal aggression they believe that listening is an effective response. The reverse is true of older nurses; they don't believe it is effective to listen to the verbally abusive patient and they don't believe that paying attention or showing anger to the physically aggressive patient is going to be of any help.

Summary of the Nursing Experience Analyses

It was found that low experience nurses prefer an attentive and emotional response in the case of physical aggression, whereas the high experience nurses were negatively associated with this approach. On the other hand, the low experience nurses believe looking busy is an effective strategy when dealing with verbal aggression, whereas the high experience nurses do not.

Summary of the Nursing Effectiveness Analysis

The low effectiveness nurses seem to believe that the use of aggressive humour might be effective when dealing with physical aggression, whereas the high effectiveness nurses tend towards a gentler, non-humorous approach. In the case of verbal aggression, low effectiveness nurses are associated with a loss of control and seeking external help, whilst the high experience nurses are not.

Summary of the Assault Rates Analyses

In the case of physical aggression, zero and low assault nurses are both negatively related to controlled aggression, whereas the nurses who have more experience of aggression tend to favour the use of controlled aggression. The opposite, however, is true in the case of verbal aggression. Here, it seems that high assault nurses are against the use of focused aggression, and zero assault nurses are in favour, while the low assault nurses lie somewhere between the other two groups.

Conclusions about the Discriminant Functions Analyses in both Domains

As hypothesised, age, nursing experience, self-rated effectiveness at handling aggression, and the number of times a nurse has been physically or verbally assaulted, do discriminate between the theories nurses hold about how to respond to both physical and verbal aggression. In general, the discriminant analyses revealed that older, more experienced, more effective, and more verbally abused nurses favour approaches characterised by the successful response strategies. They believe

that gentler, more controlled approaches are the most effective responses to both physical and verbal aggression. This pattern breaks down, however, when nurses have relatively high experience of physical aggression. These nurses favour an aggressive approach when dealing with physical aggression. In general, the younger, less experienced, less effective, and zero or low assault nurses can be associated with emotional and sometimes aggressive responses to both physical and verbal aggression.

4. DISCUSSION

The findings of this study provide important insights into nurses' theories about successful and unsuccessful approaches to handling aggression. It allows the two domains of physical and verbal aggression to be distinguished and compared with one another in this respect, and it provides a means with which to discriminate between nurses' theories about aggression management on the basis of such things as their age, nursing experience and experience of aggression.

The data were gathered using "The Nurses' Questionnaire", in which nurses were asked to rate the effectiveness of 31 response strategies in relation to both physical and verbal aggression. Out of the 150 questionnaires distributed a total of 53 were returned which formed the basis for factor analyses and discriminant function analyses.

Summary of the Typologies of the Successful Response Strategies

In the case of physical aggression, the factor analysis of the successful response strategies revealed a total of five factors, of which two were considered to be particularly important. These were the Nurturance factor, which accounted for 29% of the variance, and the Assertiveness factor, accounting for 13.3% of the variance. These factors contained items such as: Give them your full attention; listen; show your are on their side; ask for an explanation; talk softly and look friendly (the Nurturance factor), and, stand no nonsense; show they'll get nowhere and remain calm and

firm (the Assertiveness factor). In addition, the analyses revealed lesser factors which were labelled the Permissiveness, Reactivity and Concealment factors, respectively.

The factor analysis of the successful response strategies for verbal aggression revealed factors that were remarkable similar to those revealed for physical aggression. The analysis uncovered a total of six factors, of which three were regarded as highly descriptive because they accounted for the most variance. They were the Fostering factor (26.8% variance); the Fact-finding factor (14.9% variance), and the Assertiveness factor (10.1%). The Fostering and Fact-finding factors between them contained much the same response strategies as those found in the first factor in the physical analyses, the Nurturance factor. They contained; hide one's feelings; listen; and talk softly (the Fostering factor), and, ask for an explanation and give your full attention (the Fact-finding factor). In addition to this, the Assertiveness factor had a lot in common with the factor of the same name in the physical analyses, namely: stand no nonsense and show they'll get nowhere. And finally, one of the other factors revealed by the verbal analysis, the Permissiveness factor, was very similar to the Permissiveness factor in the physical analyses.

Because of the similarity between the factor structures obtained in the physical and verbal domains of the successful response strategies it was concluded that nurses believe the same approaches to be successful when dealing with both physical and verbal aggression. These approaches can be summarised as caring and nurturant as well as assertive and firm.

Summary of the Typologies of the Unsuccessful Response Strategies

These factor analyses revealed comparatively little similarity between those approaches regarded as unsuccessful in the case of physical aggression and those regarded as unsuccessful in the case of verbal aggression. In the case of physical aggression, a total of seven factors were revealed, of which three were regarded as more important because they accounted for more variance. The first

was the Authoritarian factor (19%), containing such strategies as threaten with authority; match their manner; look authoritative & stern and show your anger. The second was the Demeaning factor (12%), containing such strategies as treat them like a naughty child, scold them and make a joke at their expense, and finally, the Defensive factor (10.6%), comprising raise your voice and become indignant. The remaining four factors were labelled Denial, Defusion, Humour and Displacement and all accounted for 8.9% of the variance or less.

The factor structures described above in relation to physical aggression have little in common with those which emerged from the verbal analysis. This analysis revealed a total of six factors, of which the first two accounted for most of the variance, with a particularly strong first factor. The first factor was labelled the Deflection factor (24.5%) and contained the response strategies of hide your feelings; listen and talk softly. Nothing similar to this factor can be found in the factor structures of the physical analyses. The second most important factor was called the Anger factor (11.6%) and was comprised of the responses become angry; look authoritative and stern; match their manner and show anger. Although this factor is similar to the first factor in the physical analysis, the Authoritarian factor, because it contains three of the same response strategies, the conjunction of items makes it quite distinct. The remaining four factors were labelled Timidity, Denial, Avoidance and Defensive. They all accounted for 9.7% of the variance, or less. As can be seen, the Denial and Defensive factors are also found in the physical domain, and these two factors are the basis of any similarities between the two domains.

Although there was some similarity between the unsuccessful approaches in the two domains of physical and verbal aggression in the form of the Denial and Defensiveness factors, it was concluded that the typologies were far more dissimilar than similar. In other words, in the case of physical aggression authoritarian, demeaning and defensive approaches were considered

particularly unsuccessful, whereas in the case of verbal aggression deflection and anger were considered particularly unsuccessful.

Conclusions on the Typologies of Response Strategies

Overall, the factor analyses of the response strategies revealed several important findings. First, nurses believe that both verbal and physical aggression can be successfully dealt with by being caring and by being assertive. Second, the nurses believe that physical aggression is unsuccessfully dealt with by being authoritarian, demeaning and defensive, while verbal aggression is unsuccessfully dealt with by deflecting the aggression or by getting angry back. And third, the approaches for dealing successfully with verbal and physical aggression are far more similar than the approaches for dealing unsuccessfully with verbal and physical aggression.

The insights provided by the factor analyses and the conclusions drawn from them can be usefully applied within the framework of the planned training programme. They will provide a discussion point from which nurses can begin to explore their own approaches to aggression and their assumptions about how to deal with it successfully.

Discriminating between the nurses

The discriminant functions analyses reported in this chapter successfully discriminated between nurses' theories about how to handle aggression on the basis of age, nursing experience, self-rated effectiveness at handling aggression and experience of aggression. In general, it was found that older, more experienced, more effective nurses favoured less aggressive responses than the young, less experienced and less effective nurses. This pattern broke down only when examining the nurses who had experienced higher levels of physical aggression. These nurses were associated with an aggressive response to both verbal and physical aggression, unlike nurses who had little or no experience of physical aggression. In contrast, nurses with more experience of verbal

aggression were associated with more pacifying approaches to both physical and verbal aggression than were nurses who had little or no experience of verbal aggression.

Although these analyses do not provide any objective evidence of the efficacy of using more pacifying approaches, it was compelling to find that the more mature and experienced nurses as well as those who rated themselves as more effective at handling aggression favoured more pacifying approaches than the younger, less experienced and less effective nurses. These findings seem to indicate that it might be the case that non-aggressive and nurturant responses are actually more effective when dealing with aggression. However, this cannot be verified until the next study which will examine what nurses actually did when facing aggression, and how well their strategies worked.

The finding that those nurses who had greater experience of physical aggression favoured an aggressive approach was also considered to be of great interest, although no firm conclusions can be drawn without further investigation into it. The effects of a nurse's experience of aggression will be examined in chapter 4 in relation to her ability to cope with aggressive incidents in terms of her general emotional well-being.

Final Conclusions

This study has covered new ground, and has provided some useful insights into the theories nurses hold about dealing with aggression and the differences between nurses in terms of these theories. The study itself was exploratory and the findings which it produced will be used to stimulate discussion amongst nurses in the planned training programme. Using these findings, amongst others, nurses will be helped to take a fresh look at their attitudes and methods of dealing with aggression.

CHAPTER THREE

REAL-LIFE RESPONSES TO AGGRESSION

1. INTRODUCTION

In the previous chapter, nurses' theories about various ways of responding to aggression were examined. In this chapter the aim is to examine what nurses *actually* did last time they dealt with an incident of physical or verbal aggression. Nurses were asked to remember the last incident of aggression in which they were involved at work, and to rate 31 response strategies in relation to that incident. They had to decide whether or not they had used each strategy while dealing with the incident, and, if they had, how effective it had proved to be.

Once the decision had been made to examine how nurses deal with real-life incidents of aggression, the major issue became one of methodology - whether to use observation or self-report to collect the data. Clearly, observation is more objective, and a highly trained observer may notice things that the nurse, when subsequently reporting an incident, may have missed. However, the problem with aggressive incidents in hospital is that they are spasmodic. This means that the observer would need to invest an enormous amount of time to obtain a respectable sample of aggressive incidents, conceivably years. In addition, even if the time were available, the spasmodic nature of such incidents could lead to a delay between the onset of the incident and the arrival of the observer. Such a delay would potentially be damaging, because the observer could miss many of the crucial behaviours in the developing sequence between nurse and patient. For these reasons the decision was made to rely on self-reports about critical incidents of aggression, given by the nurses who had been involved in them.

One advantage of using a self-report method for obtaining data about nurses' responses to aggression, is that the variables can be carefully defined prior to collecting the data. In this case,

the 31 responses which nurses were asked if they had used were derived from lengthy interviews with 20 senior nurses, and it was believed that these responses were representative of the methods that nurses use to control aggression. In addition, because these behaviours had already been used to find out more about nurses' theories about how to handle aggression (as reported in chapter 2), the data on their "real-life" responses could be compared with their theories.

A wide range of additional data were gathered about such things as a nurse's emotional responses to aggressive incidents, the importance of the event to her, how much control she felt she had over it, and whether she had anticipated it. These data were used to discriminate between the nurses who were more effective at handling aggression and those who were less effective at handling aggression. The study was also designed to examine the way in which each nurse's theories about how to handle aggression influenced her behaviour when she came to deal with it in real-life. The aims of the study are covered in more detail below.

2. GENERAL AIMS

Because this was an exploratory rather than an experimental study, general aims were used to guide it in the place of hypotheses. These aims influenced the design of the study and the types of analyses used to examine the data. They were as follows:

a) To find out which are the most effective and the most ineffective responses to both physical and verbal aggression.

b) To compare the use of different responses in the domains of physical and verbal aggression.

c) To examine the relationship between the *theoretical* and *actual* effectiveness of the behavioural responses. That is, do the nurses' theoretical models of what are effective ways of dealing with

aggression (as reported in chapter 2) actually work when they are used?

d) To examine the relationship between a nurse's theories of how to handle aggression and her effectiveness when she deals with a real-life incident.

e) To look at the relationship between the number of different responses employed by each nurse when dealing with aggression and her effectiveness.

f) To examine what discriminates between nurses in terms of their ability to cope with aggression.

3. METHOD AND PROCEDURE

A. Subjects

Of the 53 nurses who took part in the study reported in chapter 2, 48 also provided data for the present study. The remaining five nurses were discarded because they did not report any critical incidents of aggression over the preceding 12 months. In addition to these 48 nurses a supplementary sample of 17 nurses was obtained from the same hospital. The supplementary nurses were randomly selected from the staff canteen and were considered to represent a reasonable cross-section of both grades and wards. The supplementary nurses brought the total sample up to 62, of whom 60 were female and 2 were male. Their average age was 27.5 and the mean nursing experience in the sample was 7.4 years.

B. Materials and Method

The materials for this study consisted of The Nurses' Questionnaire (Part 2 - see Appendix 2), and the Nurses Questionnaire Supplement (see Appendix 3). Nurses were asked to provide information about the most recent incidents of both physical and verbal aggression in which they

had been involved at work. As in the case of the study reported in chapter 2, the nurses were asked to include aggressive incidents in which patients, relatives, visitors or other members of the public had been involved. Those nurses who had experienced both physical and verbal aggression in the previous 12 months provided two critical incidents, while those nurses who had only experienced a verbal or physical incident provided one critical incident.

Nurses rated the same 31 responses strategies that had been used in the study reported in chapter 2. They were asked to recall an incident and then to remember if they had used each of the 31 strategies to deal with it at any point during the incident. If they had not used it they circled "nu", standing for "not used", and if they had used it they circled "u" for "used". If they had used the strategy they were then asked to make a judgement about how effective it had been in dealing with the aggression. The nurses made these judgements on a bi-polar five-point scale ranging from "Totally ineffective", through "Neither effective nor ineffective", up to "Totally effective". If nurses could recall both a physical and a verbal incident of aggression, they rated both as described above.

In addition to the information about the responses they had used, the nurses also provided information about how they had felt emotionally both during and immediately after each incident. They rated a total of eight emotions on a five-point scale ranging from "Not at all" to "Very much indeed". The emotions were: depressed; miserable; tense; anxious; frightened to carry out my duties; confused and uncertain; demoralised; confident I had handled the situation well; guilty or ashamed; stressed.

And finally, the nurses rated a five-point unipolar scale (running from "not at all" through to "very much so") in relation to the following statements: How important was the incident to you at the time? How much control did you see yourself as having over the outcome of the incident? Had

you anticipated that this incident was going to arise? To what extent do you think the incident was avoidable? and, overall, how well do you feel you coped with this incident?

As for the previous chapter, please note that aggression may be referred to as "patient aggression" throughout this chapter, but this includes aggression involving relatives, visitors and other members of the public.

4. RESULTS

A. The Behavioural Response Strategies

Before moving on to examine the behavioural responses in more detail, a number of facts need to be made clear. First, the 62 nurses provided a total of 51 incidents of physical aggression and a total of 51 incidents of verbal aggression. However, while some of the nurses provided critical incidents in both the physical and the verbal domains of aggression, some only provided a critical incident of either physical or verbal aggression.

Second, it was not possible to use the whole sample of 62 nurses in all of the analyses reported in this results section. In particular, when comparing nurses' theories about how to handle aggression with what they actually did, and when comparing their anticipation of how well they would handle aggression with how well they actually did handle aggression, it was only possible to use the 48 nurses taken from the original sample used in chapter 2. This was because the supplementary nurses had not been asked to provide information about their theories and could not, therefore, be included in the analyses which made use of these data.

The first analyses to be presented below utilise the total sample of 62 nurses, and help to describe the behavioural responses. Particular attention has been paid to the effectiveness of the

strategies in dealing with aggression in both domains, and how the strategies compared across the two domains.

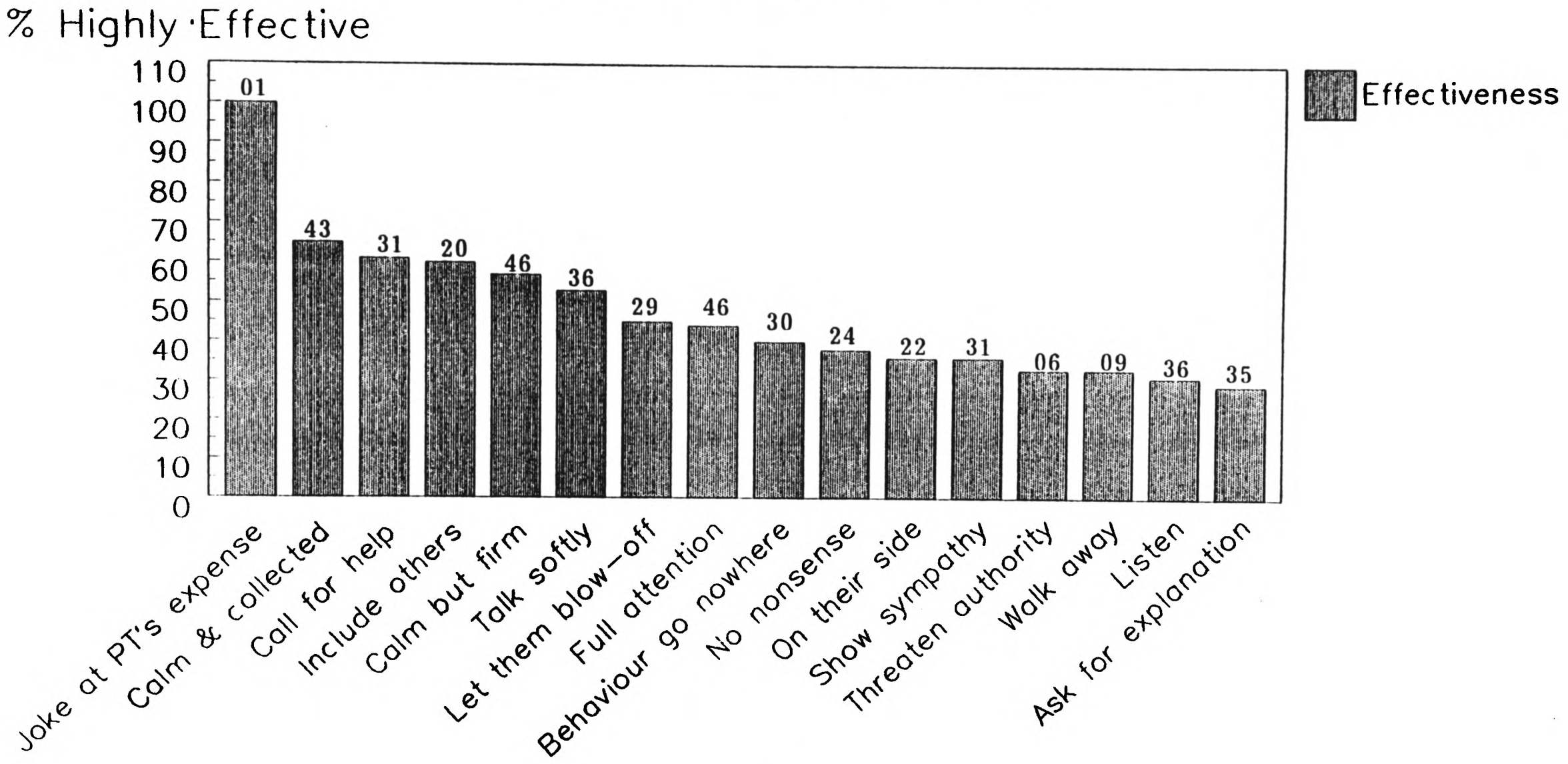
(i) Describing the Behavioural Responses in both Domains of Aggression.

Physical Aggression

Tables 3.1 and 3.2 summarise the data on how often each behavioural response strategy was actually used by the nurses when dealing with physical aggression, and how effective each proved to be. The effectiveness of each strategy was calculated by working out how often it had been awarded a rating of 4 or 5 on the scale (ie. the top effectiveness rating) and then by dividing this figure into how often it had been used by the sample of nurses. To give an example, the strategy of remaining calm and collected was used 43 times, and it was rated as highly effective (ie. achieving a rating of 4 or 5) on 65% of the occasions it was used. Or to give another example, the strategy of walk away was used 9 times, and out of these 9 times if was given a highly effective rating by 35% of the nurses who used it.

TABLE 3.1

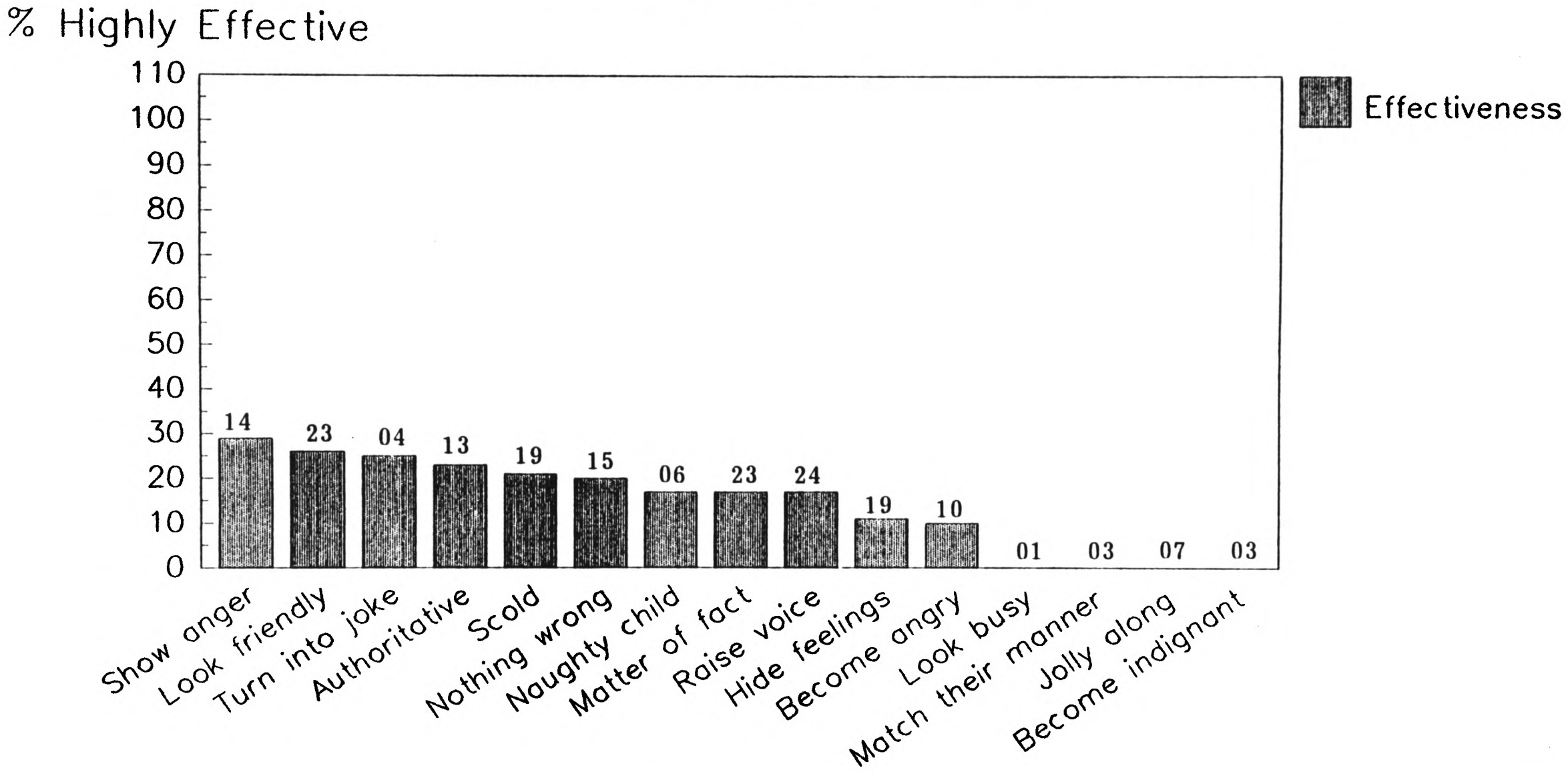
Usage and Effectiveness
(Physical Aggression 1)



The number above each bar represents the number of times that particular behaviour was used

TABLE 3.2

Usage and Effectiveness
(Physical Aggression 2)



The number above each bar represents the number of times that particular behaviour was used

Looking at the two Tables it is possible to see which strategies the nurses used most often and which they considered to be highly effective. For example, those behavioural responses which are rated as highly effective by 50% or more of the nurses who used them, are: remain calm and collected; call for help, include others, act calm but firm and talk softly. (Although the strategy of joke at the patient's expense was rating as highly effective 100% of the times used, it was only used by 1 nurse, and has therefore been discounted.)

Tables 3.1 and 3.2 also give some indication of the strategies which were used and regarded as either neutral or ineffective. These strategies are the ones which received 30% or fewer endorsements as highly effective. This means than 70% or more of the nurses rated these strategies as either neutral or ineffective on the bi-polar scale. Out of the 31 behavioural responses, 17 of them fell into this category. They are: listen; ask for an explanation; show anger: look friendly; turn it into a joke; look authoritative & stern; scold them; act as though nothing is wrong; treat them like a naughty child; become matter of fact; raise your voice; hide your feelings; become angry; look busy; match their manner; jolly them along and become indignant.

The nurses used the ineffective responses quite a lot, although they were not used as often as the responses which turned out to be effective. This can be seen by examining the figures above each column which represent the number of nurses who used that strategy.

One final point which is worth noting relates to the most frequently used of the high and low effectiveness strategies. Of the five strategies rated as highly effective by over 50% of nurses, the most frequently used were calm and collected (used 43 times) and calm but firm (46), and, of the 17 strategies rated as neutral or ineffective by over 60% of nurses, the most frequently used were listen (36), ask for an explanation (35), raise your voice (24), become matter of fact (23) and look friendly (23).

In summary, while only five behavioural response strategies were rated as highly effective by 50% or more of the nurses, a range of 17 strategies were rated as either neutral or ineffective.

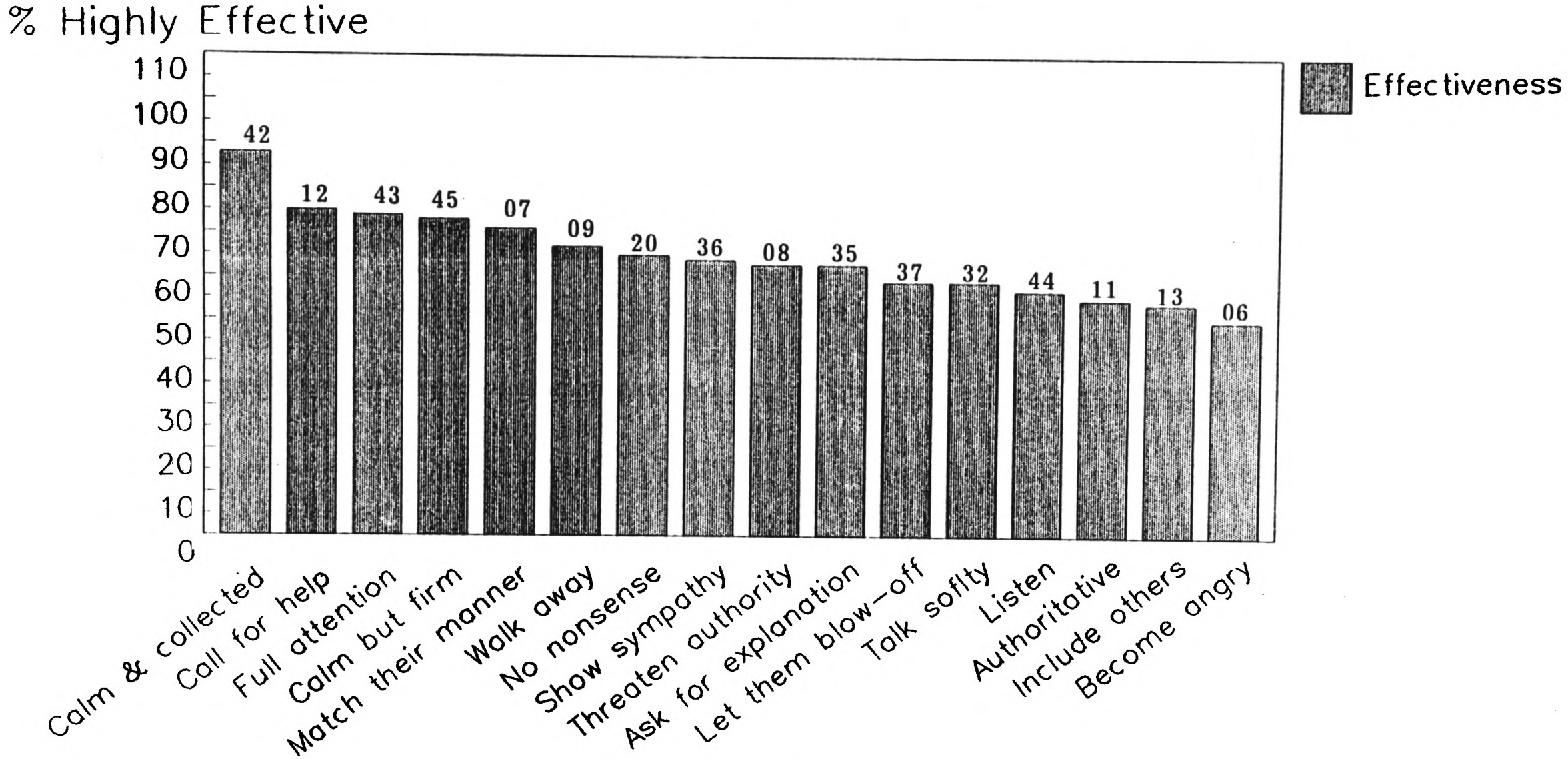
Verbal Aggression

Tables 3.3 and 3.4 summarise the data on how often each behavioural response strategy was used by the nurses when dealing with verbal aggression, and how effective each proved to be. Once again, the effectiveness of each strategy was calculated as a proportional score of its usage and the graphs give the percentage for which each strategy was regarded as highly effective by the nurses who had used them.

It is immediately apparent from Tables 3.3 and 3.4 that far more of the strategies were regarded as highly effective than was the case in the domain of physical aggression. In fact, 18 of the strategies were rated as highly effective by 50% or more of the nurses, compared with only five strategies for the physical aggression data. Indeed, there is almost a complete reversal, because only six strategies were rated as either neutral or ineffective by 30% or less nurses, compared with 17 in the domain of physical aggression. Moreover, four of these strategies were used two or less times.

TABLE 3.3

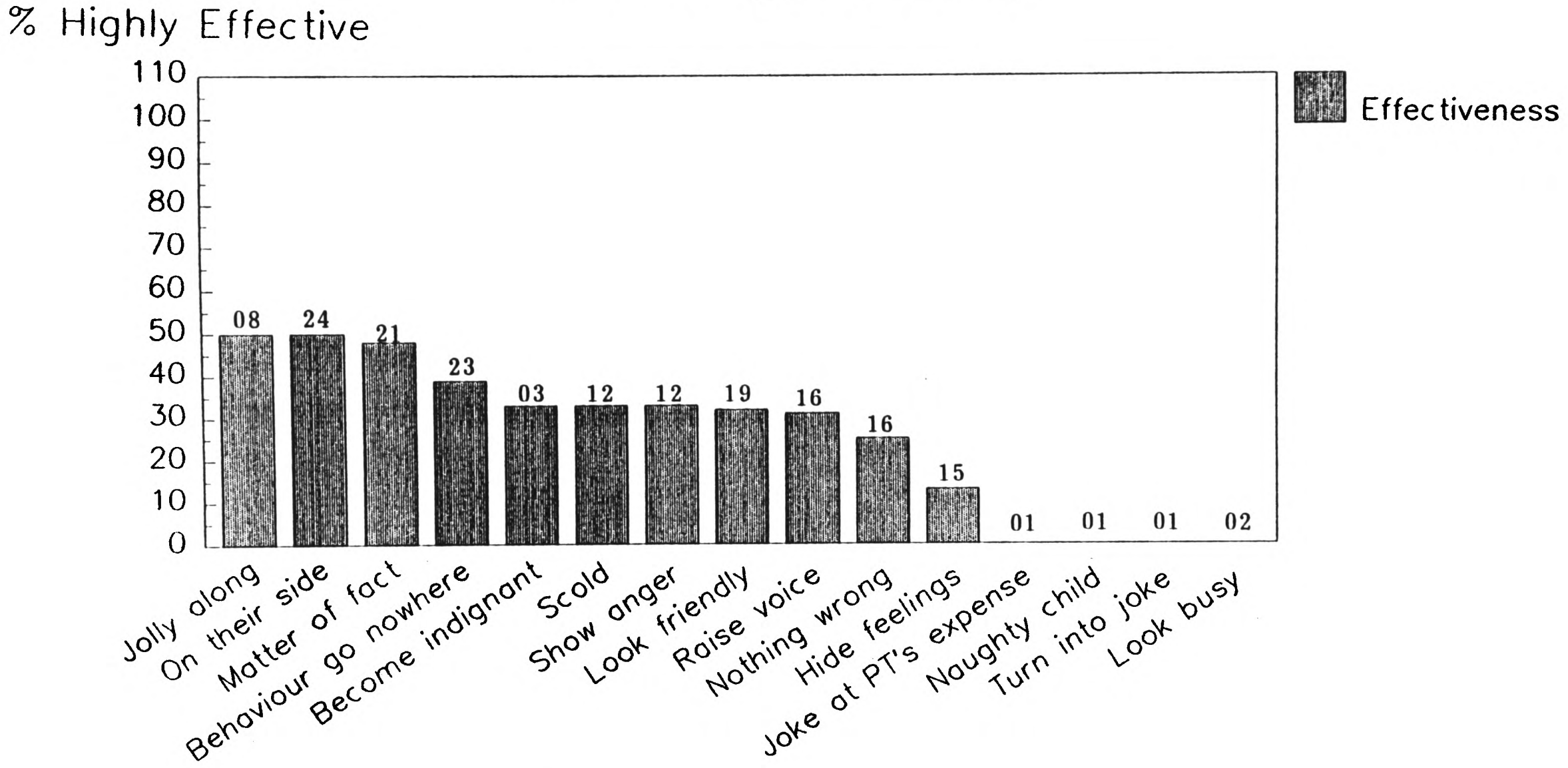
Usage and Effectiveness
(Verbal Aggression 1)



* The number above each bar represents the number of times that particular behaviour was used

TABLE 3.4

Usage and Effectiveness
(Verbal Aggression 2)



The number above each bar represents the number of times that particular behaviour was used

Of the effective strategies, rated as such by 50% or more nurses, the most frequently used were as follows: calm but firm (45); listen (44); full attention (43); and remain calm and collected (42). It is particularly interesting to note that the strategy of listen appears as not only a frequently used strategy, but also as one which is rated as highly effective by almost 60% of the nurses who used it. In the case of physical aggression, it was frequently used (36 times), but was rated as neutral or ineffective by more than 60% of the nurses who used it. Of the five strategies which were rated as neutral or ineffective by these nurses, four of them were used no more than two times. The remaining two were, "act as though nothing is wrong" (used 16 times), and "hide your feelings" (used 15 times).

In summary, it is apparent from the data that there are many more ways of dealing effectively with a verbally aggressive person than there are ways of dealing effectively with a physically aggressive person. In fact, nurses rated 18 strategies as highly effective when dealing with verbal aggression, while rating only five as highly effective when dealing with physical aggression. In addition to this, it appears that some strategies are effective within both domains of aggression. These are: calm and collected and calm but firm. However, a number of other strategies that are effective when dealing with verbal aggression are neutral or ineffective when dealing with physical aggression.

(ii) Comparing Theoretical with Actual Effectiveness

One of the difficulties of dealing with real-life data is that they often fail to observe the rules of experimental design. These data were no exception. When nurses were asked to report if they had used a particular response strategy last time they had dealt with an aggressive incident, they were given the option of saying, "no, I did not use this particular strategy" or "yes, I did use this particular strategy, and, in addition, it proved to be effective/ineffective". The outcome of giving the nurses such flexibility was a large amount of "missing data". In other words, not all the nurses used all of the strategies all of the time, and when they did not use a strategy its effectiveness

score became missing data. This restricted the type of analyses that could be done. Ideally, factor analyses, matching those that were used in chapter 2, would have provided some insight into whether or not nurses found the same approaches useful in reality as they had anticipated in theory. These analyses, however, were not possible given the fact that there was so much missing data.

Although there are ways of dealing with missing data, they are not entirely satisfactory. It is, for example, possible to recode the missing data so that it becomes the lowest point on an already existing scale. In the context of the present data, this would have meant that the "did not use" category became the 0 on the effectiveness scale. In other words, instead of having a five-point scale of effectiveness ranging from 1 to 5, it would have become a six-point scale, ranging from 0 to 5. It was felt, however, that such manipulation of the data would produce misleading results. Certainly, it would have meant that those strategies which were not used by individual nurses would have been categorised as ineffective, when it may have been the case that those strategies, if they had been used, would have been extremely effective. This would have distorted the results of the factor analyses, making it very difficult to draw comparisons between those factor analyses done in chapter 2 and those done in this chapter.

For the reasons given above, it was decided not to use factor analyses to find out if the nurses regarded the same approaches as effective in theory as they did after they had actually used them. Instead, the analyses were kept very simple, and the ranked effectiveness of the strategies derived from the data in chapter 2 (the 'theoretical' data) were compared with the ranks produced by the data being reported in this chapter (the 'real-life' data). The ranks were obtained by averaging the effectiveness scores within both sets of data, and then rank ordering the averages.

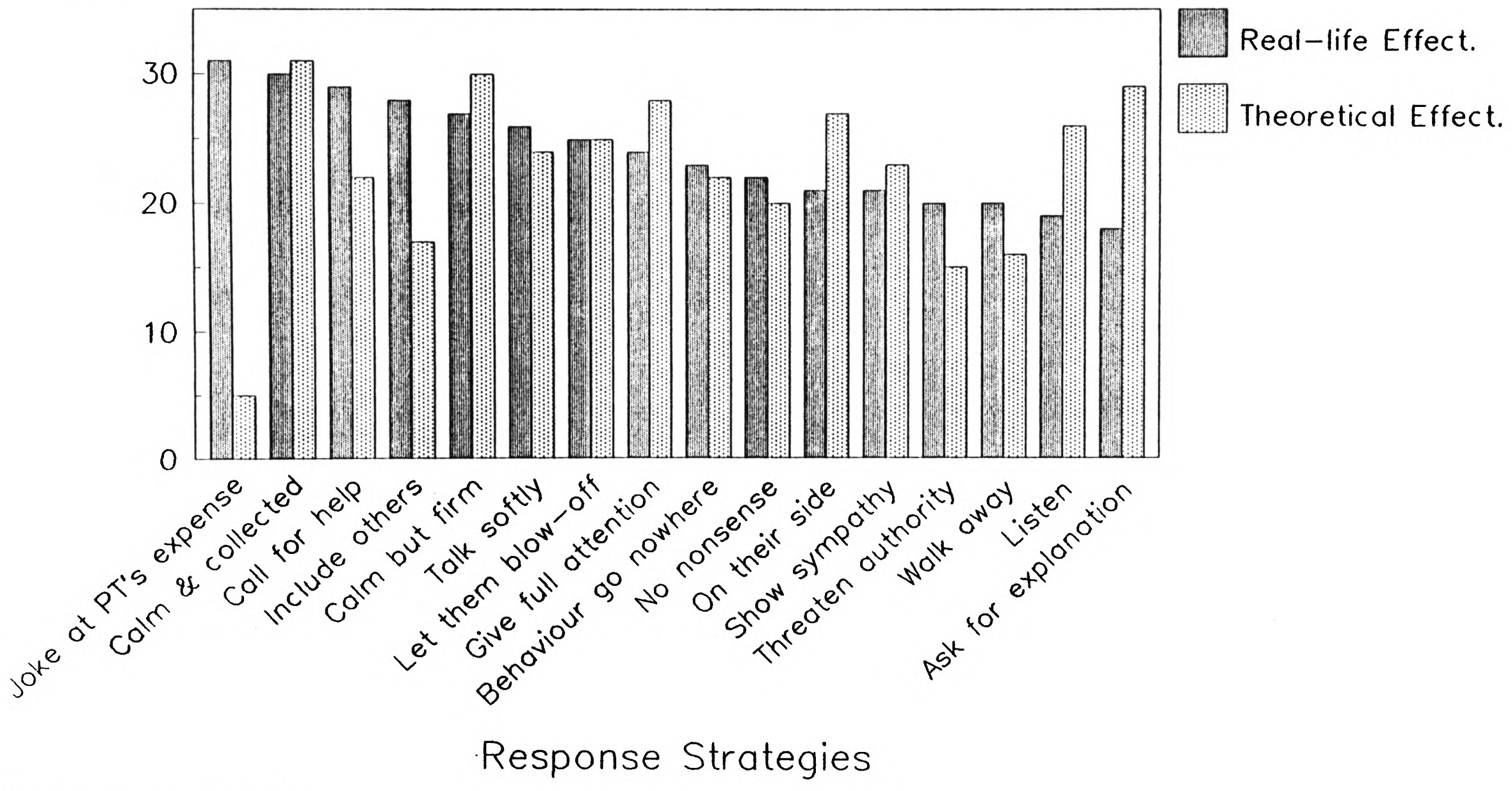
Physical Aggression

The rank order of the theoretical and real-life effectiveness scores are presented in graphical form in Tables 3.5 and 3.6. The Tables display two bars for each strategy, the darker bar represents the rank order of the effectiveness scores for the real-life data, and the lighter bar represents the rank order of the effectiveness scores for the nurses' theories data. And so, for example, the strategy of remaining calm and collected is the second most effective way of dealing with *real-life* physical aggression, and it is ranked as the most *theoretically* effective way of dealing with physical aggression.

The ranks were submitted to Spearman's p (rank correlation coefficient), to check statistically to see if they were similar to one another. In fact, the theoretical and real-life rankings were significantly similar ($r=0.519$, $p<.001$).

TABLE 3.5

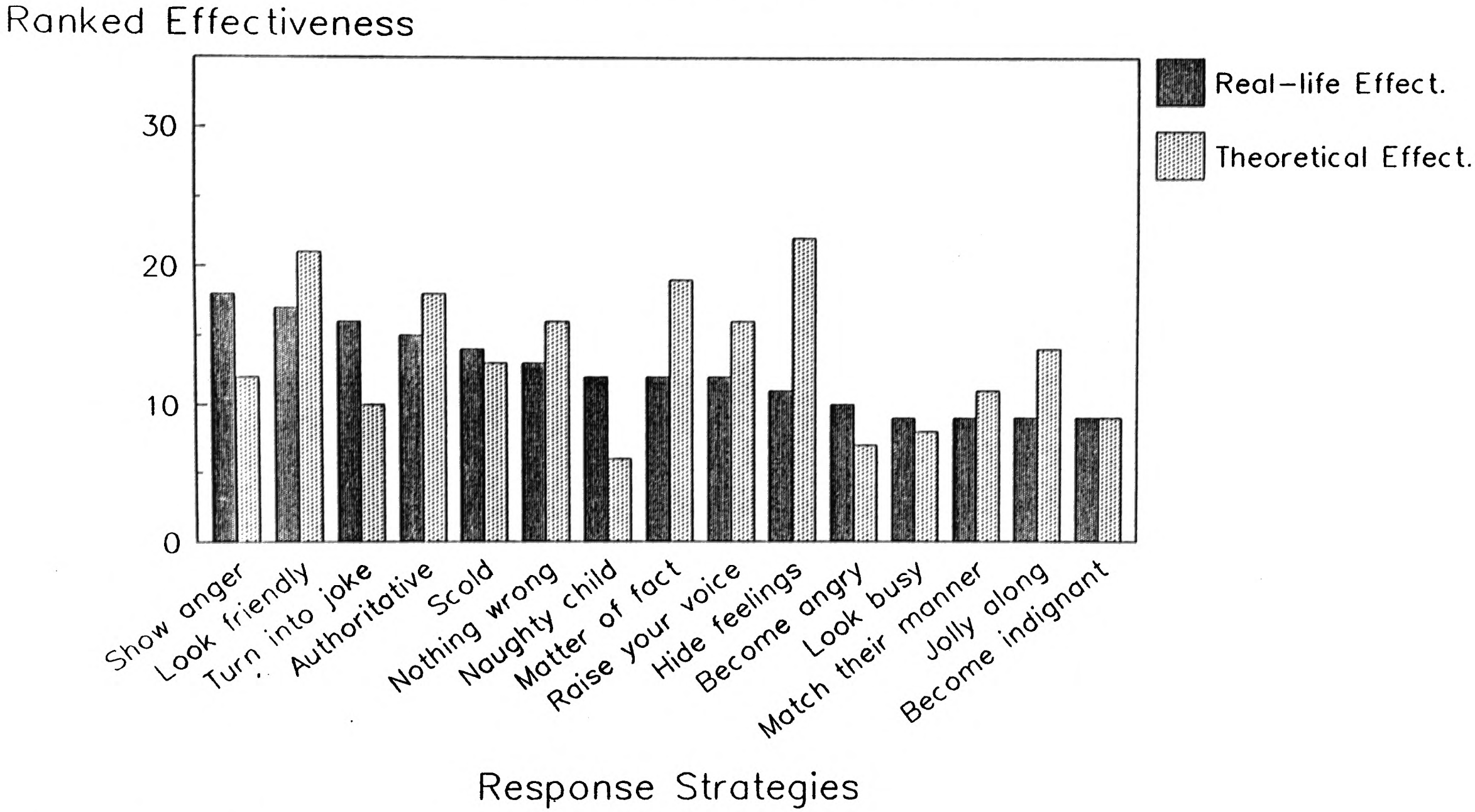
Comparing Anticipated & Actual Effectiveness (Physical Aggression 1)



Spearman's p=.56

TABLE 3.6

Comparing Anticipated & Actual Effectiveness (Physical Aggression 2)



Spearman's p=.52

Although the test of similarity between the rank correlations shows them to be significantly related, it is worth noticing the major differences between the theorised and actual effectiveness of the strategies. Some of the strategies turned out to be *more* effective than the nurses' theories suggested would be the case. This discrepancy is particularly obvious with the strategy of 'make a joke at the patient's expense', but this will be ignored for the moment as it was only used in a real-life incident by one nurse. The other strategies which most markedly display this characteristic are: call for help; include others; show anger; turn it into a joke; and, treat them like a naughty child.

A number of other response strategies turned out to be *less* effective when used than had been anticipated in theory. The largest discrepancies occur within the strategies of listen, ask for an explanation, look friendly, become matter of fact, hide your feelings and jolly them along.

In summary, nurses' theories about which are the most effective ways of dealing with physical aggression are significantly similar to their real-life experiences about which are the most effective ways of dealing with physical aggression. However, it is worth noting that there are some instances where the nurses' theories and the actuality are different. In particular, nurses underestimate the usefulness of calling for help, including others, showing anger, turning it into a joke and treating the aggressor like a naughty child. On the other hand, they overestimate the usefulness of listening, asking for an explanation, looking friendly, becoming matter of fact, hiding their feelings and jollying the patient along.

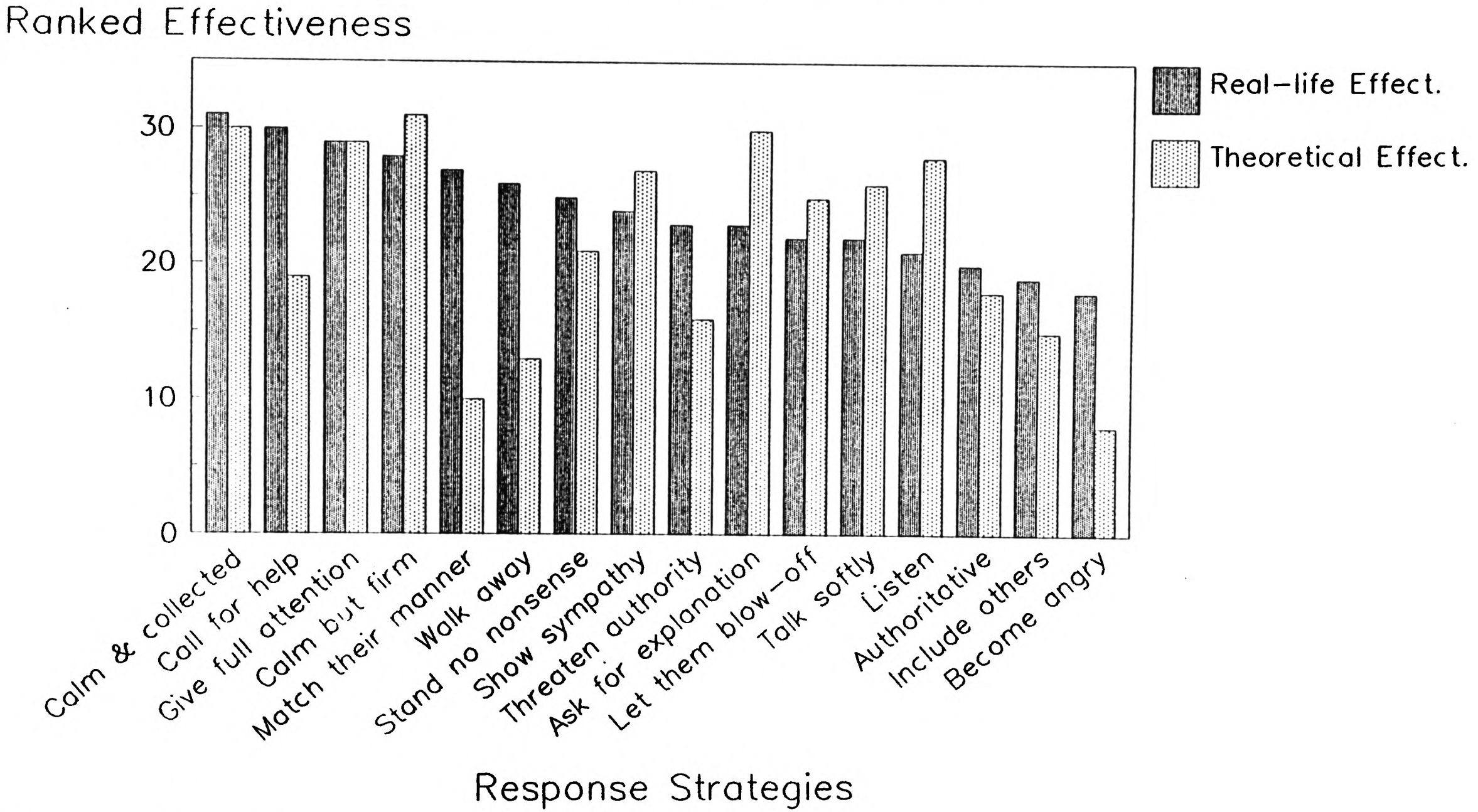
Verbal Aggression

The rank order of the theoretical and real-life effectiveness scores are presented in graphical form in Tables 3.7 and 3.8. Once again, there are two bars for each strategy, the darker of which represents the real-life data and the lighter of which represents the theory data. The ranks were

submitted to Spearman's p (rank correlation coefficient), and returned a highly significant result ($r=0.560$, $p<.001$). It can therefore be concluded that the rank ordering of the real-life and theoretical effectiveness ratings are significantly similar to one other.

TABLE 3.7

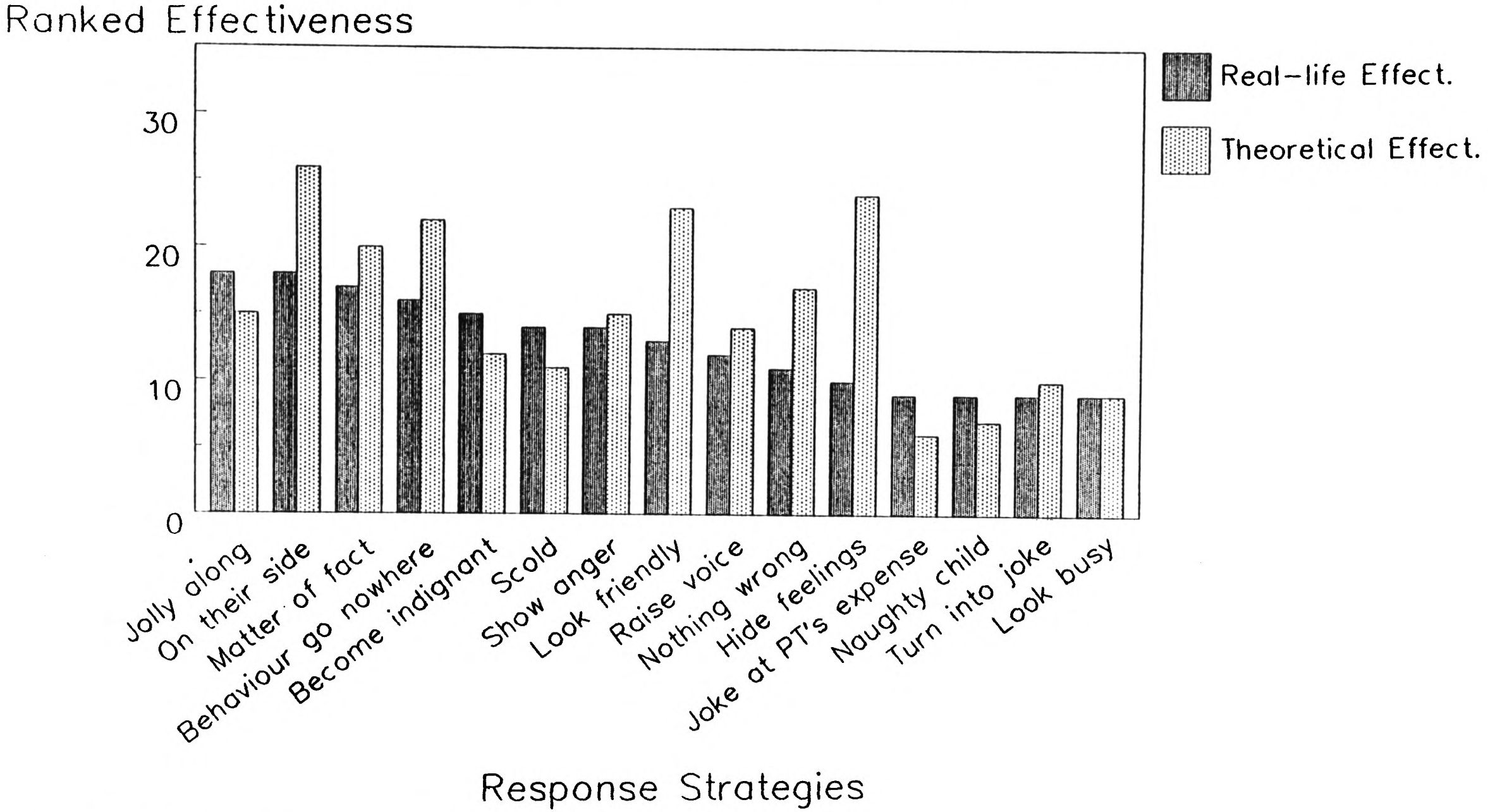
Comparing Anticipated & Actual Effectiveness (Verbal Aggression 1)



Spearman's p=.56

TABLE 3.8

Comparing Anticipated & Actual Effectiveness (Verbal Aggression 2)



Spearman's p=.56

In spite of the statistical confirmation of the consistency between nurses' theories about how to handle verbal aggression and the reality of how to handle it, there are some discrepancies which are worth noticing. For example, the strategies which are *less* effective than had been anticipated by the nurses' theories included: ask for an explanation; listen; show you are on their side; show their behaviour will get them nowhere; look friendly; and, hide your feelings. While the strategies that turned out to be *more* effective than the nurses had anticipated were: call for help; match their manner; walk away; threaten them with higher authority; and become angry.

In summary, the nurses' theories and their real-life experiences about how to handle verbal aggression are significantly similar. However, in spite of this, there are a number of strategies which were believed to be more or less useful in theory than they turned out to be in practice. In particular, nurses underestimate the usefulness of calling for help, matching their manner, walking away, threatening them with higher authority and becoming angry. In contrast, they overestimate the usefulness of asking for an explanation, listening, showing you are on their side, showing their behaviour will get nowhere, looking friendly and hiding your own feelings.

B. Individual Nurses and their Skill at Dealing with Aggression

The two sets of analyses described below will examine 1) the relationship between a nurse's theories of how to handled aggression and how well she handled it in real-life, and 2) what it is that discriminates between nurses who are skilful at dealing with aggression and nurses who are not.

These analyses were done on a sub-sample of 48 nurses, who had all provided data on their theories about how to deal with aggression as well as at least one incident of real-life aggression. A total of 37 nurses gave data on a real-life incident of physical aggression, and provided ratings about the effectiveness of the response strategies which they had employed to deal with it, and

35 nurses provided similar ratings for the last verbal incident of aggression in which they had been involved. And finally, a total of 26 nurses reported both a verbal and a physical incident.

(i) Can Nurses Predict how well they will Deal with Aggression?

The question to be answered by these analyses is, to what degree do a nurse's theories about the effectiveness of various behaviours influence her effectiveness when dealing with a real-life incident? If there is a relationship between her theories and her ability to handle aggression, it would be expected that the averages of her theoretical effectiveness score and her real-life effectiveness score would be very similar. Indeed, if the strategies that she chose to use in the real-life incident were *more* effective than her theories suggest she will probably be quite content with her performance, whereas if the strategies that she chose were *less* effective than her theories suggest she will probably be discontent with her performance. While these variables have not been directly measured, it is possible to divide the nurses into two groups - those who were as effective, or even more effective, than their theories suggested it was possible to be when dealing with aggression ("skilled strategists"), and those who were less effective than their theories suggested it was possible to be when dealing with aggression ("unskilled strategists").

The mean "theoretical" effectiveness score was calculated by summing the effectiveness ratings given in chapter 2 and then dividing by 31 (the total number of strategies). The mean "actual" effectiveness score was calculated by summing the effectiveness rating each nurse gave to the strategies she had employed when dealing with aggression and then dividing this figure by the number of strategies she had used. These calculations provided scores for both theoretical and actual effectiveness. By subtracting one from the other it was possible to establish if the nurse had been more or less effective than her theories had predicted, and to consequently define her as a skilled or unskilled strategist.

TABLE 3.9

Behavioural Responses: The Usage and Differences between Theoretical and Actual Effectiveness Scores for each Nurse in Both Domains

	PHYSICAL		VERBAL	
NURSE	No. of Behaviours	Effectiveness Difference	No. of Behaviours	Effectiveness Difference
1	12	0.40	11	0.38
2	14	-1.72	-	-
3	12	-0.36	10	1.19
4	-	-	12	1.17
5	15	-0.72	-	-
6	12	1.10	14	1.28
7	13	-0.75	8	1.60
8	-	-	14	-0.23
9	-	-	10	0.99
10	-	-	10	-1.13
11	6	1.19	-	-
12	-	-	9	0.81
13	12	-0.22	-	-
14	8	0.51	-	-
15	11	-0.16	8	1.26
16	9	-0.03	-	-
17	-	-	9	1.41
18	13	-1.05	16	0.16
19	13	-0.92	14	1.21
20	8	-1.77	11	-0.13
21	9	0.53	20	-0.39
22	12	1.22	12	0.70
23	13	0.73	7	1.05
24	13	0.55	10	0.49
25	8	-1.77	13	0.18
26	15	-0.97	12	1.05
27	19	0.67	14	0.88
28	8	0.73	-	-
29	-	-	16	1.63
30	16	0.78	10	0.74
31	-	-	13	1.52
32	14	0.97	13	1.19
33	7	0.42	12	1.24
34	12	1.41	-	-
35	-	-	13	1.72
36	-	-	16	1.03
37	16	0.14	18	0.16
38	10	0.69	17	0.69
39	12	0.17	-	-
40	13	-0.32	-	-
41	17	-0.34	-	-
42	17	0.66	-	-
43	16	-0.98	12	0.81
44	10	0.10	-	-
45	-	-	11	0.66
46	15	-0.27	9	-1.06
47	12	0.10	11	1.85
48	9	0.90	11	0.28

Table 3.9 shows how many strategies were employed by each nurse in each domain of aggression and her status as a skilled or unskilled strategist. The far left-hand column simply allocates a number to each of the 48 nurses. The Table is divided vertically into physical and verbal incidents and subdivided into the number of different strategies used to deal with each real-life incident (on the left) and the difference between the nurse's theoretical and actual effectiveness scores (on the right). A minus indicates that she was less effective (an unskilled strategist), and a plus that she was more effective (a skilled strategist). The blanks are because the nurses did not all provide both a physical and verbal incident, some only provided one. The most important point to notice about this Table is that while 15 nurses out of the 37 who reported physical incidents were less effective than they had anticipated, only five out of the 35 who reported verbal incidents were less effective than they had anticipated. It therefore appears that it is more difficult to live up to one's theories when dealing with physical than when dealing with verbal aggression.

Having established that there are fewer skilled strategists in relation to physical aggression than there are in relation to verbal aggression, the next obvious question is, what distinguishes the skilled from the unskilled strategists? One possible clue might lie in the number of strategies that are used to deal with aggression. Tables 3.10 and 3.11 present the results of a chi-squared test which evaluates the relationship between level of skill and number of strategies employed for physical and verbal aggression, respectively. Nurses were already categorised into skilled versus unskilled, as explained earlier, but the number of strategies employed was as yet uncategorised. Two groups of "low" versus "high" were calculated using a median split on the overall number of strategies used by the nurses.

TABLE 3.10

Cross-tabulating Usage by Effectiveness

(Physical Domain)

Behavioural Responses	EFFECTIVENESS Skilled Strategists	Unskilled Strategists	
Low	14	5	19
High	8	10	18
	22	15	37

$X^2 = 3.28$, d.f. 1, $p<.07$.

TABLE 3.11

Cross-tabulating Usage by Effectiveness

(Verbal Domain)

Behavioural Responses	EFFECTIVENESS Skilled Strategists	Unskilled Strategists	
Low	13	3	16
High	17	2	19
	30	5	35

$X^2 = 0.48$, d.f. 1, $p<.49$.

Table 3.10 presents the results for the 37 nurses who had reported a physical incident. As can be seen from the Table, a total of 19 nurses belonged to the group who used fewer strategies (the "low" group) and 18 to the group who used more strategies (the "high" group). Of the low group, 14 were skilled strategists (that is, they did better than they had anticipated was possible), and five were unskilled (that is, they did worse than they had anticipated was possible). Of the high group, eight were skilled and ten were unskilled. Although there was a trend (X^2=3.28, d.f. 1, p<.07), the differences between the two groups were not significant. From these analyses it can be concluded that a substantial number of nurses were unskilled when dealing with physical aggression (15 out of 37), and that there is a strong trend for those nurses who were unskilled to use more strategies than the skilled nurses.

Table 3.11 presents the results for the 35 nurses who had reported a verbal incident. As can be seen from the Table, a total of 16 nurses belonged to the group who used fewer strategies and 19 to the group who used more strategies. Of the low group, 13 were skilled strategists and three were unskilled. Of the high group, 17 were skilled and two were unskilled. The chi-squared for this table was non-significant (X^2=0.48, d.f. 1, n.s.). Two points can be made in relation to this analysis. First, the majority of nurses were skilled at dealing with verbal aggression, and second, it does not make any difference when dealing with verbal aggression whether you try out a lot of different strategies or only a few.

TABLE 3.12

Cross-tabulating Physical Effectiveness by Verbal Effectiveness

Physical	VERBAL: Skilled Strategists	VERBAL: Unskilled Strategists	
Skilled Strategists	15	1	16
Unskilled Strategists	7	3	10
	22	4	26

$X^2 = 2.67$, d.f. 1, $p<.10$.

One final analysis remains to be presented, to establish if the same nurses who are skilled at dealing with physical aggression are also skilled at dealing with verbal aggression. Once again, this was examined using chi-squared. The results are presented in Table 3.12. Unfortunately, only 26 of the nurses could be used in this analysis, as only 26 nurses had provided information on a real-life physical *and* a real-life verbal incident. Verbal Aggression is represented in the rows, and physical aggression in the columns, both are subdivided into skilled and unskilled strategists. In all, 15 nurses were skilled at dealing with both physical and verbal aggression, and seven were skilled at dealing with verbal but not physical aggression. Only one nurse was unskilled at verbal but skilled at physical aggression, and three nurses were unskilled in both domains of aggression. The chi-squared was non-significant ($X^2=2.67$, d.f.1, $p<.10$).

The next question that was examined, was whether or not certain nurses are intrinsically skilful or whether their skill depends on circumstances. To some extent this question can be answered by the simple observation that many more nurses can deal with verbal than with physical aggression, suggesting that is has something to do with the type of aggression rather than something to do with the nurses. But what of those nurses who were unskilled at dealing with physical aggression, how did they differ from the skilled nurses? Of the 15 nurses who were unskilled in the physical domain of aggression, only nine reported an incident of verbal aggression as well. Out of these nine nurses only three were unskilled when dealing with verbal aggression, and six were skilled. In other words, 66% of the nurses who were unskilled at dealing with physical aggression were skilled at dealing with verbal aggression. Although the numbers are very small, this does suggest that the nurses are not unskilled per se, but that they are vulnerable to the circumstances surrounding physical aggression, and that while they did not choose wisely in terms of their responses to physical aggression, they were quite capable of dealing effectively with verbal aggression. Before leaving this issue, however, it is worth pointing out that the three nurses who were unskilled in both domains of aggression constituted 60% of the unskilled nurses in the verbal domain. This does seem to indicate that individual differences may also have a role to play, and that there is an interaction effect between circumstances and the individual.

(ii) What Predicts Nurses' Effectiveness at Handling Aggression

The final issue to be addressed by this study was to find out what discriminates between those nurses who are effective at handling aggression and those nurses who are less effective. Of course, the first requirement of such an analysis is a method of categorising nurses as more or less effective at handling aggression, and it was decided to use the skilled and unskilled strategists groupings for this purpose. As mentioned in the materials section of this chapter, the NQ1 (Part 2) obtained information on a range of emotional responses to aggressive incidents, as well as more general information on whether the incident was avoidable, how well the nurse felt she coped,

and so on. It was decided to split these two sets of data up into emotional and general, and perform two discriminant functions analyses to see if either set could discriminate between the skilled and unskilled nurses.

Unfortunately, because the nurses who were skilled at dealing with verbal aggression far outweighed those who were unskilled (30 and five, respectively), it was not possible to do any further analyses on the verbal data. This was not the case with the physical aggression data. If the earlier analyses are recalled, it was established that 22 nurses were skilled at dealing with it, while 15 were unskilled. The difference of seven in the group sizes is easily adjusted for in discriminant function analysis.

The analyses were performed using SPSSX's discriminant functions analysis with stepwise regression to select out those predictor variables with a sufficiently high f to enter (Wilks' Method). The default f to enter on SPSSX is set at one, which is very low unless there are a large number of subjects. For this reason, the default f to enter was changed to three. Prior probabilities was also applied, to weight the scores according to group size, so that group size did not influence the outcome.

Discriminating Nurses' Skill in terms of the "General" Predictor Variables

The first discriminant function analysis used the skilled/unskilled strategists as the grouping variable, and the data for the independent variables were obtained from the following questions: how important was the incident to you at the time? How much control did you feel you had over the outcome of the incident? had you anticipated that this incident would arise? to what extent do you think the incident was avoidable? how sure were you about what to do about the incident? and, overall, how well do you feel that you coped with the incident?

TABLE 3.13

Strategic Skill Discriminating Coping Responses

(Physical Aggression)

i) **Standardised canonical discriminant function coefficients**

Function 1	(Wilks Lambda .75, X^2 = 9.46, d.f. 1, p<.002)
Coped well	1.00

ii) **Correlations between the discriminating variables and the canonical discriminant function**

	Function 1
Coped well	**1.00**
Situational control	**0.54**
Incidents importance	**-0.48**
Response certainty	**0.43**
Avoidability	-0.18
Anticipation	-0.07

iii) **Canonical discriminant function evaluated at the group centroids**

Group Membership	**Function 1**
Unskilled strategists (1)	-0.67
Skilled strategists (2)	0.47

iv) **Percent of cases correctly classified**

Actual Group	**Predicted Group Membership**	
	(1)	**(2)**
Unskilled strategists (1)	**66.7%**	33.3%
Skilled strategists (2)	31.8%	**68.2%**

% correctly classified = 67.57%

The results of the analysis are presented in Table 3.13. The analysis is highly significant (Chi-squared=9.46,d.f. 1,p<.002). The function was defined by one variable, coped well, as can be seen in part i) of the Table. This means that the effectiveness groupings (skilled/unskilled) are most efficiently discriminated in terms of how well the nurse felt she coped with the incident. Part ii) of the Table gives the correlations between the remaining independent variables and the discriminant function. The significant correlations are highlighted in bold print. These are: how well the nurse felt she coped; how much control she felt she had over the situation; how important the incident was to her; and how sure she was of how to respond to the incident. The importance of the incident is negatively correlated to the function - while the other variables are positively correlated with it.

Part iii) of the Table shows the relationship between the grouping variables and the discriminant function. As can be seen, unskilled strategists are negatively related to the function (-0.67), and skilled strategists are positively related to the function (0.47). In other words, it is the skilled strategists who feel they coped well, were in control, and knew what to do.

Discriminant function analysis also allows prediction of which group each subject belongs to, based on their discriminant function scores. This process is called the 'classification' stage. The nurse's score on the discriminant function is used to predict which group she belongs to (skilled or unskilled), and this prediction is then compared with the nurse's known group membership to see if it was correct. As can be seen from the Table, the classification was correct in 67.57% of the cases. A total of 66.7% of the unskilled and 68.2% of the skilled strategists were correctly classified on the basis of their discriminant function scores.

In summary, the analysis shows that it is possible to use a nurse's assessment of how well she coped with an incident of physical aggression to 1) predict how well she performed when compared with her theories about how to deal with physical aggression, and, 2) to discriminate the nurses who were skilled from those who were unskilled strategists. The analysis also revealed

that skilled nurses regarded the physical incidents which they had reported as relatively unimportant, while the unskilled nurses regarded the incidents which they had reported as relatively important. And finally, the analysis shows that skilled nurses felt that they were in control of the incident and that they were confident about how to handle it, while the unskilled nurses did not feel in control and nor were they sure about how to handle it.

Discriminating Nurses' Skill in terms of the Emotional Predictor Variables

The second discriminant function analysis used the skilled/unskilled strategist's grouping as the dependent variable, and the independent variables are: depressed; miserable; tense; anxious; frightened to carry out my duties; confused and uncertain; demoralised; confident that I had handled the situation well; guilty or ashamed; stressed.

TABLE 3.14

Strategic Skill Discriminating Emotional Responses

(Physical Aggression)

i) **Standardised canonical discriminant function coefficients**

Function 1 (Wilks Lambda .84, $X^2 = 5.88$, d.f. 1, $p<.01$)

Well-handled	1.00

ii) **Correlations between the discriminating variables and the canonical discriminant function**

	Function 1
Well-handled	**1.00**
Confused	**-0.56**
Guilty	**-0.55**
Demoralised	**-0.25**
Stressed	-0.23
Anxious	-0.22
Depressed	-0.16
Frightened	-0.12

iii) **Canonical discriminant function evaluated at the group centroids**

Group Membership	**Function 1**
Unskilled strategists (1)	-0.51
Skilled strategists (2)	0.35

iv) **Percent of cases correctly classified**

Actual Group	**Predicted Group Membership** (1)	(2)
Unskilled strategists (1)	**53.3%**	46.7%
Skilled strategists (2)	22.7%	**77.3%**

% correctly classified = 67.6%

The results of the analysis are presented in Table 3.14. The analysis is significant (Chi-squared=5.88,d.d. 1, p<.01). Once again, the function was defined by one variable, well-handled, as can be seen in part i) of the Table. This is remarkably similar to the variable which defined the function in the analysis above, "coped well". As can be seen from the significant correlations, which are highlighted in bold print, the other end of the function is associated with the negative emotions of confused, guilty and demoralised. In other words, nurses who felt they handled the situation well are not associated with these negative emotions. As would be expected, part iii) of the Table shows that skilled strategists are positively related to the function and unskilled strategists are negatively related to it. Moreover, the discriminant function analysis provided adequate predictive value overall (67.6%), and is particularly good at predicting who the skilled nurses are (77.3%), although somewhat poorer at predicting who the unskilled nurses are (53.3%).

In summary, the analysis shows that it is possible to use a nurse's assessment of her ability to handle an incident of physical aggression to 1) predict how well she performed when compared with her theories about how to deal with physical aggression, and, 2) to discriminate the nurses who were skilled from those who were unskilled strategists. The analysis also shows that unskilled strategists are associated with the negative emotions of feeling confused, guilty and demoralised, while the skilled nurses are negatively related to these emotions.

Conclusions about both Discriminant Function Analyses

The two discriminant function analyses show that it is possible to discriminate between those nurses who are better at handling physical aggression than their theories would have suggested (the skilled strategists), and those who are worse at handling physical aggression than their theories would have suggested (the unskilled strategists). One analysis revealed that skilled nurses are associated with the feeling that they coped well with the incident which they had reported,

that it wasn't terribly important, that they knew what to do and that they felt themselves to be in control of the incident. The other analysis showed that the skilled nurses believed that they had handled the incident well, and, in addition, that they were negatively associated with emotions such as feeling confused, guilty and demoralised.

5. DISCUSSION

The study reported in this chapter has shown that there are many more ways of dealing effectively with a verbally aggressive than with a physically aggressive person, that the nurses' theories about which are the most effective ways of dealing with physical and verbal aggression are supported by their real-life experiences, that while 40% of nurses fail to live up to their theories about how to deal with physical aggression the corresponding figure for verbal aggression is only 14%, and that those nurses who are skilled at dealing with physical aggression use fewer strategies than those who are less skilled.

Conclusions about the Behavioural Response Strategies

The majority of nurses who reported an incident of physical aggression found only five out of the 31 response strategies to be highly effective when dealing with it. In the case of verbal aggression, 18 strategies are rated as highly effective. The two strategies that are considered to be highly effective in both domains of aggression are "calm and collected" and "remain calm but firm". However, a number of other strategies which are considered to be effective when dealing with verbal aggression become either ineffective, or at the very least neutral, when dealing with physical aggression. It therefore seems that nurses must be extremely careful when selecting methods of dealing with physical aggression.

The five strategies that were rated by most nurses as highly effective when dealing with physical aggression were: calm and collected; call for help, include others, remain calm but firm and talk

softly. Although the strategy of "make a joke at the patient's expense" was rated as highly effective it was only used by one nurse, and this finding was therefore discounted. These five, then, are the strategies that proved to be the most helpful at defusing a physically aggressive incident. Of course, other strategies are also helpful to some of the nurses, but these are the one's that over 50% of the nurses who used them found to be highly effective.

It can be concluded from these findings that nurses have far more freedom to try out a variety of ways of dealing with verbal aggression and a far higher chance of dealing with it successfully. However, when dealing with physical aggression, nurses should be taught quite specific methods and should be discouraged from experimenting: it was apparent from the data that nurses were trying out a number of strategies for dealing with physical aggression, of which a majority were subsequently rated to be of little use.The fact that nurses need to learn how to be calm and collected, include others, remain calm but firm, to talk softly, and to call for help, when someone is being physically abusive, provides crucial empirical evidence on which to build a training programme. Moreover, it provides very concrete information about the effectiveness of specific response strategies.

Chapter 2 examined nurses' theories about the effectiveness of the 31 response strategies when dealing with both physical and verbal aggression. These theories provided the foundations for a number of the analyses reported in this chapter. However, the primary rationale for looking at nurses' theories about how to deal with aggression was to compare them with their judgements about the effectiveness of the same 31 strategies when used to deal with real-life incidents of aggression. In fact, overall, the nurses' theories and real-life experiences were significantly similar to one another. Even so, there was a fair amount of trial and error, as shown by the fact that quite large numbers of nurses used strategies which were not helpful when dealing with aggression. These data suggest, therefore, that while nurses' theories are in agreement with their

experiences, they do not always get it right. This once again underlines the importance of providing nurses with guidance during training, so that they can be helped to develop a deeper understanding of the model they hold of how to deal with aggression and helped to understand what actually does work.

Conclusions about the Individuals

When the nurses provided data on their theories about the effectiveness of the strategies in relation to both physical and verbal aggression, they also provided a measure of the best that they believed could be achieved with these 31 strategies. When this was compared with their overall effectiveness when dealing with real-life incidents, it was possible to see if they did better or worse than their theories had suggested was possible. These two groups of nurses were called "skilled" and "unskilled" strategists. It was found that fewer nurses were skilled at dealing with physical aggression. Moreover, it was found that a nurse's skill was unrelated to the number of different strategies she used to deal with verbal aggression - the skilled strategists used both a few and lots of strategies. But, in the case of physical aggression, skilled strategists used fewer methods of dealing with it. What does this tell us?

The fact that 18 of the response strategies were rated as highly effective methods of dealing with verbal aggression, while five were awarded the same status in relation to physical aggression, has already been discussed. The discussion will now turn towards the relationship between this fact and the skilled and unskilled strategists, so that certain links may be made between the data.

It appears, then, that there are very specific methods of dealing with physical aggression, and any deviation from these has a poor outcome. It is therefore likely that the unskilled strategists are not using the effective response strategies when dealing with physical aggression. Indeed, it is probable that they try certain strategies which do not work, and which, therefore, do not match

up with their theories about how to deal with aggression, and so they continue to try out a variety of different strategies. In stark contrast, the skilled strategists use fewer strategies, are satisfied by their effect, and so do not need to try out any others.

This pattern is not duplicated in the case of verbal aggression, where 30 out of 35 nurses are skilled strategists. As mentioned above, 18 of the 31 response strategies were regarded as highly effective (in theory) by the majority of nurses. Because of this the nurses have a wide range of highly effective strategies to choose from. Perhaps for this reason, the nurse's skill at dealing with verbal aggression does not appear to be related to how many different strategies she uses.

It was also found that those nurses who were skilled at dealing with physical aggression could be discriminated from those nurses who were unskilled, on a number of different measures. In fact, the unskilled nurses judged themselves as not able to cope with physical aggression, not able to handle it and they felt guilty, confused and demoralised. These nurses also tended to rate the physical incidents that they reported as very important, they did not know what to do to deal with it and they felt that they were not in control of the incident. The skilled nurses, on the other hand, judged themselves as able to cope, able to handle the situation, they felt the incidents were not important, they felt confident about what to do and they felt themselves to be in control. Furthermore, they did not experience the negative emotions experienced by the unskilled nurses. These data provide empirical support for what common-sense tells us, and that is that nurses who are skilled at dealing with aggression do not suffer such ill after-effects as nurses who are less skilled.

Final Conclusions

The data from this study have shown that verbal aggression can be responded to in a variety of different ways which help to defuse the situation, while physical aggression demands a more

disciplined approach, using only a limited number of strategies to deal with it. Moreover, it has been found that nurses can do better than their theories suggest are possible, and that these more skilled nurses are not only better at dealing with aggression at the time, but also seem to be better adjusted to the after-effects of physical aggression. These findings support the need for a training programme which can help nurses to develop a greater awareness of their theories about dealing with aggression and the best ways to actually deal with real-life incidents, and, as a consequence, to protect themselves from the after-effects of an aggressive incident. The issue of individual emotional vulnerability to the after-effects of aggression are examined in more detail in the next chapter.

CHAPTER FOUR

INDIVIDUAL DIFFERENCES AND RESPONDING TO AGGRESSION

1. INTRODUCTION

A great deal of the research into controlling aggression has examined ways of changing the aggressor through some sort of intervention. For instance, prison inmates have been taught how to control their tempers (Howells, 1989), aggressive children have been taught how to be empathic (Feshbach & Feshbach, 1982), and hostile adolescents have been put through "Aggression Replacement Training" (Glick and Goldstein, 1987). All of these interventions trained offenders in the hope that they will be less likely to aggress in the future. However, in a general hospital setting this approach does not meet the needs of staff who have to deal with aggression, because the people who are aggressive are usually transitory and are therefore not amenable to training. Instead, hospital staff need to learn how to recognise what leads up to aggression and how to defuse aggression when it does occur.

The current study sets out to examine how individual nurses react to aggression, and to find out what protects some nurses from the negative consequences of aggression, while others suffer terribly. In 1985 Lanza found that some nurses who had been assaulted experienced emotional, cognitive, social and behavioural reactions as a result of an assault up to a year after the incident, while others remained relatively unaffected. As mentioned in chapter one of this thesis, there is evidence to suggest that personality mediates between circumstances and the production of aggression, but does it also have a role to play in the ability to deal with aggression? The crucial research question is what makes individual nurses more effective when dealing with aggression and more resilient to its emotional consequences? Information of this sort can be used in training to help more vulnerable nurses to protect themselves.

A large number of individual differences measures were taken for the current study, including assertiveness, empathy, interpersonal and personal control, rigidity, and aggression. In addition to this nurses were asked to provide information about how long they had been nursing, how frequently they had experienced aggression from patients or relatives and how aggressive incidents had made them feel. Because such a large number of measures were used in the current study, each is discussed below together with theoretical justifications for including it in the study.

(i) Assertiveness

Assertiveness has long been thought to be a desirable quality. Certainly much of the American literature on interpersonal skills training focuses on the refinement and evaluation of assertiveness training. Assertiveness training was originally developed as a treatment for individuals with a passive lifestyle, but has subsequently helped a wide range of people with diverse problems (Eisler et al., 1975). Wolpe (1969) was the first to identify the link between failure in self assertiveness and the experience of psychological stress. He also identified two types of assertiveness - 'hostile assertion' and 'commendatory assertion' - that is, negative and positive assertiveness, respectively. Many authors have pointed out the importance of distinguishing assertion from aggression (Breakwell, 1989). Margalit and Mauger (1985) demonstrated that students think of aggression and assertiveness as two quite distinct classes of response. As Breakwell (1989) states: "being successfully assertive without being aggressive takes great skill. It is a skill which all carers need to acquire. Carers need to be assertive on their own behalf with their patients."

Current models of assertiveness certainly take account of the positive, as well as the negative, elements of assertiveness. Lamplugh (1988) puts it well when she says: "asserting your rights is part of good clear communication. Asserting yourself means first working out what you want and then saying it clearly and negotiating with others." Bond (1986) emphasises the importance of respecting other peoples' needs as well as your own: "assertiveness is an approach to

communicating with people in which self respect and respect for other people are demonstrated." Moreover, Frisch and Froberg (1987) found that assertion strategies for handling aggressive criticism were rated as more effective, appropriate and likable than aggression strategies were.

In addition to being amenable to training, assertiveness can be measured by questionnaire. The questionnaire chosen for use in the present study was developed by Rathus (1973) and defines assertiveness as a communication skill used with respect for others as well as for the self. This particular questionnaire correlates significantly with other forms of self report (Rathus, 1973), as well as with objective ratings of assertiveness given by an acquaintance (Rathus & Nevid, 1977; Walbek & Gordon, 1980). Moreover, Walbek and Gordon (1980) compared the Rathus questionnaire with two other assertiveness questionnaires and concluded that the Rathus questionnaire was preferable.

(ii) Extraversion

In addition to assertiveness, a simple measure of extraversion was obtained. Nurses were asked: "In general, do you think of yourself as an extraverted sort of person?".

Extraversion, as measured by the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), is positively related to hardiness, a measure which is "a constellation of personality characteristics that function as a resistance resource to an encounter with stressful life events" (Kobasa, Maddi and Kahn, 1982). It has also been found that extraversion acts as a direct moderator in stress responses (Denney and Frisch, 1981; Duckitt and Broll, 1982). It seems, therefore, that extraversion is associated with adaptive and healthy responses which help individuals to deal with negative events.

(iii) Empathy

A number of researchers have suggested that empathy may inhibit aggressive and antisocial behaviours. For instance, Feshbach & Feshbach (1982) developed an empathy training programme to teach children to "perceive situations from another's perspective, to discriminate and identify feelings and to express their own feelings and thereby reduce the aggressive response." And Baron (1971) suggested that empathy is "incompatible" with aggression and may therefore help to control it. In a meta analysis, Miller and Eisenberg (1988) concluded that empathy is negatively related to aggression.

The idea that empathy and aggression are negatively related, so that aggressive feelings decrease as empathic feelings increase, may provide some kind of framework for understanding how a nurse might control a patient's aggression. This raises two issues: first, does an angry patient *stay* angry if he/she is faced with an empathic response from the nurse? and second, does an empathic approach help the nurse in terms of her own feelings subsequent to the incident? One study has examined the effects of training nurses to respond empathically to patients. It was found that patients who had been looked after by nurses trained to be empathic showed significantly less anxiety and hostility than patients looked after by nurses in a control group (Hornblow, 1980). Although the feedback from the patients to the nurses was not monitored, it quite likely that the nurses also benefited indirectly because their patients were happier.

There is little agreement in the literature on the definition of empathy and how it should be measured. It has been suggested that empathy should be distinguished from sympathy. Sympathy is seen as both an affective and a cognitive response to another's emotions which produces feelings of compassion (McDougall, 1950; Smith, 1948), whereas empathy is seen as a primarily affective response which leads to emotional congruence (Feshbach, 1984; Mehrabian and Epstein, 1972). According to this definition, an empathic individual will become sad when the person they

are with is sad, whereas a sympathetic person will feel concern or sorrow, but will not necessarily feel sad. The measure of empathy used in the current study was developed by Mehrabian and Epstein (1972) and complies with the emotional congruence model of empathy described above. That is, it is a measure of the ability to match emotionally, and to experience vicariously, another's emotional state.

(iv) Control and Rigidity

Since Rotter (1966) introduced the notion of locus of control, a large body of research has attempted to extend and refine his original idea. More recently, Paulhus and Christie (1981) have developed a model of perceived control in terms of primary *behavioural* spheres. Two of these behavioural spheres were selected for use in the present study. They were personal control and interpersonal control. Paulhus (1983) defines someone who scores high on personal control as the type of person that wants to succeed in situations of personal achievement. This individual vies for control in the nonsocial environment, for example, "solving crossword puzzles, building bookcases or climbing mountains." The person scoring high on interpersonal control is, on the other hand, effective in dyads or group situations, "defending his or her interests at meetings, attempting to develop social relationships or maintaining harmony within the family." Paulhus gives impressive support for the convergent and discriminant validity of his scales, both in relation to other individual differences measures and also from laboratory and field studies that suggest that the scales have predictive validity (Paulhus, 1983).

Although Paulhus addresses the issue of whether or not his measure of interpersonal control has some basis in objective reality by testing its predictive value in field studies, he does not make the final leap from interpersonal control to the interpersonal skills that such control implies. Moreover, the notion of control is embraced in Kobasa's (1979) idea of hardiness. Hardiness is conceptualised as a personality characteristic comprising three component traits: commitment,

challenge and control. This personality characteristic is thought to act as a buffer between a person and stressful life events, lending psychological resilience to the hardy individual. It has made considerable impact on the research literature relating to stress and coping. The control component of hardiness is defined as, "a tendency to perceive oneself as able to influence events and outcomes though the exercise of choice, knowledge and skill", and is closely allied to Rotter's (1966) locus of control. In addition it is a major component of hardiness (Parkes, 1988). Unlike Paulhus's definition of control, the control described in the hardiness literature does not distinguish personal control from interpersonal control. In spite of this it seems likely that control as defined within the hardiness literature encompasses both personal and interpersonal control, and by using Paulhus's distinction the data from the present study will represent both domains.

The relationship between self appraisal and one's own behaviour has long been debated. Davidson (1985) argues that behaviour and cognitive self appraisal are often locked together - a thought echoed elsewhere in Bandura's (1977) model of self efficacy, in which he examined the complex relationship between cognitive self appraisal and behaviour with a variation on the idea of a 'self fulfilling prophecy'. However, for the purposes of this study Paulhus's measure of interpersonal control will be viewed as a measure of perceived effectiveness in the social sphere that may have external validity in terms of social skills. Both the interpersonal and the personal control constructs will be examined in the light of findings relating to the hardiness construct.

In addition to the control items described above, a few selected questions measuring rigidity were included in one of the questionnaires in the present study (Caplan, et al., 1975). These items measure the nurses' ability to respond flexibly to environmental demands, and were originally used by Caplan in a study of job demands and stress. The items include such statements as "I like to have a place for everything and everything in its place" and "once I have made up my mind I

seldom change it". Nurses scoring high on the rigidity measure will be at considerable risk from stress.

(v) Own Aggression

"When confronted with aggression it is easy to react in an aggressive way. We try to defend ourselves, maintain status or get our own back. The more defensive we are, the more tendency there is to focus on our own feelings and to regard the other person increasingly as a threat" (Lamplugh, 1988). This observation was made without empirical support, but a large quantity of both theoretical and empirical work has examined the antecedents to aggression and, as was mentioned earlier, a number of anger management courses have been developed. However, very few authors have addressed themselves to the role played by a professional carer's own aggression in aggressive incidents. The literature has gone some way towards acknowledging the interactive nature of conflict (Averill, 1983; Howells and Hollin, 1988), suggesting that aggression has meaning only when embedded in a social and interpersonal framework.

Because the role of own aggression in dealing with aggression from others is so poorly researched, it was included as a measure in the present study. Own aggression was measured by means of Siegel's Multidimensional Anger Inventory (1986). This particular questionnaire was attractive because of its sensitivity to the multidimensionality of the anger construct. The MAI measured the following dimensions of anger: anger arousal; range of situations that provoke anger; hostile outlook; anger in/anger out. Furthermore, it contains adequate test retest reliability, high internal consistency and produced the pattern of relations expected from other inventories designed to assess anger or hostility, such as those developed by Harburg et al. (1973), Novaco (1975) and Buss-Durkee (1957).

(vi) Stress

There has been a great deal of research interest in the stress experienced by nurses. As Menzies (1959) states, "The source of stress may seem so obvious as hardly to merit comment. For example, nurses confront suffering and death as few other people do. They work with ill people also under stress. They face heavy demands for pity, compassion and sympathy...patients are sometimes difficult and nurses find themselves getting irritable or resentful." Menzies had spent many hours talking to, and studying, nurses, utilising her own psychoanalytic training to help in her assessment of what causes stress in nurses. In the nursing profession stress is manifested in physical and mental illness, high turnover, and high drug abuse and suicide rates (Gray-Toft and Anderson, 1981). They isolated three sources of stress for the nurse: workload; emotional demands made by patients and relatives; and issues surrounding death and dying. Dewe (1987) identified five sources of stress in 2,500 New Zealand nurses: workload; difficulties in relating to other staff; difficulties in nursing the critically ill; concern over the treatment of patients; and dealing with difficult patients. And Livingston and Livingston (1984) found that nurses who spent more time in contact with patients scored higher on psychological symptoms as measured by the GHQ. These findings help to inform the belief that contact with patients is stressful for nurses and that this stress is partly attributable to interpersonal difficulties and demands that the nurses find it difficult to meet. It is certainly well documented that the nursing profession, like a number of other caring professions, carries a relatively high risk of burn-out (Maslach, 1976).

In the current study two measures of stress were taken - general stress and stress in relation to aggressive incidents. The general-stress data were obtained because it could be argued that nurses with generally high stress levels are those who have a stressful response to any negative event. In other words, high general-stress levels predispose nurses to high-stress responses in specific situations, such as when they are verbally attacked. Although many comprehensive measures of stress are available, nurses were asked to rate two simple statements because they already had a

large battery of questionnaire to complete. Moreover, Chirboga et al. (1983) found that self reported stress appraisal was one of the best predictors of a nurse's ability to adapt to stressful events.

(vii) Training

There is a paucity of empirical literature evaluating the effectiveness of aggression training programmes for nurses in Great Britain. However, in America Infantino and Musingo (1985) examined the impact of staff training in aggression management by comparing patient assaults and assault-related injuries on staff who had completed the training programme and on staff who had not. It was found that there were significantly fewer incidents of assault among trainees than among non-trainees. In another American study Thackrey (1987) assessed self attributed clinician confidence in coping with patient aggression and compared clinician groups who did and did not undergo training. He found that untrained groups showed no change in confidence over time while trained groups reported substantial pre-test/post-test gains in confidence that were maintained during an 18-month follow-up period.

Although a number of aggression-training programmes have been developed over the last 10 years in the NHS, they have been, up until recently, modified and developed by individual health authorities, with little national consistency. In 1990 a video portraying aggression and how it should be handled was commissioned by the NHS Training Authority for use in training programmes for nurses. The video covers such matters as control and restraint techniques, and the role of the voice and body in defusing aggression. However, this video was not available to nurses within the current sample. So, while it was possible to obtain a yes/no answer to the question "have you ever received any training to cope with aggression from the public?", it was impossible to standardise or control for the effectiveness of the training received by the nurses.

(viii) Experience

Two measures of experience were obtained from the nurses who participated in this study. As has already been mentioned, nurses gave information about the length of their nursing service. This measure was considered important because of the role which work experience may play in mediating, for example, stress responses. In addition to the work-experience measure, however, information was obtained about how many times the nurses had been involved in aggressive incidents while at work. The reasons for obtaining these data are well expressed by the following quotation: "People's reactions when confronted with aggressive behaviour vary widely, often because of their previous experiences with aggression" (Lamplugh, 1988). In order to obtain some empirical information on this subject an 'experience of aggression' measure was included in the current study.

(ix) Causal Explanation

Since the birth of attribution theory (Kelley, 1967) a substantial body of research has examined attributions in their many permutations both inside and outside the laboratory. When Abramson et al. (1978) applied attribution theory to the learned helplessness model of depression, a further dimension was added to causal explanations - that of the relationship between explanations and behaviour. This issue has been examined in the present study by asking nurses to rate a series of explanations of what causes aggressive incidents in the hospital setting. Thirteen causal explanations had been extracted from nurses participating in an earlier study in this series and the current sample of nurses rated them in terms of how often they believed each cause was the instrumental antecedent of an aggressive incident in the hospital setting.

(x) General Aims

This chapter is somewhat unusual in that the hypotheses will not be made until half way through the results section. The reason for this is that a number of the variables were submitted to factor

analysis to establish if there were any typologies amongst them and no hypotheses could be made until the typologies were known. These analyses served two functions: first, they summarised the variables, making subsequent hypotheses and analyses more elegant, and second, they provided insight into the relationships between the different variables. While it is interesting to understand the relationships between particular individual differences measures and how a nurse adapts to aggression, it was considered to be of greater interest to understand how certain typologies belong together and how they relate to a nurses ability to adapt to aggression. So, while specific hypotheses cannot be made at this stage, it is possible to say that the overall aim of the present study was to examine the relationship between individual difference measures and the nurses' ability to adjust adaptively to aggressive incidents.

2. METHOD AND PROCEDURE

A. Subjects

89 female nurses from the Stoke Mandeville Hospital in Aylesbury completed and returned the questionnaires. Stoke Mandeville is a general hospital serving the Aylesbury area but it is also contains a spinal injury unit. A complete list of the nursing staff for each of the general and spinal injury wards was examined and nurses were selected to participate on the basis of their grade, hours worked per week and staffing levels for each ward. A total of 180 nurses were approached, 87 questionnaires were returned, giving a 49% return rate. The mean age of nurses was 34 years; the mean length of nursing experience was 12.9 years; and, on average, the nurses had been working on their current ward for 4.6 years.

B. Materials

A set of five questionnaires was administered to each nurse. In addition to the questionnaires, the materials contained a stamped addressed envelope in which to return completed questionnaires,

a claim form for the honorarium of £2.50, and a short letter explaining what the project was about. A description of each of the five questionnaires is given below.

(i) The Aylesbury Nurses' Questionnaire

Several of the questions contained within the Aylesbury Nurses' Questionnaire (see Appendix 4) were similar to questions which had been used in the Nurses Questionnaire (Parts 1 and 2 - see Appendices 1 and 2). The data on version one of the questionnaire are presented in chapter 2.

The Nurses' Personality Questionnaire obtained the following types of information: background information; stress, confidence and negative emotions in response to verbal aggression; extraversion; experiences of aggression; and causal explanations. Fuller descriptions of each of these are given below.

Background Information

This section of the questionnaire obtained data on the following measures: age; present job and grading; full or part time; length of service on current ward; length of service as a nurse.

Stress, Confidence and Negative Emotions

Stress data were obtained by asking nurses to rate 5-point Likert scales in response to the following questions: "Overall, how stressful do you find nursing?" and "On average, how stressful do you *personally* find it when dealing with aggressive patients or other members of the public?"

A confidence measure was obtained in response to the following questions: "in general, how effective do you believe *you are* when it comes to dealing with aggressive patients or other members of the public?" This question was rated on a 5-point scale ranging from "not at all effective" to "extremely effective". The second question was "in general, when someone is verbally

aggressive to you are you pleased with how you handled it?" This item was rated on a 7-point scale ranging from "not at all" to "extremely". These items were subsequently summed to give an overall measure of confidence in ability to handle aggression.

Negative emotions in response to verbal aggression were measured on a series of 7-point scales indexed by the following words: anxious, stressed, upset, depressed, frightened, confused, guilty, demoralised and angry. Nurses rated the degree to which each of these emotions was experienced when someone was verbally aggressive to them. Those nurses who had not been involved in incidents were asked to imagine their reactions.

Experience of Aggression

In this section of the questionnaire nurses were asked to estimate how many times they had been verbally abused in the last week, the last year and since starting to work as a nurse.

Causal Explanations of Aggression

The data on the explanations of the causes of aggression in hospital settings was obtained by the Nurses Questionnaire (Part 2 - see Appendix 2). Sixty-five nurses described what they believed had caused an aggressive incident at work in which they had been involved. They gave up to three causes of the incident in their own words. These descriptions were subsequently sorted by the experimenter and the most commonly recurring explanations were identified. Thirteen types of cause emerged: side effect of medication, person feeling neglected, medical or clinical causes, staff or bed shortages, fear or anxiety, staff member being off hand, in response to physical nursing care, grief, dissatisfaction with care given, pain, being asked to abide by the rules, drunkenness/being high on non prescribed drugs and, finally, being a difficult person. The current sample of nurses was asked to judge how frequently aggressive incidents within the hospital setting could be explained by each of the stated causes by rating it on a 7-point scale.

Extraversion

Extraversion was measured by the question "Do you consider yourself to be an extraverted sort of person?" The nurses responded on a 5-point rating scale ranging from "not at all" to "very much so".

The Aylesbury Nurses' Questionnaire took approximately 10 minutes to complete. The remaining questionnaires were all standard individual-differences questionnaires and have been referred to in the introduction to this chapter. A few more details are given below.

TABLE 4.1

Information Obtained by Each Questionnaire

QUESTIONNAIRE	TYPE OF INFORMATION				
Nurses' Q. (version 2)	Background Information	Negative Emotions in response to Aggression	Experience of Aggression	Causal Explanations	Extraversion
Aggression Q.	General Aggression	Anger-In	Anger-Out	Range	Hostility
Control and Rigidity Q.	Personal Control	Interpersonal Control	Rigidity	-	-
Empathy Q.	Empathy Score	-	-	-	-
Assertiveness Q.	Assertiveness Score	-	-	-	-

(ii) The Aggression Questionnaire

The Multidimensional Anger Inventory (Siegal, 1986) measures the following five dimensions of anger: general arousal; anger in; anger out; range of irritability; and hostile outlook. The questionnaire contains 38 items and takes approximately 10 minutes to complete (see Appendix 5).

(iii) The Control and Rigidity Questionnaire

This questionnaire was compiled for use in the present study, although all the scales were derived from validated questionnaires. It contained the personal and interpersonal items used by Paulhus (1983) as well as the rigidity items used by Caplan (1975). There were a total of 25 items and it takes approximately 10 minutes to complete (see Appendix 6).

(iv) The Empathy Questionnaire

The Empathy Questionnaire (Mehrabian and Epstein, 1972) contained 33 items and took approximately 10 minutes to complete (see Appendix 7).

(v) The Assertiveness Questionnaire

The Assertiveness Questionnaire (Rathus, 1973) contains 30 items and takes approximately 10 minutes to complete (see Appendix 8).

(vi) Summary of the Questionnaires

Five questionnaires were therefore used in this study: the Aylesbury Nurses' Questionnaire; the Aggression Questionnaire; the Control and Rigidity Questionnaire; the Empathy Questionnaire; and, finally, the Assertiveness Questionnaire. The types of information obtained by each questionnaire is presented in Table 4.1.

C. Method

Before the questionnaires were sent out to the selected sample of 180 nurses, they were piloted on five nurses. The reasons for this were: 1) to ensure that the nurses understood what was being asked of them, and that they were at ease with these particular questionnaires; 2) to establish approximately how long the battery took to complete; 3) to assess the willingness of nurses to invest their time in a project such as this; 4) to check if nurses minded giving their name. (In the John Radcliffe Hospital nurses had been extremely reluctant to give their names, and the fact that it had been requested was given as an explanation for the relatively low response rate.)

Each nurse in the pilot study met the experimenter and completed the questionnaires with her in attendance. The nurses were timed while completing the battery and were then interviewed by the experimenter to obtain answers to the questions listed above. The interviews were audio recorded. In fact, the nurses were unanimously in favour of the questionnaires, and so no changes were necessary.

After the successful completion of the pilot study, the questionnaire batteries were compiled. No time limit was set and the questionnaires were counter-balanced for order. The questionnaires were then sent, together with a covering letter and stamped addressed envelope, to the selected sample of nurses. The sample had been selected from a comprehensive list of nursing personnel provided by the nursing administration of the hospital. The questionnaires were distributed to nurses via the internal mailing facility.

3. SUMMARISING THE VARIABLES

As mentioned earlier, some of the data were summarised using factor analysis before specific hypotheses were made. There was particular interest in establishing the relationships between the personality variables (assertiveness, empathy, personal and interpersonal control, rigidity and

extraversion), the nine negative emotions, the three measures of a nurse's experiences of aggression and the 13 causal explanation variables. The factor analyses were deemed important for two reasons: first, summarising the data prepared them for more elegant analyses subsequently; and second, it was felt to be of theoretical value to find out more about the relationships between them.

The factor analyses were executed by means of SPSSX's principal components analysis with varimax rotation. The number of significant factors was partly determined by Cattell's scree plot of eigenvalues, and was partly determined by conceptual considerations. All factor scores were saved, so that they could be used in future analyses.

(i) **Factor Analysis of the Personality Variables.**

The first factor analysis examined the relationships between the personality variables, namely, empathy, assertiveness, interpersonal control, personal control, and rigidity. These data were submitted to an SPSSX principal components analysis with varimax rotation. Three factors emerged that accounted for 67.1% of the variance. Table 4.2 presents the loadings of the six variables on these three factors. The significant loadings are highlighted in bold print.

Table 4.2 provides a summary of the personality measures that define the three factors. The first factor is a strong one, accounting for 30% of the variance and with an eigenvalue of 1.8. This factor consists of the items 'extraversion', 'interpersonal control' and 'assertiveness'. These items relate to the external world, and suggest mastery of that world. This factor was labelled 'external control'. This contrasts with the second factor, which is comprised of the two variables of 'rigidity' and 'personal control'. These items both measure something internal to the subject, and the factor has been called the 'internal control' factor. Finally, factor 3 accounts for 17% of the variance and has an eigenvalue of 1.2. Although it is characterised by the single personality trait of 'empathy',

it was felt that the factor made an important distinction by isolating empathy from external and internal control and was therefore retained.

TABLE 4.2
Factor Loadings of the Personality Variables

Variables	Factor 1	Factor 2	Factor 3
Extraversion	**0.79**	-0.15	-0.12
Interpersonal Control	**0.66**	0.37	0.30
Assertiveness	**0.65**	0.07	-0.07
Rigidity	-0.24	**0.78**	-0.27
Personal Control	0.37	**0.72**	0.16
Empathy	-0.10	-0.07	**0.93**

(ii) **Factor Analysis of the Own Aggression Variables.**

The second analysis used the own aggression scores, which were: arousal, anger in, anger out, hostile outlook, general aggression and sum aggression ('sum aggression' being the total of arousal, anger in, anger out, hostility and general aggression). The six scores from the Aggression Questionnaire were submitted to principal components analysis with varimax rotation. The analysis returned a two-factor solution, accounting for 69.7% of the variance. The factor loadings can be seen in Table 4.3, and again the significant loadings are highlighted in bold print.

TABLE 4.3

Factor Loadings of the Own Aggression Variables

Variables	Factor 1	Factor 2
General Aggression	**0.79**	0.36
Anger In	**0.74**	0.30
Arousal	**0.73**	0.34
Anger Out	**-0.72**	0.28
Range	0.12	**0.81**
Hostility	0.13	**0.80**
Sum Aggression	0.65	**0.71**

The first factor in the own aggression analysis is very strong, accounting for almost all of the significant variance (52.5%), and with an eigenvalue of 3.7. Factor 1 is bi-polar and at the positive end consists of the items 'general aggression', 'arousal' and 'anger in', and at the negative end 'anger out'. This factor represents high levels of arousal accompanied by the inability to express that arousal. For this reason the factor is labelled 'internalised anger'. The second factor is labelled the 'vigilance to hostility' factor, and consists of the items: 'range', 'hostile outlook' and 'sum aggression'.

(iii) **Factor Analysis of the Experience of Aggression Variables**

The three experience of aggression variables were examined in the third factor analysis. These measures were: 1) the number of incidents the nurse had been involved in since starting work

(sum abuse); 2) the number of incidents over the last year (abuse over the last year), and 3) an average of incidents (mean sum abuse). The mean sum abuse score was computed by dividing sum abuse by length of nursing service. These scores were then grouped into high, medium and low and submitted to principal components analysis which returned a single, unrotated, factor, with all three items loading significantly. The factor accounted for 84.2% of the variance and the loadings for each item are displayed in Table 4.4

TABLE 4.4

Factor Loadings of the Experience of Aggression Variables

Variables	Factor 1
Abuse over the Last Year	**0.93**
Sum Abuse	**0.91**
Mean Sum Abuse	**0.88**

(iv) **Factor Analysis of the Causal Explanation Variables.**

The fourth analysis used the 13 causal explanations, which were: side effect of medication, person feeling neglected, medical or clinical causes, staff or bed shortages, fear or anxiety, staff member being off hand, in response to physical nursing care, grief, dissatisfaction with care given, pain, being asked to abide by the rules, drunkenness/high on non prescribed drugs and, finally, being a difficult person. The data were submitted to principal components analysis with varimax rotation

and returned a 4-factor solution. Table 4.5 presents the loadings for each of the 13 items on each of the factors.

Factor 1 accounted for 35.3% of the variance and had an eigenvalue of 4.6. The items loading on factor 1 were: 'fear/anxiety', 'grief', 'pain' and 'in response to physical nursing care'. Together these items suggest that patients or relatives who express anger do so because of extenuating circumstances that predispose them to behave in this way. This factor is labelled the 'empathic explanation' factor.

The interpretation of the first factor contrasts sharply with the interpretation of the second. The second factor accounts for 10.8% of the variance and has an eigenvalue of 1.4. As Table 4.5 shows, the items that load significantly on this factor are 'dissatisfaction with care given', 'staff/bed shortages' and 'staff being off hand'. 'Staff/bed shortages' was singled out as the item that informed the interpretation. In the light of this item the two remaining items 'dissatisfaction with care given' and 'staff being off hand' can be explained by shortages, which lead to lowered standards of care. This factor has been called the 'organisational explanation'.

The third factor, although it had an eigenvalue of 1.2, accounted for very little variance (9.4%). Nevertheless, it was retained because it made sense. As can be seen from the loadings, the items 'drink/drugs', 'difficult person', 'rules' and 'medical/clinical causes' are significantly related to the factor. The drink/drugs item refers to the alcoholics and drug addicts whom nurses often find themselves treating in casualty, medical and short stay wards. The 'medical/clinical causes' refers to patients who are, for instance, head injured and notoriously aggressive. The 'rules' item refers, for instance, to asking patients not to smoke on the wards, not to use bad language, and so on. Taken together these items suggest that the aggressive patient is not someone to whom reason can be applied. In other words, they are intrinsically difficult and aggressive people. This factor is called the 'constitutional explanation'.

TABLE 4.5

Factor Loadings of the Causal Explanation Variables

Variables	Factor 1	Factor 2	Factor 3	Factor 4
Fear/Anxiety	**0.80**	0.05	-0.05	0.18
Grief	**0.77**	0.17	0.25	0.10
Pain	**0.69**	0.37	0.21	0.08
In Response to Physical Care	**0.55**	0.38	0.20	-0.23
Dissatisfied with Care	0.18	**0.79**	0.29	0.03
Staff/bed Shortages	0.14	**0.59**	0.17	0.02
Staff Off-hand	0.47	**0.54**	0.07	0.17
Drink/Drugs	0.28	0.10	**0.75**	0.18
They're a Difficult Person	-0.08	0.26	**0.67**	-0.11
Rules and Restrictions	0.25	0.39	**0.65**	0.18
Medical/Clinical Causes	0.40	-0.32	**0.45**	0.38
Medication	0.04	-0.05	0.17	**0.82**
Patient Feels Neglected	0.23	0.49	-0.09	**0.71**

TABLE 4.6

Factor Loadings of the Negative Emotion Variables

Variables	Factor 1
Anxious	**0.93**
Stressed	**0.91**
Upset	**0.88**
Depressed	**0.76**
Frightened	**0.74**
Confused	**0.74**
Guilty	**0.73**
Demoralised	**0.69**
Angry	**0.48**

TABLE 4.7

Summary of the Factor Analyses Labels

Factors	Personality	Own Aggression	Negative Emotions	Experience of Aggression	Causal Explanations
1	External Control	Internalised Aggression	Negative Emotions	Experience of Aggression	Empathic Explanation
2	Internal Control	Vigilance to Hostility	-	-	Organisational Explanation
3	Empathic Personality	-	-	-	Constitutional Explanation

The fourth factor accounts for very little of the overall variance, and only just reaches significance. Furthermore, the items do not hang together in any discernible pattern. For this reason factor 4 was abandoned.

(v) Factor Analysis of the Negative Emotion Variables

The nine emotional responses (anxious, stressed, upset, depressed, frightened, confused, guilty, demoralised and angry). were submitted to SPSSX principal components analysis. The analysis returned a single, unrotated, factor solution, with all items loading positively onto it.

Table 4.6 presents the loadings for each of the nine items on the single factor. The factor accounts for 54.5% of the variance. The items 'anxious', 'stressed', 'upset' and 'depressed' load highest on the factor, suggesting a state of tension as opposed to passive depression or some other such negative emotion. The factor was simply labelled the 'negative emotion' factor.

(vi) Summary of the Factor Analyses

Table 4.7 presents the factor labels given to each factor in each of the analyses. As the Table shows, the factor analysis of the personality variables provided three factors of interest; and they were labelled "external control", "internal control" and "empathy", and so on for each of the analyses.

4. HYPOTHESES

The factor analyses described above provided new typologies of the original variables and as a consequence it was possible to develop and test specific hypotheses about them. The variables were divided into independent variables (IVs) and dependent variables (DVs). The IVs consisted of the three personality factors (external control, internal control and empathy), the two own aggression factors (internalised anger and vigilance to hostility), aggression training, nursing

experience, age, and experience of aggression. The DVs consisted of the three causal explanation factors (empathic explanation, organisational explanation and the constitutional explanation), and the three response variables of confidence, stress and negative emotions, all in relation to aggression. The dependent variables were hypothesised to be affected by a nurse's personality, her own levels of aggression, her experiences of aggression, and so on, and could therefore be said to be dependent upon them. The hypothesised relationships between the independent and the dependent variables are described below.

A. Hypothesised Relationships between Independent and Dependent Variables

It was anticipated that the three personality factors (external control, internal control, empathic personality), the two own aggression factors (internalised anger and vigilance to hostility), and aggression training would predict the dependent variables even when the variance due to such 'extraneous' variables as nursing experience, age and experience of aggression was taken into account. The specific hypotheses and how they were tested are discussed in more detail below, together with the conceptual issues that underpin them.

(i) Nursing Experience, Age, Experience of Aggression

Simple correlations do not provide evidence of causal relationships between variables and do not rule out the possibility of influence from other variables. For instance, if anger is highly correlated with stress, this could be due to a number of variables that are not controlled for, such as nursing experience, age, and experience of aggression. However, by the use of multiple regression these problems can be overcome. It is possible to remove the variance accounted for by these 'extraneous' variables and to see if the relationship between, for instance, anger and stress is still significant. If it is, then it can be safely assumed that the extraneous variables do not get in the way of the prediction being tested. Furthermore, by extracting the variance accounted for in this way it is possible to find out the role played by each of the 'extraneous' variables in relation to

each of the dependent variables. For these reasons multiple regression was used to test the causal relationships between the IVs and the DVs as well as the role of the extraneous variables in relation to the DVs.

In the current analyses the extraneous variables were nursing experience, age and experience of aggression. The extraneous variable that was singled out as the most potentially interesting was experience of aggression. It was believed that if a nurse had been involved in a great number of aggressive incidents it would affect her ability to deal with aggression. That is, a nurse who had experienced high levels of aggression would be more confident of her abilities to deal with aggression, less stressed by aggression and would have lower levels of negative emotion in response to aggression.

If experience of aggression was to be examined, though, it was important to control for the effect of nursing experience and to some extent to control for age. A nurse who has been working for 30 years will have had more opportunity to experience aggression at work than a nurse who has only been working for one year. As far as age is concerned it could be argued that an older nurse has more life experience behind her, which would affect her responses to aggression. For these reasons variance due to nursing experience and age was extracted before entering experience of aggression as the third step in the multiple regression equation.

To summarise, it was decided that the three 'extraneous' variables of nursing experience, age and experience of aggression would constitute the first three steps in each of the multiple regressions, with only the dependent or independent variable changing in each analysis. In addition it was hypothesised that experience of aggression would predict the three DVs of confidence, stress and negative emotions. It was therefore hypothesised that experience of aggression will significantly predict:

1. High confidence.
2. Low stress.
3. Low negative emotions.

(ii) External Control

The external control measure was the first factor in the 'personality factor analysis'. It comprises the items extraversion, interpersonal control and assertiveness. The combination of these traits within the single factor of external control seems particularly powerful. Certainly it is the case that there are many training programmes in assertiveness and interpersonal skills, both of which demand a certain degree of extraversion. And, although interpersonal control is not a direct measure of interpersonal skills, it certainly implies them. It was therefore hypothesised that external control would predict lower levels of stress and negative emotions, and increased levels of confidence.

In addition to the relationship between external control and the DVs it was expected that external control would have some relationship with the causal explanations. Both the organisational and constitutional explanations allocate blame to something outside the control of the explainer. In the case of the organisational explanation, aggressive incidents are attributed to such factors as staff and bed shortages, while in the case of the constitutional explanation, they are attributed to the aggressor, who is characterised as an alcoholic, a drug addict or simply a 'difficult' person. Both of these explanations allocate blame, but more than this, they leave the explainer powerless to change the situation. By contrast, in the case of the empathic explanation no blame is allocated. Aggression is due to pain, grief, anxiety, and so on. The explainer is therefore free to act, and in so doing influence the causes of aggression: pain can be relieved and grief can be soothed. In other words, the empathic explanation empowers the explainer to alter the course of an aggressive incident, or potentially to prevent it, by intervening. It was therefore hypothesised that the nurse

who scored high on external control would exercise her control, and would explain aggressive incidents in such a way as to leave the way open for action - in other words, the nurse scoring high on external control would use the empathic explanation. It was therefore hypothesised that external control will significantly predict:

4. Low negative emotions.
5. Low stress.
6. High confidence.
7. The empathic explanation.

(iii) Internal Control

Internal control was the second factor to emerge out of the factor analysis of the personality variables. It comprises the items rigidity and personal control. The personal control item, as defined by Paulhus (1983), measures a need to "vie for control within the nonsocial environment in situations of personal achievement", and the rigidity score, as defined by Caplan (1975) measures an inflexible approach to problems. The combination of these items seems far removed from the notion of healthy, positive control as portrayed by the hardiness concept (Kobasa, 1979). Instead, the Internal control factor suggests some kind of insular obsessionalism with high achievement expectations. For this reason it was hypothesised that internal control would predict high confidence but also high stress. It was therefore hypothesised that internal control will significantly predict:

8. High confidence.
9. High stress.

(iv) Empathic Personality

The empathy factor was the third and final factor in the personality factor analyses, with only one item loading onto it - the score from the Empathy Questionnaire. It might, then, have been

equally valid to use the empathy score from the questionnaire in place of the factor score, but the factor score was used since all the other analyses were done with factor scores, thus maintaining consistency.

It was hypothesised that nurses scoring high on the empathy factor would be emotionally vulnerable. A lot of the questions in the Empathy Questionnaire are of the nature: "it makes me sad to see a lonely stranger in a group"; "I am able to remain calm even if those around me worry" (if you agree with this question it reduces your empathy score); "I cannot continue to feel OK if those around me are depressed", "I tend to lose control if bringing bad news to someone", and so on. In other words, if the respondent claims that her emotions are affected negatively by another's negative state, she gets a higher empathy score. However, if this is not the case and the respondent claims emotional independence, she gets a lower empathy score. It is easy to imagine a situation (especially in a hospital setting) in which such 'empathy' would leave the person emotionally drained and probably lacking in confidence. For this reason it was thought that the empathic nurse would score low on confidence and high on stress and negative emotions.

With regard to the causal explanations, the obvious link is between empathic personality and the empathic explanation. However, closer examination reveals that this link may not be theoretically justifiable. The nurse with a high empathy score is the nurse who absorbs the emotional texture of the person she is interacting with, taking on their emotions in place of her own. Although most of items in the Empathy Questionnaire relate to sadness, depression, crying and so on, it is possible that other emotions could be absorbed by this type of person as well. Therefore, when confronted with an angry, aggressive person, the 'empathic' nurse may well become angry herself, and as a result she may be more likely to blame the aggressor and use the constitutional explanation. It was therefore hypothesised that empathy will be significantly related to:

10. Low confidence.

11. High stress.

12. High negative emotions.

13. The constitutional explanation.

(v) **Own Aggression**

It was hypothesised that the two own aggression factors of internalised anger and vigilance to hostility would be associated with increased stress levels, increased negative emotions and decreased confidence. It was felt that a nurse who is suffused with repressed anger or is highly irritable is going to find it very hard to deal with, and to understand, another's anger and aggression. For this reason she would not feel confident in her abilities, and would be stressed and experience negative emotions after an aggressive incident. In addition it was believed that both of the own aggression measures would predict use of the constitutional and organisational explanations. That is, an angry or hostile nurse would be more likely to use the explanations that allocate blame. It was therefore hypothesised that internalised anger will significantly predict:

14. Low confidence.

15. High stress.

16. High negative emotions.

17. The organisational explanation.

18. The constitutional explanation.

and that vigilance to hostility will significantly predict:

19. Low confidence.

20. High stress.

21. High negative emotions.

22. The organisational explanation.

23. The constitutional explanation.

(vi) Aggression Training

A nurse who has completed an aggression training programme should, at the very least, have increased confidence and decreased negative emotional responses to aggression. She should have gained some insight into the skills to help her handle aggression, as well as some methods of defending herself from the emotional impact of aggression. In addition, she should have some confidence in her ability to influence the outcome of an aggressive incident, or even to prevent it from happening. It was therefore anticipated that nurses who have been trained to deal with aggression would experience less stress and fewer negative emotions; that they would feel more confident and would be associated with the only causal explanation that empowers them to act - the empathic explanation. It was therefore hypothesised that aggression training will significantly predict:

24. High confidence.
25. Low stress.
26. Low negative emotions.
27. The empathic explanation.

(vii) The Role of General Stress

It was hypothesised that general stress would influence the dependent variables of confidence with aggression, stress with aggression and negative emotions. That is, if a nurse is suffering from generalised feelings of stress she would be less able to handle aggression. In addition to this, it was hypothesised that general stress would *not* reduce significant relations between the IVs and the DVs to non significance. However, the latter hypothesis could not be tested until after the results of the multiple regressions were known, and so this point will be picked up in the results section. It was therefore hypothesised that general stress will significantly predict:

28. Low confidence.
29. High negative emotions.
30. High stress in relation to aggression.

B. Relationships Among the Dependent Variables

It was anticipated that certain relationships would be evident among the dependent variables. It was felt that confidence would be negatively correlated to both stress and negative emotions, and that negative emotions and stress would be positively correlated to one another. It was therefore hypothesised that:

31. Confidence will be negatively related to stress.

32. Confidence will be negatively related to negative emotions.

33. Stress will be positively related to negative emotions.

5. RESULTS

A. Relationships between Independent and Dependent Variables

Hypotheses 1 - 27 cover the causal relationships between the independent and the dependent variables, hypotheses 28 - 30 cover the role played by general stress, and hypotheses 31 - 33 cover the relationships among the dependent variables. The relationships between the independent and the dependent variables and between general stress and the dependent variables were all tested by GLIM (Generalised Linear Interactive Modelling). Regressions on GLIM are similar to SPSSX's fixed order multiple regressions, except that GLIM is more flexible (Healy, 1988). However, as multiple regressions do not give us any indication of the direction of the predictions (that is, whether there is a negative or a positive relationship between the IV and the DV), all of these relationships were also analysed by means of simple correlations to determine the direction of the relationship. These correlations can be found in Table 4.8. In addition to analyses of the relations between the IVs and DVs, simple correlations were performed between the six dependent variables with the aim of examining hypotheses 31 - 33. These correlations can be seen in Table 4.11. The results of the multiple regressions are presented below under headings for each of the independent variables.

(i) Nursing Experience, Age, and Experience of Aggression

The extraneous variables in the multiple regression analyses were nursing experience, age and experience of aggression, which comprised steps 1 - 3 in the analyses. The first variable to be entered in each regression was nursing experience, followed by age and the experience of aggression. Hypotheses 1 - 3 stated that experience of aggression would predict high confidence, low stress and low negative emotions. In Table 4.9.a the predictive power of these three variables can be seen in relation to the dependent variables. From a look across the rows for each of the extraneous variables, it can be seen that the only significant relationship is that between nursing experience and organisational explanation (r^2=0.11, p<.01), and that neither age nor experience of aggression make any significant predictions. As a result hypotheses 1 -3 were rejected. The direction of this relationship is presented in the correlations between the IVs and DVs given in Table 4.8 in which it can be seen that nursing experience and organisational explanation are positively correlated (r=0.31,p<.01).

In summary, experience of aggression did not predict confidence, stress or negative emotions. Therefore, hypotheses 1, 2 and 3 were rejected. However, an unhypothesised relationship did emerge - high nursing experience predicts use of the organisational explanation.

(ii) External Control.

Hypotheses 4 - 7 state that external control will predict low negative emotions, low stress with aggression, high confidence with aggression and use of the empathic explanation. Table 4.9.a shows that external control predicts stress with aggression (r^2=0.10,p<.05) and confidence with aggression (r^2=0.20, p<.001), but does not predict negative emotions (r^2=0.07, n.s.). The direction of these relationships were confirmed by the correlations in Table 4.8 which show that external control is positively related to confidence (r=0.35, p<.001), and is negatively related to stress (r=-0.21, p<.01). External control is also significantly and negatively related to negative emotions (r=-0.19, p<.05), although this relationship was not strong enough to reach significance

in the multiple regressions. Finally, Table 4.9.b shows that external control does not predict any of the causal explanations. In summary, high external control predicts low stress with aggression and high confidence with aggression, confirming hypotheses 5 and 6, but does not predict negative emotions or the empathic explanation, refuting hypotheses 4 and 7.

(iii) Internal Control

Hypotheses 8 and 9 state that internal control will predict the response DVs of stress and confidence. As can be seen in Table 4.9.b, only one of these hypotheses was confirmed - internal control predicts confidence with aggression (r^2=0.11, $p<.01$), but it does not predict either negative emotions (r^2=0.02, n.s.) or stress (r^2=0.05, n.s.). Table 4.8 shows that internal control is positively correlated to confidence with aggression (r=0.39, $p<.001$). In addition to the hypothesised relationships, the analyses revealed that internal control predicts empathic explanation (r^2=.20, $p<.001$), and that they were positively correlated (r=-0.41, $p<.001$).

TABLE 4.8

Correlations Between the Independent and Dependent Variables

	Confidence with Aggression	Stress with Aggression	Negative Emotions	Empathic Explanation	Organizational Explanation	Constitutional Explanation
Nursing Experience	.2193*	.0233	-.0648	-.1361	.3045**	.0376
Age	.3181***	-.1562	-.2083*	-.1731	.1869*	.0305
Experience of Aggression	.0749	-.0572	-.0022	.0535	-.0674	-.1274
External Control	.3520***	-.2613**	-.1859*	.0745	-.0856	-.0867
Internal Control	.3855***	-.1607	-.1286	-.4054***	.2130*	.0842
Empathic Personality	-.1459	-.0077	.1545	.0283	-.0910	-.0824
Internalised Anger	-.3042**	.2196*	.4237***	.0609	.1566	-.0208
Vigilance to Hostility	-.0423	.0859	.1480	-.0541	.0941	.2245
Aggression Training	.0867	-.1034	-.0385	.1584	-.0970	.0561
General Stress	-.1411	.3894***	.4416***	.1795*	.3453***	-.0383

* p<.05; ** p<.01; *** p<.001

TABLE 4.9.a

The Independent Variables Predicting Negative Emotions, Stress with Aggression and Confidence with Aggression

(Fixed Order Multiple Regressions)

Dependent Variables		Negative Emotions		Stress with Aggression		Confidence with Aggression	
		Change in R^2	F	Change in R^2	F	Change in R^2	F
Step							
1	Nursing Experience	0.00	0.29	0.05	0.34	0.00	3.29
2	Age	0.05	2.72	0.00	1.22	0.02	0.82
3	Experience of Aggression	0.00	0.16	0.00	0.06	0.00	0.08
4	External Control	0.07	4.05	0.10	5.91*	0.20	13.18*****
4	Internal Control	0.02	1.24	0.05	2.96	0.11	6.36**
4	Empathic Personality	0.06	3.64	0.02	0.84	0.05	2.91
4	Internalised Anger	0.19	13.50*****	0.05	2.80	0.09	5.19*
4	Vigilance to Hostility	0.01	0.69	0.00	0.00	0.00	0.62
4	Training	0.00	0.40	0.01	0.80	0.04	2.22

* p<.05; ** p<.025; *** p<.01; **** p<.005; ***** p<.001

TABLE 4.9.b

The Independent Variables Predicting the Causal Explanation Variables

(Fixed Order Multiple Regressions)

	Dependent Variables	Empathic Explanation		Organisational Explanation		Constitutional Explanation	
		Change in R^2	F	Change in R^2	F	Change in R^2	F
Step							
1	Nursing Experience	0.03	1.59	0.11	7.73***	0.00	0.05
2	Age	0.00	0.53	0.00	0.37	0.00	0.00
3	Experience of Aggression	0.00	1.45	0.00	0.26	0.00	0.26
4	External Control	0.00	0.00	0.00	0.11	0.02	1.01
4	Internal Control	0.20	14.37*****	0.00	0.58	0.04	2.20
4	Empathic Personality	0.00	0.05	0.00	0.00	0.00	0.50
4	Internalised Anger	0.00	0.57	0.08	4.91*	0.00	0.00
4	Vigilance to Hostility	0.00	0.00	0.00	0.88	0.10	6.43**
4	Training	0.00	0.10	0.00	0.05	0.00	0.00

* p<.05; ** p<.025; *** p<.01; **** p<.005; ***** p<.001110.25

In summary, high internal control predicts high confidence, confirming hypothesis 8, but does not predict stress, and so hypothesis 9 was rejected. In addition, a very strong, but unhypothesised, relationship emerged: high internal control predicts use of the empathic explanation.

(iv) **Empathic Personality.**

Hypotheses 10 - 13 state that high empathic personality will predict low confidence, high stress, high negative emotions and use of the constitutional explanation. However, as Tables 4.8.b and 4.9.b show that empathy does not significantly predict any of the DVs and therefore hypotheses 10 - 13 were rejected.

(v) **Own Aggression**

Hypotheses 14 - 23 are all concerned with the relationship between the two own aggression factors of internalised anger and vigilance to hostility and the DVs.

Internalised anger. Table 4.9.a and 4.9.b show that internalised anger significantly predicts confidence with aggression (r^2=0.09, p<.05), negative emotions (r^2=0.19, p<.001), and finally, organisational explanation (r^2=0.08, p<.05). Moreover, the correlations confirm that internalised anger is positively related to negative emotions (r=0.42, p<.001), and to the organisational explanation (r=0.15, n.s.), and is negatively related to confidence with aggression (r=-0.30, p<.01) These findings confirm hypotheses 14, 16 and 17. However, internalised anger did not predict stress with aggression or the constitutional explanation as was anticipated by hypotheses 15 and 18 and they were consequently rejected.

Vigilance to hostility. It was hypothesised that vigilance to hostility would predict the same variables as internalised anger (hypotheses 19 to 23). However, as Tables 4.9.a and 4.9.b show, vigilance to hostility only predicts constitutional explanation (r^2=0.10, p<.01), and it can be seen from the

correlations in Table 4.8 that the relationship is a positive one ($r=0.23$, $p<.05$). This confirmed hypothesis 23 but hypotheses 19 - 22 were rejected.

In summary, high vigilance to hostility predicts use of the constitutional explanation, but does not predict negative emotions, stress, confidence, or organisational explanation. On the other hand, high internalised anger predicts low confidence with aggression, high negative emotions and use of the organisational explanation, but does not predict stress or the constitutional explanation.

(vi) Aggression Training

Hypotheses 24 - 27 state that aggression training will predict high confidence, low stress, low negative emotions and use of the empathic explanation. However, as Tables 4.9.a and 4.9.b show, training does not predict any of the DVs, and therefore these hypotheses were rejected.

(vii) Summary

Listed below are those hypotheses that were confirmed by the multiple regressions. The hypotheses that were rejected are not listed. They are given in the same order as before and their original number is attached.

- High external control predicts low stress with aggression (4) and high confidence with aggression (6).
- High internal control predicts high confidence with aggression (9)
- High internalised anger predicts low confidence with aggression (14), high negative emotions (16) and use of the organisational explanation (18).
- High vigilance to hostility predicts use of the constitutional explanation.

All of these predictions were significant after the removal of the extraneous variables of nursing experience, age and experience of aggression. In addition, two unhypothesised relationships emerged:

- High nursing experience predicts use of the organisational explanation.
- High internal control predicts use of the empathic explanation.

(viii) **The Role of General Stress**

Hypotheses 28 - 30 were about general stress in relation to the DVs, but in addition to this some interest was stated in the role played by general stress as an extraneous variable between the IVs and the DVs. The point of interest was to establish whether or not general stress would undermine any significant relationships between the IVs and the DVs. This was tested by the inclusion, as the final step in the equation, of all the IVs that were known to predict the DVs *after the removal of the variance accounted for by general stress*. As for the multiple regressions described earlier, the variables of nursing experience, age and experience of aggression were extracted in steps 1-3.

Table 4.10 presents the results of these analyses. Along the top are the three DVs of confidence, negative emotions and stress and marking the rows are the various steps in each equation. The left hand column of each DV are the results *without* the removal of general stress and the right hand column those after its removal. The impact of general stress on the relationship between the IVs and the DVs has only been given only in those instances in which it was significant.

Table 4.10 allows a rapid appraisal of the effects of general stress on each of the significant predictors. As can be seen from the table, all the predictors that were significant before general

stress was entered, retain their significance (see the left hand column under each DV). For example, internalised anger predicts negative emotions (r^2=0.19, p<.001) even after nursing experience, age and experience of aggression have been entered in the equation. From the next column to the right, it is possible to see how the extraction of general stress affect internalised anger. As can be seen, general stress significantly predicts negative emotions (r^2=0.07, p<.05), but it does not reduce the relationship between internalised anger and negative emotions to non significance (r^2=0.15, p<.025). The same is true of all the other IVs. It can therefore be concluded that general stress does not reduce significant relationships to non significance.

TABLE 4.10

The Role of General Stress in Negative Emotions, Stress with Aggression, and Confidence with Aggression

(Fixed Order Multiple Regressions)

Dependent Variables	NEGATIVE EMOTIONS				STRESS WITH AGGRESSION				CONFIDENCE WITH AGGRESSION			
	Change in R^2	F	Change in R^2	F	Change in R^2	F	Change in R^2	F	Change in R^2	F	Change in R^2	F
Step												
1 Nursing Experience	0.00	0.29	0.00	0.29	0.05	0.34	0.05	0.34	0.00	3.29	0.00	3.29
2 Age	0.05	2.72	0.05	2.72	0.00	1.22	0.00	1.22	0.02	0.82	0.02	0.82
3 Experience of Aggression	0.00	0.16	0.00	0.16	0.00	0.06	0.00	0.06	0.00	0.08	0.00	0.08
Additional Step												
General Stress	-	-	0.07	4.40*	-	-	0.12	7.39***	-	-	0.00	0.17
Final Step												
External Control	0.07	4.05	-	-	0.10	5.91*	0.09	6.09**	0.20	13.18*****	0.18	12.85*****
Internal Control	0.02	1.24	-	-	0.05	2.96	-	-	0.11	6.36**	0.10	6.38**
Internalised Anger	0.19	13.50*****	0.15	11.11**	0.05	2.80	-	-	0.09	5.19*	0.08	4.92*

* p<.05; ** p<.025; *** p<.01; **** p<.005; ***** p<.001

Hypotheses 28 - 30 state that high general stress will predict the DVs of low confidence with aggression, high stress with aggression and high negative emotions. As for the previous multiple regressions, the effects of nursing experience, age and experience of aggression were removed from the equation before general stress was entered. Table 4.10 shows that general stress significantly predicts negative emotions (r^2=0.08, p<.05) and stress with aggression (r^2=0.12, p<.01). Table 4.8 displays the direction of these relationships. As was predicted, general stress is positively related to both negative emotions (r=0.44, p<.001) and to stress with aggression (r=0.38, p<.001). However, as general stress does not predict confidence with aggression, hypothesis 28 was rejected.

In summary, hypotheses 29 - 30 were confirmed: high general stress predicts high stress with aggression and high negative emotions. However, it does not predict low confidence with aggression, and so hypothesis 28 was rejected. Furthermore, the variance accounted for by general stress does not reduce significant relationships to non significance between the IVs and DVs.

B. **Relationships Among the Dependent Variables**

Hypotheses 31 - 33 state that stress and negative emotions will be positively correlated and that they will both be negatively correlated with confidence. As Table 4.11 shows, these hypotheses were confirmed - confidence is negatively related to stress (r=-0.38,p<.0001) and to negative emotions (r=-0.37,p<.0001), while stress is positively related to negative emotions (r=0.54,p<.000).

TABLE 4.11

Correlations Among the Dependent Variables

	Confidence with Aggression	Stress with Aggression	Negative Emotions	Empathic Explanation	Organisational Explanation	Constitutional Explanation
Confidence with Aggression	1.00	-0.38***	-0.37***	-0.21*	-0.06	0.05
Stress with Aggression		1.00	0.54***	0.17	0.32***	0.05
Negative Emotions			1.00	0.08	0.28**	0.05
Empathic Explanation				1.00	0.00	0.00
Organisational Explanation					1.00	0.00
Constitutional Explanation						1.00

* p<0.05; ** p<0.01; *** p<.001

In addition to the hypothesised relationships among the DVs, the correlations revealed some unhypothesised links between them and the causal explanations. The empathic explanation is negatively correlated with confidence ($r=-0.21$, $p<.0001$), and the organisational explanation is positively correlated with stress ($r=0.32$, $p<.001$) and negative emotions ($r=0.28$, $p<.01$).

In summary, hypotheses 31 - 33 were confirmed - stress and negative emotions are positively correlated, while both are negatively correlated with confidence. In addition to these hypothesised relationships it was also found that the empathic explanation is negatively correlated with confidence, and that the organisational explanation is positively correlated with stress and negative emotions.

C. Summary of the Findings

The confirmed hypotheses are listed below together with unexpected findings. The findings are indexed with the original hypothesis number, unless they are unhypothesised, in which case they are not associated with any number.

- High external control predicts low stress with aggression (4) and high confidence with aggression (6).
- High internal control predicts high confidence with aggression (9) and use of the empathic explanation.
- High internalised anger predicts low confidence with aggression (14), high negative emotions (15) and use of the organisational explanation (18).
- High vigilance to hostility predicts use of the constitutional explanation (23).

- High general stress predicts high stress with aggression (29) and high negative emotions (30).
- High nursing experience predicts use of the organisational explanation.
- Confidence is negatively correlated with both stress (31) and negative emotions (32), in relation to aggression.
- Stress with aggression is positively correlated with negative emotions in relation to aggression.

In addition to these findings, it was established that: 1) the introduction of general stress into the multiple regression equation did not reduce predictive relationships between the IVs and the DVs to non significance, and 2) Neither experience of aggression nor aggression training predict how a nurse responds to, or explains, aggressive incidents.

6. DISCUSSION

The findings of this study establish: 1) which personality traits are associated with adaptive responses to aggression, as reflected in high confidence and low levels of stress and negative emotions; 2) the role of general stress, nursing experience, experience of aggression and training in relation to the three outcome measures of confidence, negative emotions and stress; 3) the role played by nurses' causal explanations of aggression in relation to all the other variables.

The data were gathered by means of four standard personality tests that measured assertiveness, empathy, control and rigidity and own aggression, in addition to the "Nurses' Personality Questionnaire". A total of 87 female nurses completed the battery of questionnaires, and the data were submitted to factor analyses, multiple regressions and simple correlations.

The Factor Analyses "Typologies"

The factor analyses fulfilled two important functions. They gave insight into the typologies of the various measures. For example, the personality factor analysis revealed three factors that were labelled 'external control', 'internal control' and 'empathy', and the analysis of the nurses' feelings of aggression revealed two factors which were labelled 'internalised anger' and 'vigilance to hostility'. In addition to this, the analyses summarised a large number of variables, giving a parsimonious account of these data without losing information. For example, the negative emotion data comprised nine variables, all of which were summarised in a single factor score, and the three measures of experience of aggression were similarly summarised by one factor.

The Adaptive and the Maladaptive Emotional Responses

Correlations between the three response variables were high, with confidence being negatively related to both stress and negative emotions, which were positively related to one another. In other words, a nurse who is highly confident in her ability to deal with aggression also tends to experience less negative emotion and less stress as a result of aggression, and can therefore be characterised as responding 'adaptively' to aggression. By contrast, the 'maladaptive' response to aggression is characterised by the nurse who has low confidence, high stress and high negative emotions. The point about the three response measures of stress, negative emotions and confidence is that they are interdependent and can therefore be thought of, to some extent, as a syndrome. In fact, it emerged that the two factors of external control and internalised anger predicted the adaptive and maladaptive responses, respectively, as did the measure of general stress. The relationships between the adaptive and maladaptive responses and the other variables will be examined in more detail below.

External Control

The external control factor consists of the items interpersonal control, assertiveness and extraversion. Although the interpersonal control measure (Paulhus, 1983) is not a measure of social skills, it implies them - in order to exercise control over other people, social skills must be present. The strength of the factor score of external control, however, lies in the fact that interpersonal control has been combined with assertiveness and extraversion, providing a composite measure of the skills that form the basis of many training programmes (Davidson, 1985).

The external control factor is associated with the adaptive emotional response. It predicts high confidence, low stress, and just misses significance when predicting negative emotions (although there is a significant negative *correlation* between external control and negative emotions). This provides support for the idea that the combination of assertiveness, interpersonal skills and extraversion can help a nurse to protect herself from the harsh consequences of aggressive incidents. Moreover, these skills are amenable to training.

Internalised Anger

The factor that came closest to predicting the maladaptive emotional response was internalised anger. This factor consisted of the items general aggression, anger-in, and arousal at one end and anger-out at the other. The nurse who scores high on this factor is angry and bottles her anger up inside. As Siegal (1986) reports, there is now an extensive body of research that examines the relationships between anger and ill health. It was therefore of interest to find that internalised anger predicted low confidence, high negative emotions and was significantly correlated with stress. This is an important finding, because it emphasises what the nurse brings to the situation, and how unresolved personal feelings may, to some degree, interfere with a nurse's ability to respond adaptively to aggression.

General Stress

It could be argued that anybody suffering from high levels of general stress is going to find it more difficult to deal with negative events such as an aggressive incident at work. This idea was tested by means of multiple regression, and it was indeed found that general stress came close to predicting the maladaptive emotional response. It predicted high stress in response to aggression, high negative emotions, and, although there was no significant relationship between general stress and confidence, there was a slight, but non-significant, negative correlation. Clearly general stress has a role to play in a nurse's vulnerability to the negative aftermath of aggressive incidents.

The important question is, however, whether general stress is such a strong influence that it overrides other influences such as the degree of external control which the nurses has, or her own feelings of aggression. This was tested by the removal of the variance accounted for by general stress before the prediction of the three response measures of confidence, stress with aggression and negative emotions. Removing the variance accounted for by general stress did not reduce previously significant relations to non-significance, and it was therefore concluded that while general stress is certainly a significant contributor to maladaptive responses to aggression, it does not tell the whole story: personality and the nurse's own feelings of aggression also have a significant role to play. This finding is important because it emphasises that when nurses are trained to deal with aggression, they should be taught about managing their own anger, interpersonal skills, assertiveness and so on, but *in addition* they should be taught to understand and deal with their own levels of general stress.

Internal Control

The internal control factor combined Paulhus's (1983) measure of personal control with Caplan's (1975) measure of rigidity. It was hypothesised that while nurses scoring high on this factor would claim to be confident in their ability to handle aggression they would also suffer from high stress

as a result of aggression. In fact, the results show that internal control predicts high confidence and the use of the empathic explanation, but that it does not predict high stress, as had been hypothesised. The implications of these findings are discussed later in relation to the causal explanations.

Unexpected Findings

Several unexpected findings emerged from this study. The fact that experience of aggression, training and empathy bore no relationship to the three outcome measures of confidence, stress and negative emotions, is of interest. Each will be examined in turn below.

Experience

The measure of a nurse's previous experience with aggression was derived from information about how often she had been involved in aggressive incidents at work over the last year and since starting work as a nurse. A third score was calculated by dividing the number of years the nurse had been working into the number of times she said she had experienced aggression since starting work. This gave an annual average of incidents for each nurse. These three scores were then submitted to factor analysis and a single factor emerged. It was this factor score that was used to predict the dependent variables of confidence, stress and negative emotions as well as the causal explanations. No significant relationships emerged. Moreover, experience did not intervene between, for example, personality and the two own-aggression factors and the dependent variables.

The fact that experience of aggression does not predict a nurse's responses to aggression seemed, at first, difficult to understand. The measure itself was robust enough, so what was going on? The answer probably lies in the fact that the measure is one of frequency rather than of magnitude. A nurse working with geriatric patients is likely to be scratched, kicked or bitten many times a

week, and a nurse working in a different ward may have experienced aggression only once, but on that solitary occasion she may have been held at knife point for several hours. This particular measure would categorise the nurse held at knife point as a nurse with little experience of aggression and the nurse who received scratches from geriatrics as a highly experienced nurse - even though the quality of their experiences were entirely different.

Training

Another surprise came in the form of aggression training. Those nurses who had received training were not any more confident, less stressed or suffering from lower levels of negative emotions, than those nurses who had not received any training. This finding may be explained by the fact that there is no way to measure the quality of the training which a nurse has undertaken. Certainly, from informal interviews within the nursing faculties, it appears that most aggression training deals with restraint techniques and identification of potential incidents, rather than in any real understanding of the dynamics of the incident and its aftermath. The effectiveness of training is an empirical question, and can only be fully addressed by a comprehensive evaluation of training, which has not yet been undertaken. Furthermore, there is little consistency between Health Authorities - they are mostly left to design their own training courses, with little or no guidance from the centralised NHS Training Authority. It is therefore likely that nurses' experiences vary so widely in terms of aggression-training that they are not comparable, and this could explain why there was no main effect for training.

Empathy

One other variable that bore no relationship to the dependent variables was the measure of empathy. It was hypothesised that empathy, as measured by the Mehrabian and Epstein questionnaire (1972), would leave nurses vulnerable to aggressive incidents, and would be

associated with low confidence, high stress and high negative emotions. However, this was not the case, nor was empathy associated with any of the causal explanations.

In the introduction a distinction was made between sympathy and empathy. Sympathy was defined as the ability to feel compassion for another without absorbing their emotions, and empathy was defined as affective congruence with others' distress. A substantial body of literature has suggested that empathy is incompatible with aggression (Feshbach & Feshbach, 1984), but this idea was not confirmed in the present study. It is suggested that while the emotional-congruence model of empathy may not be related to the adaptive ability of nurses in response to aggression, the sympathy model may be of interest and warrants further examination.

Causal Explanations

The causal explanations data were analysed both in relation to the three dependent variables of confidence, stress and negative emotions and in relation to the independent variables. They are discussed in more detail below.

The Empathic Explanation

The empathic explanation explains aggressive incidents in terms of the patient's pain, grief, anxiety and so on. It was suggested that, unlike the organisational and constitutional explanations, such an explanation empowers the explainer to act. For example, pain can be treated and grief can be soothed. The empathic explanation was significantly but negatively correlated to confidence in ability to handle aggression. In other words, nurses who favoured the empathic explanation tended to have less confidence in their abilities. This could be the case for several reasons. Perhaps the nurses who see that the causes of aggression can be influenced by external forces, such as their own behaviour, worry about their ability to intervene constructively? Or perhaps the nurse that uses the empathic explanation is, in fact, vulnerable herself? This latter hypothesis is somewhat

undermined by the finding that the empathic explanation is positively and significantly related to internal control.

Internal control is composed of the items personal control (Paulhus, 1983) and rigidity (Caplan, 1975). Individuals who score high on internal control are characterised as needing a high degree of control over their lives. It would therefore be expected that such individuals would want to control the course and outcome of any aggressive incidents in which they were involved. Within this framework it becomes apparent why the empathic explanation and internal control are related - as mentioned earlier, the empathic explanation (pain, grief, and so on), allows the nurse to change the course of events by intervening, either by giving pain relief, counselling, or whatever else is needed.

In summary, the role of the empathic explanation is not clear cut. On the one hand it seems to be associated with lowered confidence, and on the other it is associated with high levels of internal control and rigidity. The results are certainly sufficiently intriguing to warrant further investigation.

The Organisational Explanation

The organisational explanation comprises items such as staff and bed shortages, staff being off-hand and dissatisfaction with care given. Nurses using this type of explanation are delegating responsibility for aggressive incidents to an agency outside their control - in this case the organisation. This explanation is positively and significantly correlated with stress and negative emotions and in addition it is predicted by both internalised anger and nursing experience. These findings indicate that the organisational explanation is not adaptive, it is associated with negative affect in relation to aggression and it is predicted by high levels of internalised anger and by length of nursing experience.

The Constitutional Explanation

Of all the explanations, the constitutional explanation has the least number of relationships with the other variables. It is not related to confidence, stress or negative emotions, and its only relationship with the independent variables is with vigilance to hostility. That is, nurses who tend to be irritated by a wide range of events also tend to explain aggressive incidents in terms of the constitution of the aggressor.

Summary of the Conclusions

This study set out to examine the role of individual differences in a nurse's vulnerability to aggressive incidents. It has been found that the most adaptive responses can be associated with external control, which consisted of extraversion, interpersonal control and assertiveness. And that the most maladaptive responses can be associated with internalised anger and general stress.

These findings are particularly important when placed in the context of aggression training. On the one hand, the findings provide welcome support for the wealth of literature that highlights the importance of assertiveness and interpersonal skills. The present data have extended previous research by showing how assertiveness and interpersonal skills are associated with the ability to respond more adaptively to the aftermath of aggression, which in turn leads to increased confidence and decreased stress and negative emotions. Certainly it is clearly indicated that any aggression training programme should make provision for the teaching of these skills.

However, the present data do not stop here. They indicate that two other, less obvious, skills may be of great benefit if mastered by a nurse who has to deal with aggression. The first of these is the role of the nurse's own aggression, which is a negative one. Highly aroused nurses who keep their feelings locked up inside suffer through aggressive incidents. Helping these nurses to understand and deal with their own aggression could very well help them to achieve more

adaptive responses to aggressive incidents (and potentially other difficult events at work). The second of these is general stress, which has been found to play a causal role in relation to the maladaptive emotional response. The conclusion to be drawn from these findings is that a training programme should teach nurses to become aware of their own levels of aggression and general stress, in addition to training them in interpersonal skills and assertiveness.

Several surprising findings emerged from the present study. In particular, it was found that experience of aggression and aggression training had no impact on a nurse's adaptive responses to aggression. Suggestions were made as to why this might be the case. With regard to experiences of aggression, it was hypothesised that the quality of the experience might be of greater predictive value than the quantity of experience. It was therefore suggested that future measures should take this into account. Similarly, the diversity of aggression training programmes was thought to have some effect on the findings. None of the training programmes has been subjected to evaluation, and it is therefore impossible to compare the different types of training undertaken by the current sample of nurses. This also emphasises the need for standardised training throughout the country.

Finally, the role of causal explanations proved intriguing rather than conclusive. The organisational explanation was most clearly maladaptive, being associated with high stress, high negative emotions, and internalised anger, while the empathic explanation was somewhat enigmatic, being associated both with low levels of confidence and internal control. The constitutional explanation was related to vigilance to hostility, suggesting that nurses who are irritable tend to blame the aggressor. These findings are of sufficient interest to warrant a more formal appraisal. In chapter 5 the role of causal explanations will be examined in the more conventional form of locus of control, stability and globality.

CHAPTER FIVE

ATTRIBUTIONS AND AGGRESSION

1. INTRODUCTION

In the last chapter it was found that individual differences such as extraversion and assertiveness predict the way in which a nurse will respond emotionally to aggressive incidents. The emotional responses were measured in terms of the amount of stress that each nurse associated with aggressive incidents, the confidence she felt in her ability to deal with aggression and, finally, the negative emotions that she associated with aggressive incidents. These three variables formed a triad of responses which could be characterised as adaptive and maladaptive responses to aggression. Nurses with adaptive emotional responses were confident, and had low levels of stress and negative emotions, while nurses with maladaptive emotional responses had little confidence, and had high levels of stress and negative emotions.

In the present study one of the aims was to explore the relationship between the way in which a nurse interprets aggressive incidents, and her emotional and behavioural responses to them. This was examined by asking nurses to make attributions and predictions about their behaviour in relation to five scenarios depicting aggressive incidents within a hospital setting. Because those nurses who took part in the present study were identical to those who took part in the study described above, it was possible to analyse emotional responses alongside predictions about behaviour and attributional judgements.

In a series of theoretical and empirical reviews and articles, Weiner (1980, 1988) and Weiner et al (1982) have presented an attributional model of emotions and helping behaviour which is characterised by an attribution-affect-action pathway. That is, attributions about another person's needs give rise to emotions such as pity or anger which in turn give rise to actions such as helping

or rejecting. In a meta-analysis of the literature Schmidt and Weiner (1988) concluded that "controllable causes of a need state give rise to anger, which, in turn, evokes neglect, whereas uncontrollable causes of a need state elicit pity, which in turn generates judgements of help-giving".

In general, Weiner's empirical work makes use of scenarios in which the target's dilemma is made clear, and in which the *causes* are manipulated. For example, one scenario depicts a fellow passenger on the underground train who slumps to the floor, in one condition the passenger smells of alcohol and in another condition he appears to be ill. It is these manipulations that determine the subject's attributions, emotions and predicted behavioural response (for example, giving-up one's seat on the train or ignoring the collapsed person).

Weiner has suggested that emotions such as anger and guilt are preceded by three dimensions of causality (Weiner et al, 1982): locus of causality, that is, perceived as residing within (internal to) or outside (external to) the actor; stability, that is, perceived as temporary or relatively enduring; and controllability, that is, subject to volitional influence. The notion of controllability is important, in that emotional responses are thought to be determined by both the locus and controllability dimensions of causality. He found that: "Pity was associated with uncontrollable and stable causes, with the cause residing either within the target or within his/her environment. On the other hand, guilt and anger were exhibited given a controllable cause, with the cause internal to the target of the emotion". Weiner also states that: "the distinction between other-blame and self-blame determines whether one might experience anger or guilt, given that the cause is perceived as controllable". He goes on to give an example of someone who is disloyal to their 'date' and who would consequently feel guilty versus someone whose date is disloyal to them and who would consequently feel angry. In other words, Weiner is claiming that pity is elicited when someone is perceived as being unable to influence the course of his/her misfortune, anger is

elicited when someone who could have influenced his/her misfortune is perceived as failing to do so, and guilt is experienced when the cause of someone's misfortune is seen as being associated with the self.

Although the methods used by Weiner are quite different from those employed in the present study, where there has been no attempt to experimentally manipulate variables one by one, it was possible to apply his theoretical framework. The present study does contain rich information about nurses' emotional responses to aggression, attributions about aggression, and behavioural responses to aggression. When transcribed to the domain of the present study, Weiner's attribution-affect-action model leads to the hypothesis that nurses who perceive the aggressor as the cause of an aggressive incident would be angered by his/her actions, and would, as a consequence, withhold help - or, in this case, use the ineffective behavioural responses to deal with the situation.

Weiner's experimental designs do not distinguish the circumstances surrounding a negative event from the role of the 'target' person in the event. And so, for example, within Weiner's framework an attribution blaming the long wait in out-patients for the aggressive outburst of an anxious patient cannot be distinguished from an attribution about the 'bloody mindedness' of an aggressor who, it may be thought, is probably always causing trouble wherever he goes. Instead, both the circumstances and the target become the "external locus of causality". Rule and Ferguson (1989), however, claim that hostile reactions produced by an aggressive incident depend less on the severity of the provocation and more on whether they can be attributed to the aggressor or the situation. In the current study nurses rated self-blame, other-blame and circumstances-blame as three independent phenomena, unlike many other studies where subjects are forced to make an internal/external attribution, (for example, Weiner, 1982; Peterson et al, 1982). This is an improvement on previous scales because it allows the nurses to make complex judgements about

themselves, the aggressor and the circumstances. If Rule and Ferguson are correct, it should be the case that nurses who blame the circumstances will be less hostile than nurses who blame the aggressor, and, using Weiner's model again, they will therefore be more likely to offer help in the form of effective behavioural responses than the nurses who blame the aggressor.

Weiner acknowledges that blaming the self for someone else's misfortune can elicit feelings of guilt. But what happens when you see yourself as the cause of an aggressive incident at work? In 1958 Heider systematically examined the causal structure of explanations and concluded that: "in common-sense psychology, as in scientific psychology, the result of an action is felt to depend on two sets of conditions, namely, factors within the person and factors within the environment". This, he claimed, was the most fundamental causal distinction that could be made. Both Beck (1967) and Rotter (1966) have built on this distinction in their respective theories about the role of self-blame for negative events in depression. They claimed that depressed individuals tend to *blame themselves* for negative events even when they could not have been the cause. Numerous studies have subsequently provided empirical evidence to support the idea that these two phenomena are correlated, although there is still considerable debate about whether or not self-blame *causes* depression (Barnett & Gotlib, 1988).

Janoff-Bulman (1979) has distinguished between *self-character blame* which involves an attribution to uncontrollable aspects of the self, such as dispositions or traits, and *self-behaviour blame* which involves an attribution to a modifiable aspect of the self, such as one's behaviour. A similar distinction appears in the reformulated learned helplessness model of depression (Abramson, Seligman and Teasdale, 1978) in which attributions to internal, stable, and global factors (such as one's character) are distinguished from attributions to internal, unstable, and specific factors (such as one's behaviour). These two forms of self-blame are predicted to have different implications for coping and depression. Self-character blame is hypothesised to be related to poorer adjustment

and greater depression, while self-behaviour blame is hypothesised to be related to better adjustment and lower levels of depression.

It was not, however, the aim of this study to examine self-behaviour blame, but rather to look at the more damaging phenomenon of self-character blame. This was done by comparing those nurses with an internal attributional style (self-blame) with those nurses with an external attributional style. Attributional style was related to the emotional and behavioural responses of the nurses, in the expectation that self-blame would distinguish nurses in terms of how they reacted emotionally, as well as behaviourally, to aggressive incidents. In keeping with the literature it was expected that those nurses who blamed themselves would be vulnerable and would experience uncomfortable emotional responses, characterised by high levels of stress and negative emotions and reduced confidence, while those nurses who blamed circumstances or the aggressor would be much more confident and suffer less stress and fewer negative emotions. Although the literature has not explored the relationship between self-blame and behaviour, it was anticipated that nurses with an internal attributional style would be less likely to choose the behaviours which would defuse aggression, simply because they could not cope as well as those nurses with an external attributional style, who would have no trouble identifying which behaviours would be likely to defuse aggression.

The present study also provided the opportunity to compare two different ways of measuring attributions of causality. The locus of causality measure was calculated by subtracting other-blame and circumstances-blame from self-blame to get a simple internal/external blame measure. However, in order to calculate the attributional style measure more complex calculations had to be made which incorporated the measures of globality and stability. It was felt that it would be useful to compare the two measures in relation to the emotional and behavioural responses, to establish if anything was being gained from using the more complicated measure of attributional

style or whether the "most fundamental causal distinction" isolated by Heider (1958), the locus of causality measure, would be sufficiently sensitive to establish which nurses were most at risk from aggressive incidents.

Turning now to examine the relationship of personality traits to attributional style, it was found in chapter 4 that certain individual differences measures were related to the nurses' emotional responses to aggression. In particular, it was found that the personality typology of "internalised anger" (a factor composed of bottled-up angry arousal) was related to a maladaptive emotional response, while "external control" (a factor composed of extraversion, interpersonal control and assertiveness) was related to an adaptive emotional response.[1] Mitchell (1989) has called for more descriptive work to relate attributional style to personality traits. As he points out there is a paucity of work in this area, with few studies apart from the Nezu, Nezu and Nezu (1986) study in which the link between self-efficacy and attributional style was examined and the Martin and Clark study (1985) in which the link between neuroticism and attributional style was examined. Mitchell hypothesised that adaptive personality traits (as judged "according to current social norms") would be negatively related to internal attributional style. The study reported in chapter 4 showed that the internalised anger personality typology was related to negative emotions, stress and lowered confidence and, as a result, any nurse who has such a personality typology is more vulnerable to the negative consequences of an aggressive incident. The same study also found that the external control personality typology was related to lower levels of negative emotions and stress and increased confidence, indicating that, unlike internalised anger, any nurse with this personality typology is less vulnerable to the negative consequences of an aggressive incident. It was therefore hypothesised that nurses who internalise their anger probably also have problems with their self-esteem and are therefore more likely to see themselves as the cause of an

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[1] The external control personality typology should not be confused with the external attributional style referred to earlier. The former is composed of three different measures of personality, while the latter distinguishes characteristic ways of explaining events.

aggressive incident, particularly as they are probably aware at some level of their 'bottled-up' aggression, and possibly wondering if some of it might have 'leaked-out' and caused the trouble. It was also hypothesised that those nurses who score high on the external control personality typology are less likely to see themselves as the cause of aggression and will therefore be more likely to blame either the aggressor or the circumstances.

In summary, it has been proposed that nurses' causal explanations of events are likely to be related to their emotional and behavioural responses to aggressive incidents. In particular it has been suggested that nurses who blame themselves will be more likely to suffer emotionally and will also tend to be poorer judges of which behaviours defuse aggression than other nurses. The specific aims and hypotheses are listed below.

2. GENERAL AIMS AND HYPOTHESES

It is hypothesised that:

1. Nurses will have an individual and consistent attributional style which they will apply to different aggressive incidents.

2. Nurses will have an individual and consistent way of responding behaviourally to different aggressive incidents.

2. Nurses who blame themselves for the aggressive incident (self-blame) will be associated with higher scores on the internalised anger personality typology.

3. Nurses who blame themselves for the aggressive incident will be associated with lower scores on the external control personality typlogy.

4. Nurses who blame themselves for the aggressive incident will be associated with ineffective behavioural responses.

5. Nurses who blame the target of the scenario for the aggressive incident (other-blame) will be associated with ineffective behavioural responses.

6. Nurses who blame the circumstances for the aggressive incident (circumstances-blame) will be associated with effective behavioural responses.

7. Nurses who think the aggressor could have controlled his/herself (that is, who make the controllability attribution) will be associated with ineffective behavioural responses.

8. Nurses who suffer from low confidence, high stress and negative emotions in relation to aggressive incidents (that is, have the maladaptive response) will also be the nurses who blame themselves for aggressive incidents (that is, suffer from self-blame).

3. METHOD AND PROCEDURE

A. Subjects

The 87 nurses used in the current study were identical to those used in the study of individual differences in chapter 4. The materials used in the present study accompanied the material used in the previous study and were returned at the same time. Apart from convenience the obvious benefit of using the same population of nurses is that measures used to distinguish nurses in the previous study can also be used to distinguish nurses in the present study.

B. Materials and Method

The nurses who had completed the personality questionnaires described in chapter 4, also completed the attribution questionnaire for the present study. The questionnaire was incorporated into the batch of personality questionnaires and was returned with them. Nurses completed the

questionnaire and returned it in a stamped-addressed envelope, together with a claim for the honorarium of £2.50. The attribution questionnaire is described below.

(i) The Attribution Questionnaire

The Attribution Questionnaire (the AQ - see the back of the Aylesbury Nurses Questionnaire presented in Appendix 4) was described to the nurses in the following way:

> "Over the next few pages you will find five scenarios involving aggression. Each scenario is drawn from the real life experiences of a nurse who told us about the incident in her own words. We want you to read through each scenario and try to imagine it happening to you. After each of the scenarios are a set of questions which are designed, a) to find out what you think might have caused the aggressive outburst, and b) to find out how you would react in that situation. Please remember to give answers that reflect what you might do in reality if faced with a similar incident."

The Scenarios

The scenarios used in the AQ were chosen to be representative of over 80 incidents of aggression obtained from nurses in a previous study. The 80 incidents were sorted with great care to ensure that representative types of scenario were selected which covered a wide-range of different circumstances.

No substantive claims have been made about the sex of the target in the scenarios, however, sex has been counterbalanced in an attempt to control for it. The level of detail in the scenarios has largely been derived from the accounts given by the nurses themselves, although certain details were dropped as it was felt that they would unduly influence the response variance. For example

the "head-injured patient" became the "patient" because head-injured patients are notoriously and chronically aggressive and this knowledge may have influenced the nurses attributions. Nonetheless, it was deemed to be of great importance to retain the spontaneous and naturalistic nature of the scenarios, and this was done by reflecting the nurses' style of description wherever possible.

An attempt to exert stringent experimental control over the scenarios would have made them overly artificial, changing only one variable from one incident to the next. This sort of control was felt to be unnecessary as the aim of the current study was to relate the nurses' attributional style to their preferred behavioural responses, their emotional responses and to some personality variables, rather than to make any substantive claims about the scenarios themselves.

The scenarios that were eventually chosen for use in the present study are given below.

Scenario 1

"A patient lights up a cigarette on the ward, even though he has been asked not to do so on previous occasions. You ask him either to stop smoking or to go to the smoking room. He becomes abusive."

Scenario 2

"A patient calls out to you that she needs some eye drops while you are attending to another patient who is very sick. You come back twenty minutes later with the eye drops and the patient refuses them. She is very cross and demands to see the doctor."

Scenario 3

"A patient awaiting abdominal surgery is very anxious but you have been busy doing your duties. Now you have a moment you go to talk to him but you find him in a rather grumpy mood. As you ask him questions he becomes ruder and ruder, until he tells you to get lost."

Scenario 4

"You are performing a stomach wash-out on a young female patient. Her mother is with her and refuses to leave the room during the SWO. The patient is not co-operating and you raise your voice in an attempt to control her. The mother gets angry at this and starts screaming at you, threatening to slap your face."

Scenario 5

"The brother of a patient who is seriously ill is upset. He approaches you and tells you angrily that he believes his brother's operation was mis-handled and that nobody has bothered to tell the family how seriously ill he is. He becomes more and more agitated as you try to explain things to him, until eventually he walks off as you are talking."

The Attribution Statements

The attribution statements which nurses rated in the AQ were modified versions of those used in the Attributional Style Questionnaire (Peterson et al, 1982). To get data on locus of causality nurses were asked "What do you think was the cause of the patient's anger?". In response to this question they rated each of the following three statements on a 7 point scale: "Something to do with the patient"; "Something you had said or done", and "Something to do with circumstances outside the control of either yourself or the patient". These questions unpack the Peterson et al

measure of externality, which runs on a continuum from "others or circumstances" through to "self", thus allows examination of the constituent parts of self, other and circumstances separately.

Further attribution data was obtained by asking nurses to rate the following three statements, also on a 7 point Likert scale: "How likely to you think it is that this patient would get angry in other situations?" (globality), "How likely do you think it is that this patient would get angry in the same circumstances in future?" (stability), and finally "How easy do you think it would have been for the patient to have controlled his anger?" (controllability). The target was changed in the statements to tally with the appropriate scenario. For instance, scenario 3 describes the patient's mother as the aggressor, in this instance the statements would have referred to "the mother" or "she", not "the patient" and "he", and so on.

The Behavioural Responses

In addition to the attribution ratings nurses rated a series of ten behavioural responses in relation to each scenario contained within the AQ. The behavioural responses were drawn from a previous study in which nurses had been asked to rate over 30 behaviours in terms of their effectiveness for dealing with both physical and verbal aggression. These effectiveness ratings were subsequently factor analyzed, and provided rich descriptive accounts of different typologies of behaviour. It was these behavioural typologies that were used to index the scales in the current study. To give an example, the first behavioural response which nurses in the current study rated, was: "Would you remain softly spoken and gentle, giving your full attention to the patient and trying to find out why he is so angry?". This is a complex description which manages to suggest a caring and attentive response - an idea that would be impossible to convey by using the constituent statements to index a series of scales. Once again the emphasise was on providing naturalistic stimuli which had been derived from nurses.

The nurses in the current study made their judgements about the appropriateness of the behavioural responses using a 7 point Likert scale. They were asked the following question: "Now you can tell us how you think you would respond to the [patient's] abuse. Please rate all the responses listed below". The ten behavioural responses are listed below and in brackets they are categorised as either effective or ineffective:

The Ten Behaviours

1. "Would you remain softly spoken and gentle, giving your full attention to the patient and trying to find out why he is so angry?" (effective)

2. "Would you remain passive and just let him blow-off steam?" (effective)

3. "Would you be abusive back?" (ineffective)

4. "Would you try to make him feel foolish by scolding him or by joking at his expense?" (ineffective)

5. "Would you raise your voice and become indignant" (ineffective)

6. "Would you try to ignore the abuse?" (ineffective)

7. "Would you stay calm and assertive, showing in your manner that you won't take any nonsense?" (effective)

8. "Would you become matter-of-fact and try to include others in the incident?" (ineffective)

9. "Would you try to introduce humour into the situation?" (ineffective)

10. "Would you go and get help?" (ineffective)

The behaviours were categorised as effective and ineffective according to the findings from chapter 2 of this thesis. In the study reported in chapter 2, nurses were asked to rate a number of behaviours for their effectiveness at dealing with aggression. The above statements are typologies were derived from factor analyses of these effectiveness ratings. The fact that there are fewer effective than ineffective statements reflects the findings of chapter 2. That is, the effective strategies were represented by fewer and more powerful factors than were the ineffective strategies.

4. RESULTS

(i) The Scenarios: Individual Differences or Circumstances?

Two of the aims of this study were to establish if individual nurses had i) an attributional style which they applied to explain different types of aggressive incident, and ii) a behavioural style which they use to respond to different types of aggressive incident. To find this out it was necessary to assess the consistency of individual nurse's ratings for each scenario in relation to each other scenario. This was useful for more than theoretical reasons, it also satisfied some statistical considerations which had to be taken into account if the data were to be summed across the scenarios for future analyses.

The distributions of each of the variables for each of the scenarios were checked and found to be normal. However, these findings did not give any information about the consistency of individual nurses' attributional judgements. In order to evaluate this it was necessary to correlate the nurse's rating for, say, self-blame in scenario 1 with her ratings for self-blame in scenario 2, scenario 3, and so on through each scenario. If these measures were highly correlated it would indicate that the nurse was giving consistent ratings of self-blame for each of the different scenarios. These analyses were conducted for each of the six attribution variables separately and are presented in Tables 5.1 to 5.6. As can be seen from examining the Tables, out of the 60

correlations between the attribution ratings and the five scenarios, 50 of them were significant, 27 of them were above r=.30, and a further 11 of them were above r=.25. The significant results were evenly distributed within each of the five scenarios, indicating that the scenarios received similar ratings from each nurse. Overall, these results suggest that nurses do make consistent attributional judgements in relation to different scenarios. In addition, however, it was found that there was sufficient variance across the scenarios to indicate that the circumstances of the different scenarios also affected the nurses. In other words, variance can be accounted for both by the individual styles of the nurses as well as by the particular circumstances surrounding each incident. Nonetheless, it had been found that nurses had some individual style which they applied in a variety of circumstances, and this provided sufficient support to allow the five scenarios to be collapsed for future analyses.

Rather than examine each of the 10 behaviours separately, an overall behavioural effectiveness score was calculated by subtracting the ineffective behaviour scores from the effective behaviour scores. This gave a single score which could then be correlated across each of the five scenarios. The results are presented in Table 5.7. Out of the 10 correlations nine were over r=.35, giving evidence of the high consistency among nurses across the different scenarios. Once again, this was considered to provide sufficient justification for collapsing the behavioural responses across the scenarios in future analyses.

TABLE 5.1

Correlations of the Self-blame attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.095	.182*	.284**	.188*
Scenario 2		1.00	.403***	.137	.288**
Scenario 3			1.00	.353***	.405***
Scenario 4				1.00	.306**
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.2

Correlations of the Other-blame attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.455***	.129	.105	.048
Scenario 2		1.00	.323**	.199*	.195*
Scenario 3			1.00	.280**	.485***
Scenario 4				1.00	.397***
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.3

Correlations of the Circumstances-blame attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.094	.182*	.284**	.188*
Scenario 2		1.00	.402***	.136	.288***
Scenario 3			1.00	.353***	.405***
Scenario 4				1.00	.305***
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.4

Correlations of the Globality attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.344***	.201*	.079	.219*
Scenario 2		1.00	.133	.218*	.210*
Scenario 3			1.00	.211*	.275**
Scenario 4				1.00	.448***
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.5

Correlations of the Stability attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.558***	.230**	.366**	.426***
Scenario 2		1.00	.326***	.282**	.491***
Scenario 3			1.00	.280**	.386***
Scenario 4				1.00	.440***
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.6

Correlations of the Controllability attribution across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.440***	.395***	.301**	.279**
Scenario 2		1.00	.397***	.365***	.080
Scenario 3			1.00	.412***	.252**
Scenario 4				1.00	.271**
Scenario 5					1.00

* = p<.05

** = p<.01

*** = p<.001

TABLE 5.7

Correlations of the Behavioural Response score across the Individual Scenarios

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Scenario 1	1.00	.431***	.351***	.449***	.410***
Scenario 2		1.00	.523***	.374***	.218*
Scenario 3			1.00	.348***	.451***
Scenario 4				1.00	.436**
Scenario 5					1.00

* = p<.05
** = p<.01
*** = p<.001

Note: The behavioural response score was computed by subtracting the effective behaviour ratings from the ineffective behaviour ratings for each scenario. This gives an overall effectiveness rating for each scenario.

(ii) Behavioural Responses

Each of the 10 behavioural responses were collapsed across the scenarios to produce a total of 10 scores. When their distributions were examined it was found that three of them were highly skewed. The skewed behaviours were: "be abusive back"; "make [him/her] feel foolish by scolding [him/her] or by joking at [his/her] expense"; and "raise your voice and become indignant". A majority of nurses claimed they would not use these responses. In fact 61% of nurses said they would never choose to "be abusive back", 59% that they would never try to make the target of the scenario "feel foolish" and 52% that they would never act "indignant". These three behaviours were clearly not fit for any analyses that required normal distribution and could only be used as dichotomised variables. The remaining seven behaviours were deemed fit for any analyses that required normally distributed variables.

(iii) Attributional Style

Calculations Prior to the Analysis

In this section the results will be presented for attributional style and its relationship to the three skewed behavioural responses and the two personality typologies of internalised anger and external control. Before moving on to examine the results several calculations need to be discussed.

A nurse's attributional style was calculated in the following way: first, her locus of causality was determined by summing the two external attribution scores, "something to do with the patient" and "something to do with circumstances", and then subtracting the internal attribution score "something I had said or done". The resulting table was subsequently dichotomised using a median split to give two groups of nurses - those with a high external blame score, and those with a low external blame score. The latter group will henceforth be referred to as the internal locus of

causality group, while the former will henceforth be referred to as the external locus of causality group.

Having calculated the locus of causality, the attributional style of a nurse could then be determined, with the aim of identifying those nurses who displayed the internal, stable, global attributional style usually associated with depression. To achieve this, the stability and globality measures were dichotomised by means of a median split, resulting in groups of high/low stability and high/low globality. At this stage in the calculation there were three dichotomised groups: locus of causality, stability and globality.

TABLE 5.8

Attributional Style and the "Abusive Back" Behavioural Response

Attributional Style Groups	Behaviour: Low Abusive Back	High Abusive Back	
Internal Style	N=14 50%	N=14 50%	28
External Style	N=20 63%	N=12 37%	32
	34	26	60

X^2 = .95 (d.f. 1, n.s.)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

TABLE 5.9

Attributional Style and the "Make Look Foolish" Behavioural Response

Attributional Style Groups	Behaviour: Low Look Foolish	High Look Foolish	
Internal Style	N=14 50%	N=14 50%	28
External Style	N=19 59%	N=13 41%	32
	33	27	60

X^2 = .530 (d.f. 1, n.s.)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

TABLE 5.10

Attributional Style and the "Indignant" Behavioural Response

Attributional Style Groups	Behaviour: Low Indignant	High Indignant	
Internal Style	N=13 46%	N=15 54%	28
External Style	N=16 50%	N=16 50%	32
	29	31	60

X^2 = .076 (d.f. 1, n.s.)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

TABLE 5.11

Attributional Style and the Internalised Anger Personality Typology

Attributional Style Groups	Behaviour: Low Internalised Anger	High Internalised Anger	
Internal Style	N=10	N=17	27
	37%	63%	
External Style	N=21	N=8	29
	72%	28%	
	31	25	56

X^2 = 7.08 (d.f. 1, p<.007)

Note 1: The Internalised Anger groups were computed using a median split.

Note 2: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

TABLE 5.12

Attributional Style and the External Control Personality Typology

Attributional Style Groups	Behaviour: Low External Control	High External Control	
Internal Style	N=12	N=12	24
	50%	50%	
External Style	N=16	N=12	28
	57%	43%	
	28	24	52

X^2 = .265 (d.f. 1, n.s.)

Note 1: The External Control groups were computed using a median split.

Note 2: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

These data were then sorted by hand to obtain groups containing the following combinations: internal, high global and/or high stable (the internal attributional style group); external, high global and/or high stable (the external attributional style group); any other combination (the other group). If only those nurses with internal, high global *and* high stable had been used, this would have excluded too many nurses from the analysis. For this reason a nurse being sorted into the internal attributional style group might have an internal locus of causality, a high globality score and/or a high stability score, but she did not necessarily have to have all three. In the current analyses only those nurses who fell into the groups of internal and external attributional style were used.

The Analyses

Two types of analyses will be used throughout the results section. The aim is to find out if different kinds of nurses experience different emotional responses and use different behavioural responses when dealing with aggression. However, because some of the variables are not normally distributed some analyses will be done using Chi-squared, while normally distributed variables will be submitted to discriminant functions analysis.

Chi-squares were performed on the two attributional style groups of internal and external attributional style and the three highly skewed behavioural responses of "abusive back", "make look foolish" and "indignant", all of which had been dichotomised using median splits. The results of these analyses can be seen in Tables 5.8 to 5.10. None of these analyses were significant, and it was therefore concluded that attributional style did not distinguish nurses in relation to these three behaviours. The analysis relating to attributional style and the remaining seven, normally distributed, behavioural responses are presented below under "Comparing Attributional Style with Locus of Control".

Attributional style was also related to the two personality typologies of internalised anger and external control, both of which had been dichotomised using a median split. Tables 5.11 and 5.12 present the results. Table 5.12 shows that attributional style does not distinguish nurses on the basis of the external control typology (Chi-squared=.265, d.f. 1, n.s.). However, Table 5.11 shows that it does distinguish them on the basis of the internalised anger typology (Chi-squared=7.08, d.f. 1, p<.007). 63% of nurses in the internal attributional style group are in the high internalised anger group, and 72% of nurses in the external attributional style group are in the low internalised anger group. It was therefore concluded that nurses with an internal attributional style tend to bottle up their anger more than nurses with an external attributional style.

(iv) Comparing Attributional Style with Locus of Causality

The measure of attributional style was compared with the locus of causality measure using discriminant functions analysis. No direct statistical comparisons were drawn between the two groups, instead, the same analyses were performed for each, and they were subsequently evaluated in terms of their power to discriminate between nurses in terms of their choice of the 7 normally distributed behavioural responses.

The analyses were performed using SPSSX's discriminant functions analysis with stepwise regression to select out those predictor variables with a sufficiently high f to enter (Wilks' Method). The default f to enter on SPSSX is set at one, which is very low unless there are a large number of subjects.

For this reason, the default f to enter was changed to three. Prior probabilities was also applied, to weight the scores according to group size, so that group size did not influence the outcome. Two analyses were performed. In the first the attributional style group (internal and external attributional style) was entered as the dependent variable and in the second the locus of causality

group (internal and external locus of causality) was entered as the dependent variable. The independent variables were the seven normally distributed behavioural responses.

Tables 5.13 and 5.14 present the results of the discriminant functions analyses. Both analyses are significant, with attributional style producing a significant discriminant function (Chi-squared=7.65, d.f. 2, p<.02) and locus of causality producing a highly significant discriminant function (Chi-squared=11.45, d.f. 2, p<.003). Both functions were defined by two behavioural responses, as can be seen in part i) of the Tables. Attributional style discriminated between nurses most effectively in terms of the two behavioural responses of "ignore abuse" (0.91) and "humour" (-0.71), while locus of causality discriminated between nurses most effectively in terms of the two behavioural responses of "Gentle & attentive" (0.77) and "ignore abuse" (0.53).

Part ii) of the Tables gives the correlations between the remaining behavioural responses and the discriminant functions. The significant correlations are highlighted in bold print. In the case of locus of causality, Table 5.14 shows that an additional three behaviours relate to the function, they are: "blow-off" (r=0.46); " Calm & assertive" (r=0.25) and "humour" (r=0.24). In the case of attributional style, Table 5.13 shows that only two other behaviours relate to the function, they are: "Calm & assertive" (r=0.37) and "blow-off" (r=0.22).

Part iii) of the Tables shows the relationship between the dependent grouping variables and the discriminant functions. In Table 5.13, it can be seen that the internal attributional style is negatively related to the function (-0.40), while the external attributional style is positively related to the function (0.35). Table 5.14 shows that the internal locus of causality is negatively related to the function (-0.40), while the external locus of causality is positively related to the function.

TABLE 5.13

Attributional Style discriminating Behavioural Responses

i) Standardised canonical discriminant function coefficients

Function 1	(Wilks Lambda .875, χ^2 = 7.65, d.f. 2, p<.02)
Ignore abuse	0.91
Humour	-0.71

ii) Correlations between the discriminating variables and the canonical discriminant function

	Function 1
Ignore abuse	**0.73**
Humour	**-0.48**
Calm & assertive	**0.37**
Blow-off	**0.22**
Gentle & attentive	0.15
Call help	-0.09
Matter-of-fact	0.04

iii) Canonical discriminant function evaluated at the group centroids

Group Membership	**Function 1**
Internal attributional style (1)	-0.40
External attributional style (2)	0.35

iv) Percent of cases correctly classified

Actual Group	**Predicted Group Membership** (1)	(2)
Internal attributional style (1)	**50%**	50%
External attributional style (2)	34.4%	**65.6%**

% correctly classified = 58.33%

TABLE 5.14

Locus of Control Discriminating Behavioural Responses

i) Standardised canonical discriminant function coefficients

Function 1 (Wilks Lambda .872, χ^2 = 11.45, d.f. 2, p<.003)	
Gentle & attentive	0.77
Ignore abuse	0.53

ii) Correlations between the discriminating variables and the canonical discriminant function

	Function 1
Gentle & attentive	**0.85**
Ignore abuse	**0.65**
Blow-off	**0.46**
Calm & assertive	**0.25**
Humour	**0.24**
Matter-of-fact	-0.12
Call help	-0.03

iii) Canonical discriminant function evaluated at the group centroids

Group Membership	**Function 1**
Internal locus of causality (1)	-0.37
External locus of causality (2)	0.39

iv) Percent of cases correctly classified

Actual Group	**Predicted Group Membership** (1)	(2)
Internal locus of causality(1)	**73.3%**	26.7%
External locus of causality(2)	33.3%	**66.7%**

% correctly classified = 70.11%

Discriminant functions analysis not only allows discrimination between groups, but it also allows prediction of which group each subject belongs to. This procedure is known as the 'classification' stage of the analysis. The subject's score on the discriminant function is used to predict which group that subject belongs to, and this prediction is then compared with the subject's known group membership to see if it was correct. In part iv) of Tables 5.13 and 5.14, the classification tables can be found. In the case of attributional style (Table 5.13), the classification was correct in 58.33% of the cases. A total of 50% of the internal attributional style group were correctly classified and a total of 65.6% of the external attributional style group were correctly classified. Clearly the classification of external attributional style nurses is more effective than internal attributional style nurses, although the overall classification of 58% is not very high. Table 5.14 presents more promising results for the locus of causality grouping. Here it can be seen than the internal locus of causality group were correctly classified in over 73% of cases, and the external locus of causality in over 66% of cases, with an overall classification of over 70%.

It was concluded from these results that locus of causality is a more powerful discriminator between nurses' behavioural responses than attributional style, both because it produced a more significant discriminant function and because it provided a better classification of the nurses.

It was also concluded that nurses with an external locus of causality were associated with all three of the effective behavioural responses, unlike internal locus of causality nurses who were negatively associated with them.

TABLE 5.15

The Self-blame Attribution and the "Abusive Back" Behavioural Response

Attributional Style Groups	Behaviour: Low Abusive Back	High Abusive Back	
Low Self-blame	N=31 65%	N=17 35%	48
High Self-blame	N=22 56%	N=17 44%	39
	53	34	87

$\chi^2 = 0.60$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.16

The Self-blame Attribution and the "Make Look Foolish" Behavioural Response

Attributional Style Groups	Behaviour: Low Look Foolish	High Look Foolish	
Low Self-blame	N=30 63%	N=18 37%	48
High Self-blame	N=21 54%	N=18 46%	39
	51	36	87

$\chi^2 = 0.66$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.17

The Self-blame Attribution and the "Indignant" Behavioural Response

Attributional Style Groups	Behaviour: Low Indignant	Behaviour: High Indignant	
Low Self-blame	N=27 56%	N=21 44%	48
High Self-blame	N=15 39%	N=24 61%	39
	42	45	87

$\chi^2 = 2.73$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.18

Self-blame discriminating Behavioural Responses

i) Standardised canonical discriminant function coefficients

Function 1 (Wilks Lambda .96, χ^2 = 3.11, d.f. 1, p<.07)

Matter-of-fact	1.00

ii) Correlations between the discriminating variables and the canonical discriminant function

	Function 1
Matter-of-fact	**1.00**
Call help	**0.38**
Gentle & attentive	**-0.24**
Humour	0.13
Calm & assertive	-0.09
Ignore abuse	0.08
Blow-off	0.04

iii) Canonical discriminant function evaluated at the group centroids

Group Membership	**Function 1**
Low self-blame (1)	-0.17
High self-blame (2)	0.21

iv) Percent of cases correctly classified

Actual Group	**Predicted Group Membership**	
	(1)	**(2)**
Low self-blame (1)	77.1%	22.9%
High self-blame (2)	64.1%	35.9%

% correctly classified = 58.62%

(v) Self, Other and Circumstances

In the present study the nurses' locus of causality was measured with three questions instead of the usual one used by Peterson et al (1982). The three questions unpacked the internal/external dimension into self-blame ("something I had said or done"), other-blame ("something to do with the patient") and circumstances-blame ("something to do with circumstances"). Each of these variables were examined separately to see if they were related to the behavioural responses in any consistent fashion. The relationship between each of these attributional judgements and all ten of the behaviours was examined using discriminant functions analysis for the normally distributed variables and Chi-squared for the skewed behaviours. The results are presented below.

Self-blame and the behavioural responses

Chi-squared analyses were performed on the self-blame and the three skewed behavioural responses of "abusive back", "make look foolish", and "indignant". All of the variables were dichotomised using a median split. The results of these analyses can be seen in Tables 5.15 to 5.17. None of the analyses were significant and it was therefore concluded that self-blame did not distinguish nurses in relation to these three behavioural responses.

Self-blame was also used as the dependent variable in a discriminant functions analysis of the seven normally distributed behavioural responses. Table 5.18 presents the results of this analysis. As can be seen from the tables, the discriminant function did not achieve significance, although it revealed a strong trend (Chi-squared=3.11, d.f. 1, $p<.07$).

The most effective way of discriminating nurses was in terms of the behavioural response of "matter-of-fact". Two other behavioural responses correlated significantly with this function: "Call help" (r=0.38) and "Gentle & attentive" (r=-0.24). It was found that high self-blame nurses were positively associated with this function (0.21), while low self-blame nurses were negatively

associated with it (0.21). In addition, correct classification of low self-blame nurses was high (77.1%) while classification of high self-blame nurses was low (35.9%).

These analyses indicate that self-blame attributions do have some relationship with behavioural responses, although this relationship is not strong nor entirely clear. It is certainly the case that low self-blame nurses are associated with the effective behaviour of gentle and attentive and are negatively associated with the two ineffective behaviours of matter-of-fact and call help, while high self-blame nurses are positively associated with the ineffective behaviours and negatively associated with the effective behaviour. However, the discriminant function does not give accurate classification of high-self blame nurses in the same way as it does for low self-blame nurses. It seems likely, therefore, that the discriminant function is a more accurate discriminator of low self-blame nurses than of high self-blame nurses.

TABLE 5.19

The Other-blame Attribution and the "Abusive Back" Behavioural Response

Attributional Style Groups	Behaviour: Low Abusive Back	High Abusive Back	
Low Other-blame	N=25 57%	N=19 43%	44
High Other-blame	N=28 65%	N=15 35%	43
	53	34	87

$\chi^2 = 0.63$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.20

The Other-blame Attribution and the "Make Look Foolish" Behavioural Response

Attributional Style Groups	Behaviour: Low Look Foolish	High Look Foolish	
Low Other-blame	N=25 57%	N=19 43%	44
High Other-blame	N=26 61%	N=17 39%	43
	51	36	87

$X^2 = 0.12$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.21

The Other-blame Attribution and the "Indignant" Behavioural Response

Attributional Style Groups	Behaviour: Low Indignant	High Indignant	
Low Other-blame	N=22 50%	N=22 50%	44
High Other-blame	N=20 47%	N=23 53%	43
	42	45	87

$X^2 = 0.11$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.22

Other-blame discriminating Behavioural Responses

i) Standardised canonical discriminant function coefficients

Function 1 (Wilks Lambda .90, χ^2 = 8.65, d.f. 1, p<.003)

Calm & assertive	1.00

ii) Correlations between the discriminating variables and the canonical discriminant function

	Function 1
Calm & assertive	**1.00**
Gentle & attentive	**0.25**
Ignore abuse	0.13
Matter-of-fact	-0.10
Blow-off	0.06
Call help	0.05
Humour	0.00

iii) Canonical discriminant function evaluated at the group centroids

Group Membership	**Function 1**
Low Other-blame (1)	-0.32
High Other-blame (2)	0.33

iv) Percent of cases correctly classified

Actual Group	**Predicted Group Membership** (1)	(2)
Low Other-blame (1)	**61.4%**	38.6%
High Other-blame (2)	37.2%	**62.8%**

% correctly classified = 62.07%

Other-blame and the behavioural responses

Chi-squared analyses were performed on the other-blame and the three skewed behavioural responses of "abusive back", "make look foolish", and "indignant". The variables were dichotomised using a median split. The results of these analyses are presented in Tables 5.19 to 5.21. None of the analyses were significant and it was therefore concluded that self-blame did not distinguish nurses in relation to these three behavioural responses.

Other-blame was also used as the dependent variable in a discriminant functions analysis of the seven normally distributed behavioural responses. Table 5.22 presents the results of this analysis. The discriminant function was highly significant (Chi-squared=8.65, d.f. 1, $p<.003$), and was defined by "Calm & assertive". One other behavioural response was significantly correlated with the function: "Gentle & attentive"($r=0.25$). It was also found that high other-blame nurses were positively associated with the function (0.33) while low other-blame nurses were negatively associated with it (-0.32). In addition, low other-blame nurses were correctly classified in over 61% of cases and high other-blame nurses were correctly classified in over 62% of cases.

These analyses indicate that a nurse's perception of the extent to which she holds the aggressor responsible for an aggressive incident effects her choice of behavioural responses. It is clear that nurses who hold the aggressor responsible for his/her actions are associated with two out of the three effective behavioural responses - calm & assertive and gentle & attentive, while nurses who do not are negatively related to these effective behaviours. Moreover, both low and high other-blame ratings are equally predictable from the nurses' scores on the discriminant function.

Circumstances-blame and the behavioural responses

Once again, Chi-squared analyses were performed on the Circumstances-blame (that is, the degree to which a nurse blames the circumstances) and the three skewed behavioural responses of "abusive back", "make look foolish", and "indignant". All of the variables were dichotomised using a median split. The results of these analyses can be found in Tables 5.23 to 5.25. None of the

analyses were significant and it was therefore concluded that self-blame did not distinguish nurses in relation to these three behavioural responses.

Circumstances-blame was also used as the dependent variable in a discriminant functions analysis of the seven normally distributed behavioural responses. Table 5.26 presents the results from this analysis. It shows that the discriminant function was highly significant (Chi-squared=13.58, d.f. 2, $p<.001$), and was defined by the two behavioural responses of: "Gentle & attentive" and "blow-off". Two further behavioural responses correlated significantly with the function: "Ignore abuse" ($r=0.34$) and "calm & assertive" ($r=.21$). It was found that low circumstances-blame was negatively related to the function, while high circumstances-blame was positively related to the function. In addition, the low circumstances-blame was correctly classified in over 78% of cases, and the high circumstances-blame group was correctly classified in over 60% of cases.

These analyses indicate that the degree to which the nurse perceives the circumstances as the cause of aggression is related to her choice of behavioural responses. Nurses who tend to blame circumstances are associated with all three of the effective behavioural responses, while nurses who do not are negatively related to them. In addition, classification of nurses' attributions is particularly powerful for those nurses who do not believe circumstances are an important cause of aggression.

TABLE 5.23

The Circumstances-blame Attribution and the "Abusive Back" Behavioural Response

Attributional Style Groups	Behaviour: Low Abusive Back	High Abusive Back	
Low Circumstances-blame	N=27 57%	N=20 43%	47
High Circumstances-blame	N=26 65%	N=14 35%	40
	53	34	87

$X^2 = 0.52$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.24

The Circumstances-blame Attribution and the "Make Look Foolish" Behavioural Response

Attributional Style Groups	Behaviour: Low Look Foolish	High Look Foolish	
Low Circumstances-blame	N=26 55%	N=21 45%	47
High Circumstances-blame	N=25 63%	N=15 37%	40
	51	36	87

$X^2 = 0.50$ (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.25

The Circumstances-blame Attribution and the "Indignant" Behavioural Response

Attributional Style Groups	Behaviour: Low Indignant	Behaviour: High Indignant	
Low Circumstances-blame	N=20 43%	N=27 57%	47
High Circumstances-blame	N=22 55%	N=18 45%	40
	42	45	87

X^2 = 1.34 (d.f. 1, n.s.)

Note 1: Both variables were dichotomised using a median split.

TABLE 5.26

Circumstances-blame discriminating Behavioural Responses

i) Standardised canonical discriminant function coefficients

Function 1 (Wilks Lambda .85, X^2 = 13.58, d.f. 2, p<.001)	
Gentle & attentive	0.66
Blow-off	0.57

ii) Correlations between the discriminating variables and the canonical discriminant function

	Function 1
Gentle & attentive	**0.84**
Blow-off	**0.78**
Ignore abuse	**0.34**
Calm & assertive	**0.21**
Humour	0.19
Matter-of-fact	-0.15
Call help	-0.05

iii) Canonical discriminant function evaluated at the group centroids

Group Membership	**Function 1**
Low circumstances-blame (1)	-0.38
High circumstances-blame (2)	0.45

iv) Percent of cases correctly classified

Actual Group	**Predicted Group Membership** (1)	(2)
Low circumstances-blame (1)	**78.7%**	21.3%
High circumstances-blame (2)	40.0%	**60.0%**

% correctly classified = 70.11%

(vi) Controllability

Controllability was measured in the present study by asking the following question in relation to each of the five scenarios: "How easy to you think it would have been for the [patient/mother/brother] to have controlled [his/her] anger?". The relationship between controllability and the behavioural responses was explored with Chi-squared analyses and discriminant functions analysis. As for the previous analyses, Chi-squared was used with the skewed behavioural responses and discriminant functions analysis with the normally distributed behavioural responses.

Chi-squared analyses were performed on the controllability attribution and the three skewed behavioural responses. All the variables were dichotomised using a median split. The results of these analyses are presented in Tables 5.27 to 5.29. None of the analyses were significant and it was therefore concluded that self-blame did not distinguish nurses in relation to these three behavioural responses.

The discriminant functions analysis between controllability and the seven remaining behavioural responses was highly significant (Chi-squared=8.51, d.f. 1, $p<.003$). Table 5.30 gives the results of this analysis. As the Table shows, the discriminant function is defined by "humour", and an additional behaviour is positively correlated with the function: "ignore abuse" ($r=0.29$). Both of these behaviours are ineffective. The low controllability group was negatively related to the function (-0.35) and the high controllability group was positively related to the function (0.30). In addition, the low controllability group was correctly classified in 60% of the cases and the high controllability group was correctly classified in over 59% of the cases.

TABLE 5.27

The Controllability Attribution and the "Abusive Back" Behavioural Response

Controllability Attribution	Behaviour: Low Abusive Back	High Abusive Back	
Low Controllability	N=27 68%	N=13 32%	40
High Controllability	N=26 55%	N=21 45%	47
	53	34	87

X^2 = 1.34 (d.f. 1, n.s.)

Note 1: Both groups were computed using median splits.

TABLE 5.28

The Controllability Attribution and the "Make Look Foolish" Behavioural Response

Controllability Attribution	Behaviour: Low Look Foolish	High Look Foolish	
Low Controllability	N=27 68%	N=13 32%	40
High Controllability	N=24 51%	N=23 49%	47
	51	36	87

X^2 = 0.43 (d.f. 1, n.s.)

Note 1: Both groups were computed using median splits.

TABLE 5.29

The Controllability Attribution and the "Indignant" Behavioural Response

Controllability Attribution	Behaviour: Low Indignant	High Indignant	
Low Controllability	N=21 58%	N=19 47%	40
High Controllability	N=21 45%	N=26 55%	47
	42	45	87

$X^2 = 0.52$ (d.f. 1, n.s.)

Note 1: Both groups were computed using median splits.

TABLE 5.30

Controllability Attribution discriminating Behavioural Responses

i) **Standardised canonical discriminant function coefficients**

Function 1 (Wilks Lambda .90, X^2 = 8.51, d.f. 1, p<.003)

Humour	1.00

ii) **Correlations between the discriminating variables and the canonical discriminant function**

	Function 1
Humour	**1.00**
Ignore abuse	**0.29**
Call help	0.19
Blow-off	0.14
Matter-of-fact	0.12
Gentle & attentive	0.09
Calm & assertive	-0.07

iii) **Canonical discriminant function evaluated at the group centroids**

Group Membership	**Function 1**
Low controllability (1)	-0.35
High controllability (2)	0.30

iv) **Percent of cases correctly classified**

Actual Group	**Predicted Group Membership** (1)	(2)
Low controllability (1)	**60.0%**	40.0%
High controllability (2)	40.4%	**59.6%**

% correctly classified = 59.77%

From these results it is possible to conclude that a nurse's judgements about how easy it would have been for the target in each scenario to control his/her aggression does affect her choice of behavioural response. Nurses who *do not* believe it would have been easy for the target to control their aggression (that is, the low controllability group) are negatively associated with "humour" and "ignore abuse", while nurses who *do* believe the target could have controlled his/her aggression (that is, the high controllability group) are positively associated with these behavioural responses, both of which are ineffective behaviours. Finally, although the classification was only moderately accurate, it was consistent for both groups. In summary, it seems reasonable to conclude that nurses who believe the aggressor could have controlled him/herself can be associated with ineffective behavioural responses.

(vii) Emotional Responses

The emotional responses items were derived from the previous study, as explained in the introduction to this chapter. The items were: confidence in the ability to handle aggression, stress associated with aggression and negative emotions associated with aggression. Each of the variables was dichotomised using a median split, providing groups of high/low confidence, high/low stress and high/low negative emotions. These data were then sorted by hand to obtain the following combinations: low confidence, high stress and/or high negative emotions (the 'maladaptive' emotional response group); high confidence, low stress and/or low negative emotions (the 'adaptive' emotional response group); and any other combination (the 'other' emotional response group). All three groups were used in the following analyses, although theoretical interest lies with the adaptive and maladaptive emotional response groups.

TABLE 5.31

The Emotional Responses and Attributional Style

Attributional Style Groups	Emotional Response Groups: Maladaptive Response	Adaptive Response	Other Response	
Internal Style	N=8 29%	N=13 46%	N=7 25%	28
External Style	N=7 22%	N=18 56%	N=7 22%	32
	15	31	14	60

$X^2 = .61$ (d.f. 2, n.s.)

Note 1: Attributional style contains only two groups. Those who made Internal, and either Global and/or Stable judgements, and those who made External, and either Global and/or Stable judgements. Any other styles of attributional judgement were excluded from the analysis.

Note 2: Emotional Response Style contains three groups. The "adaptive" group with high confidence and either low stress and/or low negative emotions, the "maladaptive" group with low confidence and either high stress and/or high negative emotions, and the "other" group containing all other types of response.

TABLE 5.32

The Emotional Responses and the "Abusive back" Behavioural Response

Behaviour	Emotional Response Groups: Maladaptive Response	Adaptive Response	Other Response	
Low Abusive back	N=11 42%	N=29 71%	N=13 65%	53
High Abusive back	N=15 58%	N=28 29%	N=7 35%	34
	26	41	20	87

$X^2 = 5.58$ (d.f. 2, n.s.)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Emotional Response Style contains three groups. The "adaptive" group with high confidence and either low stress and/or low negative emotions, the "maladaptive" group with low confidence and either high stress and/or high negative emotions, and the "other" group containing all other types of response.

TABLE 5.33

The Emotional Responses and the "Make look foolish" Behavioural Response

Behaviour	Emotional Response Groups Maladaptive Response	Adaptive Response	Other Response	
Low Look foolish	N=11 42%	N=28 68%	N=12 60%	51
High Look foolish	N=15 58%	N=13 32%	N=8 40%	36
	26	41	20	87

$X^2 = 4.45$ (d.f. 2, n.s.)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Emotional Response Style contains three groups. The "adaptive" group with high confidence and either low stress and/or low negative emotions, the "maladaptive" group with low confidence and either high stress and/or high negative emotions, and the "other" group containing all other types of response.

TABLE 5.34

The Emotional Responses and the "Indignant" Behavioural Response

Behaviour	Emotional Response Groups Maladaptive Response	Adaptive Response	Other Response	
Low Indignant	N=7 27%	N=26 63%	N=9 45%	42
High Indignant	N=19 73%	N=15 37%	N=11 55%	45
	26	41	20	87

$X^2 = 8.600$ (d.f. 2, $p<.01$)

Note 1: The behavioural response groups were computed using a median split.

Note 2: Emotional Response Style contains three groups. The "adaptive" group with high confidence and either low stress and/or low negative emotions, the "maladaptive" group with low confidence and either high stress and/or high negative emotions, and the "other" group containing all other types of response.

Emotional responses and attributional style

Chi-squared analysis was performed on the three emotional responses groups (adaptive, maladaptive and other), and the two attributional style groups (internal and external). The results are presented in Table 5.31, which shows that emotional responses are not associated with attributional style (Chi-squared=.609, d.f. 2, n.s.)

Emotional Responses and the skewed behavioural responses

Chi-squared analyses were performed between the three groups of emotional response and the dichotomised behavioural responses of "abusive back", "make look foolish" and "indignant". The results are presented in Tables 5.32 to 5.34.

Emotional responses were significantly related to the indignant behavioural response (Chi-squared=8.600, d.f. 2, $p<.01$). As can be seen from the percentages in Table 5.34, 63% of nurses in the adaptive group were in the low indignant group, while 73% of nurses in the maladaptive group were in the high indignant group. This result shows quite clearly that the nurses who would consider using the indignant behavioural response are also the nurses who suffer most as the result of aggression.

Although neither of the two remaining analyses are significant, there was a strong trend between the emotional responses and the abusive back behaviour (Chi-squared=5.581, d.f. 2, $p<.06$). Looking at Table 5.32, it can be seen that 71% of nurses in the adaptive group are in the low abusive back group, compared with only 42% in the maladaptive group. This indicates that there is a trend for nurses who react maladaptively to aggression to be associated with an abusive behavioural response.

The results from these analyses are important because they relate to the three most skewed and most ineffective behavioural responses. These behaviours were only retained to see if the minority of individuals who had endorsed them could be identified, otherwise they would have been useless because they were so clearly unacceptable to most nurses. However, it has been found that the maladaptive emotional response nurses (that is, the nurses with low confidence, high stress and/or high negative emotions) can be associated with two of these behaviours, namely, indignant and abusive back.

Emotional Responses and the normally distributed behavioural responses

The relationships between the emotional response groups and the normally distributed behavioural responses were analysed using discriminant functions analysis. In order to simplify the analysis, the 'other' category of emotional responses was dropped and the behavioural responses were grouped on the basis of the maladaptive and adaptive groups. As Table 5.35 shows, a significant function was revealed (Chi-squared=3.85, d.f. 2, $p<.05$) which was distinguished by the item "blow-off". A further two behavioural responses were significantly correlated with this function, they were: "Gentle & attentive" (r=0.45) and "ignore abuse" (r=0.41). The maladaptive emotional response group was negatively related to the function (-0.31) and the adaptive emotional response was positively related to the function (0.20). However, classification of the maladaptive group was extremely poor, with over 73% being misclassified as adaptive. In the case of the adaptive group classification was good, with over 83% being correctly classified.

TABLE 5.35

Emotional Responses discriminating Behavioural Responses

i) **Standardised canonical discriminant function coefficients.**

Function 1	(Wilks Lambda .942, X^2 = 3.85, d.f. 2, p<.05)
Blow off	1.00

ii) **Correlations between the discriminating variables and the canonical discriminant function**

	Function 1
Blow off	**1.00**
Gentle & attentive	**0.45**
Ignore abuse	**0.41**
Humour	0.13
Call help	0.11
Calm & assertive	0.06
Matter-of-fact	0.03

iii) **Canonical discriminant function evaluated at the group centroids**

Group Membership	**Function 1**
Maladaptive Emotional Response (1)	-0.31
Adaptive Emotional Response (2)	0.20

iv) **Percent of cases correctly classified**

Actual Group	**Predicted Group Membership** (1)	(2)
Maladaptive (1)	**26.9%**	73.1%
Adaptive (2)	14.6%	**85.4%**

% correctly classified = 62.69%

TABLE 5.36

The Emotional Responses and Controllability

Controllability Attribution	Emotional Response Groups: Maladaptive Response	Adaptive Response	Other Response	
Low Controllability	N=12	N=20	N=8	40
	46%	49%	40%	
High Controllability	N=14	N=21	N=12	47
	54%	51%	60%	
	26	41	20	87

X^2 = .418 (d.f. 2, n.s.)

Note 1: The Controllability groups were computed using a median split.

Note 2: Emotional Response Style contains three groups. The "adaptive" group with high confidence and either low stress and/or low negative emotions, the "maladaptive" group with low confidence and either high stress and/or high negative emotions, and the "other" group containing all other types of response.

In summary, nurses in the adaptive emotional response group are associated with two of the three effective behavioural responses (Blow-off and gentle & attentive), and one ineffective response (ignore abuse). The nurses in the maladaptive emotional response group are negatively associated with these behaviours. However, when trying to classify the nurses in terms of their emotional response group, classification is extremely poor for the maladaptive group, while being high for the adaptive group.

Emotional Responses and Controllability

One further Chi-squared was performed between the three emotional response groups (maladaptive, adaptive and other) and the dichotomised attribution of controllability. As for all previous analyses, the controllability variable was dichotomised using a median split. As Table 5.36 shows there was no significant relationship between the emotional response groups and the controllability attribution. It was therefore concluded that the emotional response groups are not associated with attributions of controllability.

5. DISCUSSION

The results from this study have implications for Weiner's attribution-affect-action model, for training interventions designed to help nurses deal more effectively with aggression, and for the measurement of locus of causality. In addition to this, the findings extend the descriptive data base on the relations between various personality traits and attributional style which has been called for by Mitchell (1989), and they make a contribution to the person by situation debate.

It was found that nurses do have certain 'styles' of both explaining and responding to events, and that confidence, stress and negative emotions are associated with undesirable behavioural responses. In addition, the results show that nurses who do *not* see themselves as the cause of aggressive incidents select behaviours which are more likely to defuse aggressive incidents than

nurses who *do* blame themselves. It has also been shown that those nurses who bottle-up their anger tend to see themselves as the cause of aggressive incidents.

The consistency of nurses' ratings for each of the scenarios was examined to determine the extent to which the circumstances affected the nurses' causal explanations and behaviours. The data revealed that nurses *do* have consistent styles, both for their attributional judgements and for their predicted behavioural responses, but, *in addition*, they are responsive to circumstances. This was indicated by the fact that nurses' attributions and behaviours were highly correlated across the scenarios, but were not so highly correlated that they excluded the influence of the scenarios themselves. It was concluded from this that nurses should be trained to be aware of their own individual styles of explanation and behaviour and to understand the role that these styles play in specific circumstances.

Weiner's attribution-affect-action model was used to underpin the present study in the expectation that a nurse's ability to adapt emotionally to aggression may be informed by the way in which she explains aggressive incidents which may in turn affect her behaviour. The current study has found relationships between attribution and behaviour and between emotion and behaviour, but no link has been found between attribution and emotion. If this relationship had existed, it would have been possible to test for a causal path leading from attribution through emotion and on to behaviour. What implications do these findings have for Weiner's model? Weiner (1988) states that psychologists are "engaged in a constant struggle to develop and replicate a data base on which to construct theories". He turns to Lykken's work (1968) which identifies a variety of different methods of replication. The third level of replication described by Lykken is "an entirely new approach to the testing of an underlying theoretical framework" and it is this level of replication that he considers to be the most compelling. The present study has applied an "entirely new" approach to test Weiner's attribution-affect-action model and it has failed to confirm his

"underlying theoretical framework". This may be partly explained by the nurses' professionalism which may moderate the effects that Weiner has uncovered in his research: while the collapsed passenger on the underground is not the formal responsibility of fellow passengers, nurses are most certainly responsible for both patients and their relatives. It may therefore be the case that a nurse actively struggles to overcome the emotions that follow on from her attributions about patients and to, in some sense, repress them, in order to adopt a more objective and professional approach. However, it also be argued that attributions are an insufficient cause of emotions, and that Weiner's model breaks down in an applied setting. Whilst these findings cannot be considered to be a refutation, they clearly do not support his model, and perhaps they can serve as a reminder of the need for more studies to examine it using an "entirely new" approach.

One of the strengths of the current study was the measurement of locus of causality using three distinct scales. This enabled nurses to make relatively complex causal judgements about the self, the other and the circumstances. For example, they were empowered to allocate blame equally to all three domains, or to none of them, rather than being forced to blame either themselves or external factors. This was a departure from the usual method of measuring locus of causality and was particularly important because it meant that all three domains could be analysed separately in relation to the behavioural responses. It was considered to be of some importance to know the specific relationships between self-blame, other-blame and circumstances-blame and the behavioural responses so that this information could be given to nurses during training to help them to understand that the way in which they explain events may affect their behaviour.

It had been hypothesised that those nurses who saw themselves as responsible for an aggressive incident would also be the nurses who used ineffective behavioural responses to deal with aggression. In fact, nurses who did blame themselves were associated with an ineffective behavioural response, while nurses who did not blame themselves were associated with effective

behavioural responses. This effect just failed to reach significance. The trend that nurses who tend *not* to blame themselves were associated with effective behavioural responses was confirmed by the locus of causality analysis. Here it was found that nurses who have an internal locus of causality (that is, have a greater tendency to blame themselves) tended not to use the effective behaviours and that nurses who have an external locus of causality (that is, have a greater tendency to blame external causes) tended to use the effective behaviours. Taken together these findings indicate that the more a nurse blames herself, the less likely it is that she will respond to aggression by using the effective behaviours.

The fact that the nurse sees herself as responsible for an aggressive incident could result from quite different causes. She may believe that she is too aggressive herself, that she does not have the patience to deal with difficult people, that she is generally useless at everything, or that she had not received appropriate training on how to respond, and so on. Whatever the cause of her self-blame it is highly likely that she will either be too demotivated, or will have insufficient confidence in her skills, to respond effectively to it. Somehow the notion of being the cause of aggression and then being able to defuse it seem incompatible. This, of course, is not the same as saying the nurse is in reality incapable of defusing aggression - just that she is much less likely to try to do so if she sees herself as being the cause of it. Once again, the insight provided by this finding can be usefully applied within a training programme, by helping nurses to become aware of the impact of their self-evaluations on their behaviour.

Rule and Ferguson (1989) claim that hostile reactions to aggression depend on the extent to which the aggressor is held responsible for an aggressive incident. This claim was not born out by the present study. In fact, both of the 'external' attributions, other-blame and circumstances-blame, were associated with the effective behavioural responses. Whatever the reason for this discrepancy, nurses in the current study did not respond with ineffective behaviours toward the

aggressor, even when they perceived him/her as the cause of the incident. This finding may partly be due to the fact that nurses were allowed to make complex attributions about locus. That is, they may have rated the aggressor as partly responsible, themselves as partly responsible, and, in addition, the circumstances surrounding the incident as partly responsible. As a consequence blame may also have been shared out, leaving the nurse relatively free to use the effective behaviours to deal with the incident. It may also be the case that the other-blame attribution contained a number of different causal judgements, such as the aggressor was not responsible for his actions, he meant no harm, and so on, and that these unknown attributions influenced the nurses' choice of behavioural responses. One thing is clear, however, and that is that nurses are capable of both holding the "other" responsible for an aggressive incident *and* of remaining "calm and attentive" or "calm and assertive" or of allowing them to "blow-off steam".

Controllability attributions were also examined in the present study, and the findings did, to some extent, substantiate Weiner's idea that if the target is seen to have control over circumstances the perceiver feels angry towards him/her and withholds help. It was found in the current study that controllability was associated with two of the ineffective behavioural responses, suggesting that nurses who make controllability attributions do not make the effort to use the effective responses. However, the finding should be treated with some caution because one of the behavioural responses associated with the controllability attribution was "ignore the abuse". Although this behaviour was previously rated as an ineffective behaviour it appeared in a number of the discriminant function analyses alongside the effective behaviours, suggesting that nurses in this sample may have considered it to be an effective behaviour. However, it was extremely interesting to find that the nurses who believe the aggressor can control his or her aggression (presumably if they 'had wanted to'), are less likely to use effective behaviours to deal with the situation. As a result it appears that the controllability attribution is not particularly helpful in relation to aggressive incidents.

The attributional style measure was computed from several different variables and when it was compared with locus of causality it was found that locus of causality was a better discriminator between nurses in terms of their behavioural responses. In other words, the complexity of the attributional style measure did not seem to provide any more discriminatory power over and above that provided by the more simple measure of locus of causality. This finding could be explained by the fact that locus of causality may be more than a simple measure of locus. To give an example, when a nurse rated herself as responsible for an aggressive incident she might have been thinking "No matter what the circumstances, I always seem to be causing trouble" or alternatively, she might have thought "I don't usually cause trouble". Unfortunately there is no way of discriminating between the two quite different attributions represented by the same self-blame rating. It may be the case, therefore, that locus of causality measured enduring rather than transitory judgements and global rather than specific judgements, and that it therefore represented the equivalent of 'self-character' blame. If this were the case it would explain why the more sophisticated measure of internal attributional style was no better than the internal locus of causality measure when it came to discriminating between nurses. The fact that the more complex measure was not any better at discriminating nurses, and the fact that it could be broken down into attributions about the self, other and circumstances, suggest that this might be a more elegant way of measuring locus of causality.

Mitchell (1989) has pointed out that the relationship between personality and attributional style is largely unmapped territory. He found that several personality typologies which could be judged as "adaptive" by today's social norms were negatively related to attributional style. In particular he found a strong negative relationship between an "Activity-Extraversion-Stability" factor and internal attributional style. It was hypothesised at the outset of the present study that the external control factor found in chapter 4 (consisting of extraversion, interpersonal control and assertiveness) would be negatively related to an internal attributional style and that the

internalised anger factor also found in chapter 4 (consisting of bottled-up angry arousal) would be positively related to an internal attributional style. Support was found for the latter, but not for the former. While it is not clear why external control and attributional style are unrelated, it is obvious why nurses who tend to blame themselves might also bottle-up their anger - perhaps they consider themselves "bad" enough without showing themselves and the world that they are angry on top of it all!

It was also found that the mean score of blame for the other was higher than the mean score for blame of the self. This ties in with Jones and Nisbett's (1971) observer bias thesis, which states that observers tend to attribute blame for negative events to the target's internal world, while blaming negative events which they personally experience on circumstances. What was interesting, however, was that the highest mean of all in the present study, was the mean for circumstances (m=25). This suggests that when people are given a choice (which doesn't happen often in studies of attribution) they far prefer to blame the circumstances than either themselves or other people.

Perhaps one of the most compelling findings of the present study was the relationship between the triad of maladaptive emotional responses and two out of the three most ineffective behavioural responses. These behaviours were rejected by the majority of nurses as untenable, were so skewed that they had to be dichotomised, and were unrelated to any of the other variables. This finding suggests that specific nurses are at risk of becoming locked into a negative cycle, where emotions and behaviours serve to reinforce one another in a downward spiral, with emotionally vulnerable nurses reacting to aggression with ineffective behaviours which only serve to make matters worse, and as a consequence they feel even more upset and less confident.

In summary, a number of relationships between attributions, behaviours, personality and emotions have been revealed by the present study, all of which provide rich material for training nurses to

deal more effectively with aggression. It was found that external locus of causality is associated with the more effective behavioural responses, and that this holds true even when nurses blame the aggressor, blame circumstances or blame both. Moreover, it has been shown that internalised anger is related to internal locus of causality, that nurses do have certain 'styles' of both explaining and responding to events, and that the triad of maladaptive emotional responses are associated with two of the three most ineffective behavioural responses. In addition, a new method of measuring locus of causality was examined and found to be even more efficient at discriminating between nurses than the more complex measure of attributional style. These findings are correlational but their causal implications will be tested in the following chapter when they are applied within an evaluated training programme.

CHAPTER SIX

TRAINING NURSES TO DEAL WITH ANGRY PEOPLE

1. INTRODUCTION

The final study conducted in this thesis was a two-day training programme which was developed to help nurses deal more effectively with angry patients and their relatives. The training programme addressed a number of different topics, ranging from such things as interpersonal skills (including basic counselling skills and assertiveness) to awareness about the effects of stress, pent-up anger, and attitudes towards patients. A principal assumption of this training was that, on a majority of occasions, nurses have the opportunity to either aggravate or defuse aggression before it occurs.

The training programme set out to incorporate some of the findings which emerged from the research presented earlier in this thesis. These findings and their applications are described below.

Handling Aggression

In chapter 2 nurses were asked to give their theories about the best and worst ways to respond to verbal and physical aggression. It was found that nurses believe verbal aggression is most effectively dealt with by 1) being caring and nurturant 2) finding out the facts, and 3) being assertive. On the other hand, the nurses feel that verbal aggression is most poorly dealt with by 1) trying to deflect it, 2) becoming angry yourself, or 3) by being timid. According to the nurses' theories, physical aggression should be dealt with in a similar way, but with a slightly different emphasis. In the case of physical aggression, it is best dealt with by 1) being nurturant, 2) being assertive, and 3) leaving the aggressor free to express him/herself. On the other hand, physical aggression is poorly dealt with if you are 1) authoritarian, 2) demeaning, or 3) defensive.

It was important to establish what nurses thought were the most effective and ineffective responses to aggression, but the next step was to find out if their theories about how to control aggression worked when put into practice. To obtain this information, nurses were asked about the last verbal and physical incident with which they had been involved. They provided details about what they had done and whether their actions had calmed the angry person down. In general, the nurses' theories about the best and worst ways to handle aggression were born out by their experiences. That is, being caring, assertive and trying to get information actually did seem to work, while being authoritarian, becoming angry, and so on, seemed to make matters worse. In addition to this, it was established that there are far fewer methods of calming someone down who is being physically aggressive, than there are ways of calming someone down who is being verbally aggressive. This means that nurses should not experiment with strategies for dealing with physical aggression, and that there are clear prescriptions on how to deal with it.

The information that was obtained about nurses' theories and experiences of dealing with aggression provided valuable data for the training programme. The data enabled the trainer to provide guidelines about the best and worst ways to respond to aggression, which were based on the experiences of other nurses. In addition to this, the findings indicated that nurses need to be highly interpersonally skilled in order to be "calming", "assertive" or to "get information". These issues were examined in more detail in chapter 4, and are described below.

Interpersonal Skills, Stress and Feeling Angry

In chapter 4 it was found that nurses who have little confidence in their ability to deal with aggression find aggressive incidents stressful and upsetting. These three measures, confidence, stress and upset, are predicted by a number of other variables. For example, if a nurse scores high on interpersonal skills (which is comprised of interpersonal control, extraversion and assertiveness scores) she tends to have high levels of confidence and low levels of stress and upset. By contrast,

the nurse who bottles her anger up inside is more likely have high levels of stress and upset, as well as lowered confidence. It was also found that general stress levels predict high stress and upset in relation to aggressive incidents.

Several important themes which were to dominate the training programme derived from these findings, namely, interpersonal skills, assertiveness and stress control. In particular, the study had reinforced the need for training nurses in interpersonal and assertiveness skills. The role of stress in the management of aggression was further underlined by the results presented in chapter 5, which are discussed below.

Blame, Behaviour and Self-Image

In chapter 5 it was found that nurses who are suffering from high levels of stress and upset, and have lowered confidence, are bad at handling aggression. In addition to this, it was established that nurses who tend to blame themselves for aggressive incidents are not very effective at defusing aggression, and that the nurses who blame themselves tend to be the ones who bottle up their own feelings of anger.

These findings served to reinforce the impression that for nurses to be competent at handling aggression, they need to have some sort of internal equilibrium themselves. Being angry with a low self image and high levels of stress are all associated with the inability to handle aggression. On the basis of this, it was decided that the training should attempt to provide nurses with the means to look after themselves (through relaxation exercises), and to examine their assumptions about what it is that makes patients angry. The aim was to help nurses to see that aggressive incidents were rarely any one person's 'fault'.

As should be apparent by now, the training focused on four main areas of concern, interpersonal skills, stress and relaxation awareness, assertiveness and, finally, the nurses' assumptions about what makes patients aggressive. While these themes were largely based on the findings presented in this thesis, they were also based on theoretical considerations and published research, which are discussed below.

Interpersonal Skills

The emphasis on interpersonal skills in the training programme was an important one. Apart from the evidence that such skills are related to the effective management of aggression, there is a considerable research literature which suggests that nurses have substantial deficiencies in communication skills (Ashworth 1980; Cartwright, 1964; Faulker 1980). In fact, observation studies have shown that nurses do not spend much of their time with patients (less than 14%),and that when they do, it is only for an average of 1.13 minutes, during which time they usually discuss superficial or task related topics (Macleod Clarke 1981; 1982). Macleod Clarke (1985) points out that: "Nurses' questions to patients were nearly always closed and leading, with few examples of open questioning. Reinforcing or encouraging strategies were rarely used appropriately and there was evidence of a lack of listening and attending. Nurses' responses to patients' questions and cues were often negative in that over half the responses or answers were evasive, cliched or even absent. The overall picture was one of tactics that discouraged communication rather than skills that encouraged it".

As Davies points out (1981), nurses undervalue the role of human relations and communication skills. When nurses were asked about conversations with patients they did not consider them to be part of their work (Stockwell, 1972). Their relationships with patients tended to be task related, and when there were no tasks to be done, they did not interact with patients. This study also showed that popular patients were given favours, and that sanctions were used against

unpopular patients. Popular patients were those who communicated readily, co-operated with treatment and who knew the nurse's name, while unpopular patients were those who expressed suffering, lack of enjoyment and who complained.

These findings, together with the findings from the thesis, underline the importance of teaching nurses interpersonal skills so that they can communicate more effectively with the patients and their relatives. These included such skills as questioning, active listening and giving feedback, and they were taught using lectures, discussion and role playing so that nurses could practice their skills. In summary, it was felt that improved communication skills would help nurses to prevent much of the aggression that they experienced from developing, and would also help them to deal with it once it had developed.

Stress and Relaxation Awareness

Another aspect of the training that was extremely important was a short introduction to the use of relaxation techniques. These included physical relaxation, massage and the use of aromatherapy. Aromatherapy uses essential oils of a variety of natural substances which are then mixed together with massage oil to make it smell pleasant. Although there is no scientific basis to their use, they are extremely relaxing when used in conjunction with massage techniques, and have, in fact, been increasingly employed in patient care in a number of major hospitals. However, few nurses have thought about applying the same techniques to 'look after themselves'.

The application of relaxation techniques was central to the training, in that stress had been associated with the ineffective management of aggression by the present series of studies (see chapters 4 and 5), and there is, in addition, a massive body of literature which suggests that excessive stress is related to a multitude of ills, both physical and psychological. In addition to this there is ample evidence that training in relaxation techniques does reduce stress. Peters and

Benson (1978) trained volunteer office workers in a physiological relaxation technique which they practised regularly. Over 12 weeks their blood pressure dropped and their overall performance and sense of well-being improved. A number of follow-up studies of different relaxation courses have all shown positive results (Murphy, 1984).

Some of the effects of stress include high staff turnover (Gray-Toft and Anderson 1981), coronary heart disease (Hingley & Cooper, 1986), mental illness (Maslach 1979), alcoholism (Vincent 1983), drug abuse (Small 1981; Vincent 1983) and suicide (Elliott, 1986). In fact, women in the nursing profession are more likely to commit suicide than women in any other professional group (OPCS 1978). As a consequence of this overwhelming evidence, and with the link between stress and ineffective handling of aggression which had been established in the course of the current research, it was felt that the training programme should attempt to give the participants some means of learning to deal with stress. This was done by teaching the nurses relaxation techniques and extensive discussion about what causes stress, its effects, and what can be done to reduce it.

Assertiveness and Nurses' Assumptions

There has been much debate about whether you can change peoples' attitudes through training. Certainly, attitudes are deeply rooted and not always conscious. As a consequence, attitudes are difficult to make explicit. In spite of this, an attempt was made during the two-day training to help nurses to examine their attitudes towards the patients, their relatives, and the 'rules' governing patient care. These issues were examined using a combination of lecture, discussion and the practise of basic assertiveness techniques.

Assertiveness was used as a vehicle to help nurses to examine their attitudes towards what should be communicated to patients and their relatives, and how it should be communicated. Bond (1986) defines assertiveness in the following way "being assertive involves respecting your own and the

other person's rights as an individual, making decisions for yourself and allowing other people to make decisions for themselves. It means taking responsibility for yourself, your decisions and actions, and not intruding on other people's personal responsibility." She distinguishes this assertive approach from aggressive, submissive and indirect approaches. The crucial part of this definition has to do with the importance of allowing people to take responsibility for themselves. Certainly patients are not often encouraged to 'take responsibility for themselves'.

When people enter hospital and become patients there is an implicit assumption that they will relinquish responsibility to their care givers - the nurses and the doctors. It is tacitly assumed that the nurse or doctor knows best. This attitude is encouraged by both doctors and nurses because, quite simply, it makes their lives easier. Working with cooperative patients who do not take valuable time by asking too many questions is preferable to working with patients who do not automatically accept your judgement and who ask awkward questions. There are a large number of implicit and explicit rules in hospitals which govern both the behaviour of the staff and the behaviour of the patients. The effects of these 'rules' are powerful and far reaching, as are any social rules, moreover they are rarely either acknowledged or questioned. What is apparent is whether patients are thought of as 'nice', 'cooperative', 'difficult' or 'awkward'. Such judgments, as most nurses will happily tell you, are frequently spoken about between themselves as if they were truths. The training was designed to help nurses to become sensitive to the particular rules which govern their interactions with both patients and colleagues.

The way in which attitudes and assertiveness were addressed by the training is well illustrated in the following example, given by a nurse participating in the training. She told the training group how patients often became aggressive on the days they were due to have surgery. When pressed for more information, she confided that the surgeons nearly always drew up a list of operations which was unrealistically long and of which there was little hope of them completing. As a

consequence, some patients are robed-up without the nurses knowing whether or not they will make it to the operating theatre. As time draws on the patients become increasingly agitated. Finally, when they are told that they cannot be operated on today because the surgeons have 'run over time', some of them become very angry. These circumstances are intolerable for patients who are psychologically and physically prepared for the highly stressful event of being operated on.

During the training, the nurses discussed the example given above (amongst many others). It was decided that the patients should be told about the circumstances surrounding their operations as soon as possible, so that they are fully aware of what is happening, thus allowing them to prepare themselves for the possibility of their operation being cancelled. In addition, the nurse involved agreed that she would explain the consequences of the long lists to the surgeons and tell them her solution. This marked quite a radical change in attitude from a passive and unquestioning interface between patient and surgeon to an active problem-solving role marked by increased awareness of the patients' rights.

The component of the training which dealt with attitudes and assertive communication was considered to be fundamental to the training. The current research had indicated that both assertiveness and an understanding of the causes of aggression influence the way in which nurses respond to it (see chapter 5). In addition to this, for the theoretical reasons outlined above, it was felt that nurses needed to take a fresh look at their attitudes towards patients so that they could increase their understanding of, and sympathy towards, aggressive patients or relatives.

Training Objectives

All of the findings and theories described above were used to help develop the training objectives, which were presented to the participants at the outset of training. They are also given below.

1. To increase awareness about the possible causes underlying aggression
2. To define individual difficulties with aggression at work
3. To identify sources of stress and individual responses to stress
4. To identify ways of reducing stress
5. To distinguish assertive behaviour from aggressive, passive or manipulative behaviour.
6. To learn how to listen, ask questions, and give feedback.
7. To learn new ways of calming angry people
8. To define what each participant wants to take back to their place of work from the training and how to do so
9. To examine methods of future development

Evaluating the Training

Although a number of influential reports (DHSS, 1988; Surrey County Council, 1987; Poyner & Warne, 1988) have singled out training as a way of helping staff who are at potential risk of violence from the public, very little research has been undertaken to evaluate the effects of training. As a result statements such as this one from Surrey County Council (1987) tend to be based on common sense rather than on empirical evidence.

> "Although training cannot completely eliminate the risks, it does afford the opportunity for staff to gain a greater understanding of the causes of violence and increases their ability to recognise potentially violent situations, as well as developing their skills in preventing violence and handling violence if it does occur."

Although one or two studies have attempted to examine the effectiveness of a variety of training programmes about how to handle aggression (for example, Honeycutt and Worobey, 1987; Turnbull et al, 1990), very few have done more than measure changes in the subjective experiences of participants, without comparing them to control groups. While increased confidence is clearly very important, it does not provide any evidence of a change in skills. Moreover, without a control group the change in confidence cannot be attributed to the training programme. One study which used objective measures to assess change was undertaken by Infantin and Musingo (1985). In this study, the assault rates among staff with and without training in aggression control techniques were examined and it was found that the staff who had undergone training were involved in significantly fewer assaults than were untrained staff.

While the Infantin and Musingo study goes some way towards evaluating aggression training the 'untrained' staff in their study did not undergo any training, and were therefore not a proper control group. Thackrey (1987) did, however, use a proper control group which underwent different but comparable training to that undertaken by his experimental group. Thackrey measured "self-attributed clinician confidence" over time, and compared scores with those of a control group. The trained group showed a substantial pretest/post-test gain in confidence which was maintained during an 18 month follow-up. The control group did not show any pretest/post-test gains in confidence. Thackrey's study, however, fails to establish if there is any observable difference between the two groups in terms of their skills.

The current study made use of a control group, all of whom underwent a two day training programme of the same duration as the experimental group, but instead of learning about how to deal with aggression the control group learnt about a new computer system which was being introduced into the Health Authority. Both subjective and objective measures of skills were taken. The nurses' subjective evaluations were sampled before training, immediately after training and

after seven weeks. The objective evaluations were made on the basis of individual interviews with both the control and experimental groups after training had taken place. Nurses were asked how they would handle two hypothetical scenarios involving aggressive incidents. They were subsequently rated on a series of scales designed to assess their level of skill at defusing the incidents which had been described to them.

Style of Training

The present training programme was based on the principles of 'experiential' learning. The experiential method of training requires the active participation of all group members, and it builds on their experiences, ideas and skills, so that they are seen as being actively involved in the learning process rather than as passive recipients of knowledge. Experiential training tools are numerous. For the current training the media which were chosen were lectures, discussion, role play and participation in relaxation exercises.

John Dewey (1938) provided the foundations for experiential learning. Dewey advocated "learning by doing", suggesting that people only really learn when they experience things themselves. This was given empirical support when, In 1969, Wirran and Nierhousy found that people only remember 10% of what they read, 20% of what they hear and 80% of what they say *as they do something.* David Kolb (1984) suggests that experiential learning is comprised of 4 elements: concrete observation (what is happening?); reflective observation (what happened?); abstract conceptualisation (what does it mean?); and active experimentation (what shall I do as result?). He goes on to say that the training must be connected in some way to the beliefs that participants bring to the course, the skills must be practised, responded to and tried again and again if they are to become natural, and that, finally, follow-up support has to be given to participants if change is to be maintained.

The training programme was partly designed to take account of Kolb's learning theory. Nurses were helped to reflect on why patients or relatives become angry, to look at their own attitudes as well as those of the doctors and 'the hospital' as an institution. A forum was provided in which they could practice new skills, and an effort was made to help nurses to identify their particular difficulties at work, and to plan how they could effectively incorporate what had been learned during the training into their work environment. Nurses were also provided with follow-up support to help them assess and maintain change.

2. GENERAL AIMS

It was hypothesised that:

(i) The training participants will show significant pretest/post-test increases in self-rated confidence in their ability to handle aggression which will *not* appear in the case of the control group.

(ii) After training the experimental group can be differentiated from the control group in terms of their ability to deal with two hypothetical incidents of aggression.

3. METHOD AND PROCEDURE

A. Subjects

The Training Group:

Twelve nurses participated in the two day training programme. Eleven of them were female and 1 was male. Their average age was 32 years, with an average of 12 years nursing experience. There were two sisters and 10 staff nurses. The nurses were selected from the High Wycombe Health District.

The Control Group:

Eleven nurses acted as controls to the training group. All of them were female. Their average age was 40 years, with an average of 18 years nursing experience. There were three sisters and eight staff nurses. The nurses were selected from the High Wycombe Health District.

B. Materials

Training Materials:

A large range of training materials were used. They included a series of hand-outs on such things as the causes of aggression, basic counselling skills, methods of calming angry patients and a set of hand-outs on assertiveness.

Relaxation Materials:

Literature was provided about massage, physical relaxation and the use of aromatherapy. In addition a range of essential oils were provided for massage practice.

Evaluation Materials:

Two questionnaires were administered to both the training and control groups, immediately before and immediately after training. In addition a final questionnaire was administered to the training group seven weeks after they had completed the training. They are each described below.

The pre-training questionnaire obtained basic demographic details, information about the amount of aggression experienced by each nurse in the previous month, a series of self-judgement questions on such things as skills in dealing with angry people, how assertive they are, how aware they are of what makes them stressed, and how to relax themselves.

The post-training questionnaire obtained much the same data as the pre-training questionnaire, except it was not necessary to obtain the demographic and aggressive experiences data again.

The second post-training questionnaire was administered to the experimental group but not to the control group. It was completed when the group reconvened with the trainer seven weeks after training had taken place. The questionnaire was identical to the one which was completed immediately after training, except that, in addition, nurses were asked to comment on how useful the training had proved to be.

C. Method

Training.

The control group, like the training group, underwent two consecutive days' training. The difference was that the control group were concurrently spending two days learning about a new computer system which was being installed on the wards. The pretest questionnaires were administered to both groups immediately before their training started, and the post-test questionnaires were administered at the end of the two days, immediately after the training. The training took place on the same two days for both groups.

Interviews.

Both groups were interviewed within five days of undergoing training. During the interviews they were asked to do 'cold role plays' around two scenarios depicting aggressive incidents. In one, a dishevelled young man appeared on the ward late at night asking to see his girlfriend, who was in for observation after receiving a head injury. In the other, an older woman with a serious skin complaint was withdrawn and verbally aggressive. The nurses were asked to describe in great detail how they would respond to each scenario behaviourally, non-verbally, emotionally and verbally. A pre-determined amount of information about each scenario was given to each nurse

during the course of the interview. At the end of each interview the interviewers rated the nurses on a series of scales, designed to measure their skills at dealing with aggression.

Three interviewers were used. Two of whom interviewed blind, in that they did not know who had received the aggression training and who had not. The third interviewer was also the trainer and therefore knew who had participated in the aggression training. All the interviewers worked extensively together prior to the interviews to standardise their interviewing and evaluation technique.

Seven week follow-up.

Seven weeks after the nurses had participated in the aggression training, they returned for a half day session to discuss how useful they had found the training, whether they had been able to apply it, and any outstanding issues. This session was tape recorded, and, as described above, the opportunity was taken to ask the nurses to complete another questionnaire.

4. RESULTS

A. Subjective Evaluations

(i) Pre-training measures

Experiences of aggression

Both the control and the experimental groups provided data on the aggressive incidents they had been involved in the month prior to training. These data were compared across the two groups. Tables 6.1 to 6.4 show the frequency of aggressive incidents in four categories (minor and major physical aggression and minor and major verbal aggression). The two rows in each table indicate the frequency of each type of incident in the previous month. For example, 10 nurses in the experimental group and seven nurses in the control group experienced no minor physical aggression in the month prior to training, two members of each group experienced between one

and five incidents, and, while nobody in the experimental group experienced six or more incidents, two of the control group did.

where appropriate
Chi-squared analyses were performed on the experiences of aggression data and no significant differences emerged between the experimental and the control groups. In other words, nurses from both groups had experienced similar levels of minor and major verbal and minor and major physical aggression in the month prior to training.

Self-evaluation

Nurses in the experimental and control groups evaluated themselves on a number of criteria before receiving any training. Nurses rated themselves on a total of 15 criteria on a seven point scale, ranging from "Not at all" to "Very much so". Before doing anything else, the effect of age was related to the pre-training measures. This was important because the control group was an average of 8 years older than the experimental group, and if age was related to any pre-training measures it could be controlled for in any further analyses. Table 6.5 presents the correlations between age and the pre-training scores. As the table shows, age is correlated with seven of the fifteen pre-training measures. Age was positively correlated with confidence with aggression ($r=.38$, $p<.05$), calm them ($r=.41$, $p<.01$), question ($r=.39$, $p<.05$), know what to do ($r=.33$, $p<.05$), handle their emotions ($r=.34$, $p<.05$), cope ($r=.50$, $p<.005$), and relaxation awareness ($r=.33$, $p<.05$).

TABLE 6.1

Experimental and Control Group Experiences of Minor Physical Aggression in the Month Prior to Training

No. of Incidents	Experimental	Control
0	10	7
1-5	2	2
6-15	0	2
	12	11

Fisher Exact = 0.28, p>.05

TABLE 6.2

Experimental and Control Group Experiences of Major Physical Aggression in the Month Prior to Training

No. of Incidents	Experimental	Control
0	12	11
>1	0	0
	12	11

TABLE 6.3

Experimental and Control Group Experiences of Minor Verbal Aggression in the Month Prior to Training

No. of Incidents	Experimental	Control
0	1	4
1-5	10	6
6-15	1	1
	12	11

Fisher Exact = 0.13, p>.05

TABLE 6.4

Experimental and Control Group Experiences of Major Verbal Aggression in the Month Prior to Training

No. of Incidents	Experimental	Control
0	9	10
1-5	2	1
6-15	1	0
	12	11

Fisher Exact = 0.33, p>.05

Having established that age was correlated with some of the pre-training measures it was decided to control for it's effect when testing for differences between the control and experimental groups. This was done by covarying age during ANOVA's. In other words, the variance accounted for by the difference in ages between the control and experimental group would be extracted prior to testing for differences between the groups on the specified variables. The results of these analyses are presented in Table 6.6. The first column in the table presents the means for the experimental group, and the last column presents the means for the control group. The three centre columns give the f and significance for each one-way ANOVA, covarying for age. The first f column is for the age covariation, the second is for the main effect of group (control vs experimental), and the final f column is for the overall ANOVA.

As Table 6.6 shows, the control and experimental group were significantly different on 4 out of the 15 pre-training measures, skill - control own emotions ($f=4.12$, $p<.05$), skill - question ($f=3.56$, $p<.05$), skill - cope ($f=5.72$, $p<.01$) and relaxation awareness ($f=4.44$, $p<.05$). Two of these differences were due to the variance accounted for by age [skill - question ($f=4.49$, $p<.05$) and skill - cope [$f=8.68$, $p<.01$)], while two of these differences were due to the variance accounted for by the main effect of group [skill - control own emotions ($f=5.66$, $p<.05$) and relaxation awareness ($f=5.52$, $p<.05$)]. These findings suggest that the only pre-training differences between the two groups which cannot be accounted for by the differences in age between them were related to the ability to control their own emotions and their relaxation awareness. All other differences were eradicated once age had been controlled for.

TABLE 6.5

Correlations Between Age and the Pre-Training Measures

	Confidence	Stress	Upset	Calm Them	Find Cause	Control Self	Listen
AGE	r=.38*	r=-.20	r=.11	r=.41**	r=.02	r=.29	r=24

	Question	Be Symp.	Know What To Do	Handle Emotions	Cope	Be Assertive
AGE	r=.39*	r=.10	r=.33*	r=.34*	r=.50***	r=-.16

	Stress Awareness	Relax. Awareness
AGE	r=-.17	r=.33*

Note: * = p>.05
** = p>.01
*** = p>.005

TABLE 6.6

Pre-Training Mean Scores and ANOVA results (covarying age) for the Experimental and Control Groups

Criteria	PRE MEANS AND ANOVA RESULTS Exp. Means	Age F	Group F	Explained F	Control Means
Confidence with aggression	3.3	3.86	0.18	2.02	3.8
Stress with aggression	5.3	0.93	0.08	0.50	5.2
Upset with aggression	4.3	0.28	2.32	1.30	5.2
Skill - Calm them	3.9	4.97*	0.95	2.94	4.5
Skill - Find cause	4.9	0.01	0.02	0.02	4.9
Skill - Control own emotions	4.3	2.57	5.66*	4.12*	5.6
Skill - Listen	5.1	1.51	2.97	2.24	5.8
Skill - Question	3.3	4.49*	2.64	3.56*	4.4
Skill - Be sympathetic	5.4	0.23	0.30	0.27	4.8
Skill - Know what to do	3.7	3.02	0.98	2.00	4.6
Skill - Handle their emotions	3.7	2.96	0.03	1.50	4.3
Skill - Cope	3.4	8.68**	2.77	5.72**	4.6
Assertiveness	3.8	0.69	2.25	1.47	4.2
Stress awareness	5.3	0.67	0.65	0.66	5.4
Relaxation awareness	3.4	3.40	5.52*	4.44*	4.7

Note: * = $p>.05$
** = $p>.01$
*** = $p>.005$

(ii) Difference measures

In the preceding sections the pre-training scores for each group were compared. This section will deal with the differences between pre and post scores, allowing a statistical evaluation of the *change* due to the influence of training. The difference scores were obtained by subtracting the self-evaluation measures taken after training from the self-evaluation measures taken prior to training. It was now possible to compare the difference scores for each group, to ascertain whether one group had changed more than the other group. Once again, one-way ANOVA's were performed on the data, while covarying age.

Tables 6.7 presents the results of these analyses. The difference scores for the experimental group are in the left-hand column, and the difference scores for the control group are in the right-hand column. Minus scores signify that the post-training scores were higher than the pre-training scores and a plus scores signifies a post training decrease. Once again the three central columns contain the f values and significance scores for the covariation of age, the main effect of group (control vs experimental), and the explained or overall variance.

Looking down the "Explained" column in Table 6.7 it can be seen that there are significant differences between the experimental and control groups on 10 out of the 15 criteria. The mean scores in the far-left and far-right hand columns give the direction of the differences between the groups. For example, the experimental group has increased in confidence by 1.83 while the control group have only increased by .42. This is reflected in the result of the ANOVA which found a significant difference between the two groups ($f=6.56$, $p<.01$) which was attributable not to age but to group membership ($f=9.13$, $p<.01$). Age formed a significant part of the variance in a number of the analyses (as can be seen by looking down the "Age" column). Although age, by itself, only accounted for the overall significance of one of the ANOVA's (skill - handle their emotions). However, 9 out of the 10 significant analyses were attributable to the main effect of group.

TABLE 6.7

Pre-Post Difference Mean Scores and ANOVA results (covarying age) for the Experimental and Control Groups

MEAN PRE-POST DIFFERENCES AND ANOVA RESULTS					
Criteria	Exp. Mean	Age F	Group F	Explained F	Control Mean
Confidence with aggression	-1.83	3.99	9.13**	6.56**	-0.42
Stress with aggression	1.58	0.35	3.31	1.83	0.50
Upset with aggression	0.75	0.37	0.00	1.84	0.67
Skill - Calm them	-1.25	6.87*	9.12**	7.99**	0.25
Skill - Find the cause	-0.50	1.61	0.99	1.3	0.25
Skill - Control own emotions	-0.58	0.08	5.07*	2.57	0.92
Skill - Listen	-0.75	4.37*	5.46*	4.91*	0.42
Skill - Question	-0.92	2.00	6.22*	4.10*	0.08
Skill - By sympathetic	-0.92	2.23	5.33*	3.78*	0.08
Skill - Know what to do	-1.17	0.58	2.80	1.69	-0.17
Skill - Handle their emotions	-0.92	5.60*	0.47	3.02*	-0.17
Skill - Cope	-1.83	19.02***	32.24***	25.63***	0.25
Assertiveness	-0.92	1.86	13.25***	7.56***	0.33
Stress awareness	-0.58	0.39	8.69**	4.54*	0.33
Relaxation awareness	-2.08	7.22*	27.94***	17.58***	0.17

Note: * = p>.05
** = p>.01
*** = p>.005

The 9 significant differences between the groups which can be attributed to group membership after removing variance for age all went in the hypothesised direction. That is, the experimental group who had undergone training improved on these 9 criteria, after removing any variance accounted for by their differences in age. They were: confidence with aggression ($f=6.56$, $p<.01$); skill - calm them ($f=7.99$, $p<.01$); listen ($f=4.91$, $p<.05$); question ($f=4.10$, $p<.05$); be sympathetic ($f=3.78$, $p<.05$); cope ($f=25.63$, $p<.005$); assertiveness ($f=7.56$, $p<.005$), stress awareness ($f=4.54$, $p<.05$) and relaxation awareness ($f=17.58$, $p<.005$).

In summary, the analyses show that the experimental group improved significantly more than the control group on 10 out of the 15 criteria, and that on 9 of the criteria this was attributable to the training rather than differences in age between the two groups. In other words, after completing the two day training the experimental group became considerably more confident in their ability to deal with aggressive incidents and the control group did not.

B. Seven Weeks Later

Seven weeks after the training had been completed the nurses returned to a half-day follow-up. Ten of the original 12 nurses were able to attend the follow-up session, the remaining two being either away on annual leave or attending another study day. The questionnaire which these ten nurses completed during the follow-up provided the same data as the questionnaire they had completed immediately after training. The reason for asking them to provide this data was so that their scores could be compared with their post-training scores to see if change had been maintained.

Tables 6.8 shows results of the paired t-test which were used to compare the post-training scores of the 10 nurses with their seven-week follow-up scores. The post-training means are shown in the left-hand column and the means in the far right column are those obtained seven weeks after

the training had taken place. The two centre columns show the results of the paired t-test. As can be seen from the tables, the mean scores on each of the 15 criteria are remarkably similar, indicating that post-training confidence has been maintained, and all the t-tests are non-significant. It was therefore concluded that the nurses had maintained their improved confidence in relation to dealing with aggression.

C. Independent Evaluations

(i) Interviewers' evaluations

Within five days of completing the training both the experimental and the control group nurses were interviewed to assess their skills at dealing with two hypothetical scenarios of aggression. The interviewers rated each nurse immediately after the interview on 10 skill-based criteria. The two groups were compared using a one-way ANOVA to see if there were any differences in the interviewers' assessments. The results of these analyses are presented in Table 6.9.

As the Table shows, the experimental group (left column) got higher average scores than did the control group (right column). In fact, these differences were significant on six of the 10 criteria. The experimental group were considered to be more able to explain things to the aggressor (f 4.85, p=>.04), as well as letting the aggressor explain themselves (f 4.22, p=>.05). In addition, they were judged as being more calming (f 5.14, p=>.04), more skilful overall in dealing with the aggressors (f 6.21, p=>.02), better at using a calming tone of voice (f 7.09, p=>.02), and at using a kinder facial expressions (f 5.18, p=>.03) than were the control group. They were not, however, judged as significantly more helpful, reassuring, caring or more able to ask probing questions than were the control group, although all of the means show trends in favour of the experimental group.

TABLE 6.8

Scores after Seven Weeks Compared with Post-Training scores for Ten of the Participants

Criteria	MEAN AND PAIRED T-TEST RESULTS Post-training	t	Sig	7 Weeks Later
Confidence with aggression	5.1	0.00	n.s.	5.1
Stress with aggression	3.8	-1.56	n.s.	4.5
Upset with aggression	3.9	.32	n.s.	3.8
Skill - Calm them	5.2	-0.69	n.s.	5.4
Skill - Find the cause	5.5	1.00	n.s.	5.1
Skill - Control own emotions	4.9	-0.21	n.s.	5.0
Skill - Listen	5.8	0.69	n.s.	5.6
Skill - Question	4.1	-1.47	n.s.	4.6
Skill - Be sympathetic	5.7	1.41	n.s.	5.4
Skill - Know what to do	4.9	1.00	n.s.	4.7
Skill - Handle their emotions	4.5	-0.61	n.s.	4.7
Skill - Cope	5.2	-0.69	n.s.	5.4
Assertiveness	4.6	0.00	n.s.	4.6
Stress awareness	5.7	0.43	n.s.	5.6
Relaxation awareness	5.3	-1.15	n.s.	5.6

Before these results could be accepted one further set of analyses had to be performed. Three interviewers were used, and one of these interviewers was also the trainer. This meant that, unlike the other two interviewers, she was aware of who had undergone aggression training and who had not. This interviewer only interviewed one of the control group, and so these data were not examined. However, she did interview 50% of the experimental group, together with one of the other interviewers. It was these ratings that were statistically compared.

The interviewers' ratings of the experimental group were compared on the 10 skill-based criteria. Their ratings were statistically compared with one-way ANOVA's, and the results are presented in Table 6.10. The average ratings given by interviewer 1 are in the left hand-column. It was this interviewer who knew who had received aggression training and who had not. The average ratings given by interviewer 2 are in the right-hand column. This interviewer did not know who had undergone aggression training and who had not.

As can be seen from examining the means presented in Table 6.10, interviewer 1's ratings tended to be more conservative than those given by interviewer 2. However, the ANOVA's failed to show any significant differences between the ratings given by the two different interviewers. As a result it was concluded that the results were not influenced by interviewer 1's knowledge of who had undertaken the aggression training.

In summary, it can be concluded that the interviewers could distinguish between the experimental and control groups on six out of 10 skill-based criteria, and that these discriminations were not affected by the inside knowledge held by one of the interviewers.

TABLE 6.9

Interviewer Ratings of Interviewees

Criteria	Means and Anovas for each group			
	Experimental	F	Sig	Control
Helpful	5.00	1.38	.25	4.40
Reassuring	4.75	1.17	.29	4.00
Caring	5.25	2.01	.17	4.20
Explain things	5.08	4.85	**.04**	3.70
Let them explain	4.25	4.22	**.05**	2.90
Calming	5.33	5.14	**.04**	3.90
Skilful	5.17	6.21	**.02**	3.70
Skilful questioning	4.50	1.22	.22	3.70
Tone of voice	5.75	7.09	**.02**	4.30
Facial expression	5.50	5.18	**.03**	3.90

TABLE 6.10

Comparing the Ratings Given by Different Interviewers for the Experimental Group

Criteria	Means and Anovas for each group			
	Interviewer 1	F	Sig	Interviewer 2
Helpful	4.88	1.15	.83	5.20
Reassuring	4.43	5.17	.13	5.20
Caring	5.00	1.05	.91	5.60
Explain things	5.29	2.72	.35	4.80
Let them explain	4.14	1.82	.49	4.40
Calming	5.14	4.92	.15	5.60
Skilful	5.29	3.81	.22	5.00
Skilful questioning	4.14	3.21	.28	5.00
Tone of voice	5.71	1.03	1.00	5.80
Facial expression	5.71	1.42	0.67	5.20

Note: Interviewer 1 is the author of this thesis.

D. Informal Feedback

The informal feedback from the training was extremely encouraging. Senior nursing and administrative staff were told by many of the nurses who had attended the two day aggression training that "It was the best training we've ever done". Currently there is a long list of nursing staff within the hospital who have asked to attend the training days in the future.

Seven weeks after the training the nurses met with the trainer and were asked to assess what they had found particularly helpful about the training. Nearly all nurses claimed that it was the combination of different approaches which had proved so valuable. Many also claimed that the training had helped them to look at their assumptions in relation to both patients and colleagues, and had encouraged them to try out new strategies when dealing with familiar problems. Without exception the nurses felt that the new strategies they had tried had been constructive, and they felt they wanted to continue experimenting within the framework which had been established by the training. In fact, they were so keen to continue to develop the ideas from the training programme that they voted to form a small discussion group which would meet once a month.

In conclusion, the informal feedback about the training was positive. It came from four sources: i) senior hospital staff from feedback they had received from participants, ii) enthusiasm of other hospital staff to take part in future training days, indicating that the training participants had praised the course to their colleagues, iii) direct feedback given from participants to the trainer and, iv) the participants' commitment to continue meeting to discuss and develop the ideas initiated by the training.

5. DISCUSSION

Summary of the Results

The results from this study show that nurses who have been trained to deal with aggression can be differentiated from nurses who have received a different, but equivalent, training. It was found that those nurses who undertook the aggression training became significantly more confident in their ability to deal with aggression, that they maintained this enhanced confidence over a seven week period, and that they were judged, by independent observers, as being more able than the control group to deal with two hypothetical incidents of aggression.

Method of Evaluation

The current study made use of a control group who underwent a two-day training, just like the experimental group, although their training was to do with the installation of a new computer network on the hospital wards. The control group was arranged so that any pre-post changes could be attributed to the content of the training, rather than to the fact of training, per se. In addition, measures of both subjective and objective differences between the two groups were gathered, so that claims could be made about both internal and external change.

It was stated at the outset that while subjective changes due to training are undoubtedly important, there has to be, in addition, some objective measure of level of skill. In the present study trained observers were able to distinguish between the experimental and control groups, and as a result, it can be stated with confidence that the nurses who participated in the training not only *felt* that they could deal more effectively with aggression, but that they *could* deal more effectively with aggression.

In the introduction, a study by Infantin and Musingo was described, in which the success of aggression training was measured in relation to assault rates among staff with and without training.

It could be argued that the present study would have been improved by taking account of non-reactive measures such as assault rate, or by getting evaluations from senior staff observing the nurses once they had returned to their wards. These measures were not obtained for several reasons, which will be discussed in more detail below.

If the success of the current training programme had been assessed by looking at a non-reactive measure such as assault rate, several important criticisms could have been made. First, aggressive incidents are sporadic and as a consequence it would have taken a long time to build up a sufficient data base. This alone would have excluded the use of trained observers to monitor assault rates. As a result the nurses themselves would have had to provide the data on assault rates. Second, this data would have been based on subjective, rather than objective, evaluations. And third, nurses who had taken part in the training may have changed their definition of an aggressive incident. If this had been the case, the assault rates could have reflected a change in attitude rather than a change in skills. In the case of obtaining evaluations from senior staff, it would have been extremely difficult for them to observe sporadic incidents of aggression. As a consequence they would not have been able to provide an accurate picture of incidents or of how they were dealt with.

In conclusion, although a variety of other measures could have been used to evaluate the effectiveness of training, it was felt that the best method was to use highly trained interviewers to assess the nurses' skills through the medium of cold role play. The results from this phase of the study reinforced the nurses own evaluations of their skills, and provided additional evidence that the nurses trained in aggression management were more skilled at dealing with aggression.

Issues of Causality

Up until now the research described in this thesis has revealed relationships between variables without allowing any more than speculation about the causal relationships between them. It has been stated more than once through the chapters, that the training would provide a measure of the causal influence of a number of variables on a nurse's ability to deal with aggression. In fact, because the training *has* been found to help nurses deal more effectively with aggression causal claims can now be made. It can now be stated that the component parts of the training (interpersonal skills, stress awareness, and so on), are *causally* related to the better management of aggression. What cannot be established, however, is the precise causal role played by the individual components of the training. It cannot be claimed, for example, that training the nurses in basic counselling skills was the single most important influence on their improved skills in dealing with aggression, nor that the training would have been equally successful without stress awareness. On the contrary, the training must be seen as an integrated whole, which works because its constituent parts are complimentary to one another.

The only practical way to find out how useful each component of the training had been, was to ask the participants. When asked for feedback on this issue, the participants, without exception, felt that it was the *combination* of the training components which had worked so well. Of course individuals found various components more attractive - some enjoyed learning about stress and relaxation awareness, while others were enthused by basic counselling skills, but, in spite of this, they all insisted that no part of the training should be sacrificed and that the whole was more than the sum of its parts.

Conclusions

In conclusion, the two day training programme set out to change the participants' personal assessments of their abilities to deal with aggression as well as to change their observable skills. These ends were achieved, not only in relation to pre-post training measures, but also in relation to a control group which had received different but equivalent training.

Issues surrounding the evaluation of training have been discussed. It was concluded that the use of a control group allows claims to be made about the efficacy of the contents of the training, and that the objective measure of skills was the most appropriate in the circumstances. And finally, the causal relationship between the combination of basic counselling skills, assertiveness, stress/relaxation awareness, assumptions about patient care and the ability to deal with aggressive incidents has been established, although no claims can be made about the individual effects of these constituent parts.

CHAPTER SEVEN

DISCUSSION AND CONCLUSIONS

In the introduction to this thesis a number of issues were raised which were subsequently addressed by the research reported in chapters two through to six. These issues were:

1) The psychological literature on aggression has primarily focused on the production of aggression while the aim of the current research has been to examine the role of responses to aggression.

2) One of the most frequently proposed solutions to the problem of aggression at work is to train staff to deal with it. However, there has not been any research in this country which has tested the effectiveness of training: the primary aim of the current research has been to develop a training model, implement it and evaluate its effectiveness.

3) The research literature has provided some evidence which suggests that certain responses inhibit aggression, such as mild sexual arousal and humour, while other responses aggravate aggression, such as being provocative or aggressive. The research reported in this thesis has explored nurses' experiences of what inhibits and what aggravates aggression.

4) Evidence has been found to suggest that age and experience play a role in the production of aggression. The current research has explored how age and experience relate to a nurse's ability to defuse and recover from aggression.

5) Attributions are said to mediate between circumstances and the production of aggression. This research has examined how they influence the way in which a nurse responds to aggression.

6) Stress, negative affect and a variety of other personality variables are implicated in the production of aggression. The current research has related personality to a nurse's ability to cope with aggression.

7) It has been suggested that aggression is pre-cognitive. The reported research has explored whether or not nurses have conscious control over the way in which they respond to aggression.

The major findings from each of the studies reported in chapters two through to six will now be examined and related to their theoretical, practical and methodological implications, before moving on to examine how the current research might be usefully extended in the future.

(i) Nurses' Theories about how to Deal with Aggression

In chapter two it is was revealed that nurses believe that the most effective strategies for dealing with both physical and verbal aggression are to be calm, caring and assertive. However, when asked to isolate the least effective strategies for dealing with aggression, the nurses felt that those strategies which aggravate verbal aggression are different from those that aggravate physical aggression. The nurses believe that physical aggression is aggravated by being authoritarian, demeaning or defensive, while verbal aggression is aggravated by getting angry back or by attempting to deflect the aggression.

Interestingly, Baron (1972) and Donnerstein and Donnerstein (1972) have found that non-aggressive role models, that is, people who show restraint in the face of provocation, can reduce violent responses in others. It may therefore be the case that nurses who respond calmly to aggression provide a model for the aggressor to follow, thus inhibiting his or her aggressive response. In fact, evidence for the actual effectiveness of calm responses to aggression was found

in chapter three, when nurses were asked to say what they had done in real-life incidents of aggression and how effective their strategies had been. The implications of these findings will be discussed more fully in relation to chapter three (see below).

In chapter two it was also found that older nurses who have greater nursing experience favour less provocative responses to aggressive incidents than do younger nurses. The same is also true of nurses who rate themselves as being good at dealing with aggression and for those who have experienced more verbal aggression. However, those nurses who have been involved in more incidents of physical aggression favour aggressive responses to both physical and verbal aggression. How do these findings fit into the literature?

The literature on the psychology of aggression has found that age and life experiences are mediating factors in the production of aggression, and, as the findings described above show, they also influence the types of theories nurses hold about how to deal with aggression. Surprisingly, however, in chapters four and five a nurse's previous experiences with aggression and age, respectively, were unrelated to her ability to cope with it either emotionally or behaviourally. These findings are important because they suggest that there is no straight-forward relationship between a nurses' age, her nursing experience and her experiences of dealing with aggression and her ability to cope with it. This has interesting implications for the notion of older role models used by younger nurses when learning how to deal with difficult or aggressive patients and underlines the importance of standardised training for all grades of nurses.

(ii) Dealing with Aggression in Real-life

The research reported in chapter three, where nurses were asked to say what they did last time they dealt with aggression, gives broad support to the findings presented in chapter two. That is, nurses' real-life experiences of the most effective and least effective methods for dealing with

aggression reflect their theories. In real-life nurses found that a calm approach is the most effective strategy for defusing both physical and verbal aggression, and that the responses which aggravate physical aggression are different from those that aggravate verbal aggression.

It was also revealed that there are many more ways of dealing effectively with a verbally aggressive than a physically aggressive person. Nurses report that the best ways to defuse physical aggression is to remain calm, talk softly and, if possible, summon help. However, any deviation from these strategies makes matters worse. In contrast, when dealing with verbal aggression, the nurses reported a far wider range of strategies which they find effective, although, once again, the most effective strategies involve staying calm.

The findings from chapter three have implications for the literature in a number of ways. First, they break new ground; there is no other research on what nurses do when dealing with aggression, nor how effective their actions prove to be. Second, they shed light on what inhibits aggression. Previous, laboratory-based research has found that such factors as making excuses, showing distress and the use of humour inhibit aggression (Zillman and Cantor, 1976; Baron and Richardson, 1991). In the current research, nurses rated humour as a mildly effective method for defusing verbal aggression, thus providing some support for the laboratory-based findings. However, nurses did not spontaneously mention the role of excuses or of showing distress when dealing with aggression, so neither of these strategies were evaluated. More importantly, however, nurses felt that by far the most effective inhibitor of verbal and physical aggression was to remain calm themselves. This provides some support for the calming role model proposed by Byrne (1972) and Donnerstein and Donnerstein (1972).

The third implication of the findings is the close agreement between nurses' theories about the effective methods of dealing with aggression and their real-life experiences of the same. This

indicates that nurses are conscious of the strategies that they use, and have definite theories as to whether or not they are likely to work. The question of nurses' conscious control over how they respond to aggression was stimulated by Berkowitz's theoretical model (1989), in which he proposes that emotions, including anger, are pre-cognitive and that cognitive factors, such as attributions, have only a small role to play in the production of overt aggression. The fact that nurses' theories and their experiences are closely linked indicates that their cognitive understanding is a significant factor in their responses to aggression.

The fact that nurses are aware of how they respond to aggression is encouraging because it indicates that nurses may be helped to deal with aggression through developing their awareness and understanding during training. In fact, further support for the role of training comes from another finding from chapter three: that is, nurses who are more skilled at dealing with aggression suffer less emotional ill-effects than nurses who are less skilled. Again, this underlines the importance of improving nurses' confidence and skills when dealing with aggression.

(iii) Individual Differences and Responding to Aggression

As stated earlier, there is evidence to suggest that stress, negative affect and a variety of other personality variables, such as, anger, empathy, and interpersonal control mediate between circumstances and the production of aggression. In chapter four it was found that these factors are related to a nurse's ability to recover from aggression.

Nurses with "adaptive" and "maladaptive" emotional responses to aggressive incidents were defined as having low stress and negative affect and high confidence, and high stress and negative affect and low confidence, respectively. These emotional responses were referred to as "syndromes". Certain personality variables were related to the adaptive and maladaptive syndromes. For example, if a nurse bottles her anger up inside she is more likely to suffer from the maladaptive

syndrome. Similarly, if she has high levels of general stress (as opposed to stress associated with dealing with aggression) she is also likely to respond maladaptively to an aggressive incident. In contrast, those nurses who are assertive, extravert and who exercise interpersonal control are associated with the adaptive response to aggression.

These findings are interesting in a number of ways. First, they underline the role of interpersonal skills, stress control, coming to terms with one's own feelings of anger, and open, assertive communication in the management of aggressive incidents. All of these factors were taken into account during training (see chapter six). However, in addition to this, they indicate that measurable personality traits may be associated with the emotional aftermath of dealing with aggression. Previously, the literature has only examined the role of personality in the production of aggression.

It was also found in chapter four that a nurse's age and previous experiences with aggression were unrelated to her ability to cope with it emotionally. In other words, older nurses with more experience of aggression were no more nor less emotionally vulnerable than younger, less experienced nurses. The measure of experience was a quantitative one, and it was proposed that perhaps the quality of each nurse's experiences with aggression may be a better predictor of how she feels after being involved with an aggressive incident. However, the fact that age was also unrelated to nurses' emotional reaction to aggression suggests that other factors, such as personality and possibly the nature of her experiences, are of greater importance than chronological age. It also supports the earlier observation that it may not be helpful for younger nurses to use older or more experienced nurses in order to learn how to deal with aggression: if older, more experienced, nurses are indistinguishable from their younger colleagues when it comes to recovering from aggression, it may be a case of the blind leading the blind. It therefore seems

sensible to conclude that all grades and ages of nurses should be given the opportunity to participate in training.

Chapter four also examines nurses' theories about the causes of aggression incidents in hospitals, thereby providing a means with which to compare nurses' theories with the theoretical models found in the literature. Nurses provided three typologies of causal explanation: the organisational explanation (long waits, shortage of beds, and so on), the empathic explanation (fear, pain, anxiety, and so on), and the constitutional explanation (something intrinsic to the make-up of the aggressor). Interestingly, the empathic and constitutional explanations closely resemble some of the models used in psychological studies of aggression, while the organisational explanation more closely resembles a sociological model. Because these explanations were derived from the nurses themselves and were not devised by either a psychologist or sociologist they provide powerful support for the models which they resemble, suggesting that ordinary people explain aggression in these ways.

(iv) **Nurses' Cognitions and Aggression**

Weiner's (1980, 1988) attribution model of emotions and helping behaviour postulates an attribution-affect-action pathway. This model was tested on nurses in chapter five, in an attempt to examine the relationship between their attributions about aggressive behaviour and their emotional and behavioural responses to it. The study was designed in such a way as to enable the nurses to make simultaneous causal judgments about themselves, the aggressor and the circumstances surrounding aggressive incidents, rather than using the more usual method of measuring attributions which forces subjects to make internal-external judgements.

It was found that nurses have identifiable styles of explaining and responding to events, which remain relatively consistent in different circumstances. Nurses who tend not to see themselves as

the cause of aggression are better able to select behaviours that are likely to defuse aggression than nurses who blame themselves for causing aggression. This may partly be explained by the finding that those nurses who do blame themselves are the same nurses who bottle-up their feelings of anger. It was also found that nurses who are associated with the "maladaptive" syndrome described in chapter four (high stress and negative emotions and lowered confidence), are associated with highly ineffective methods of dealing with aggressive incidents.

Chapter five provides a number of findings with important theoretical and practical applications. First, the results yield important information which has been used to develop the training programme described in chapter six. Second, the way in which attribution was measured was novel, allowing subjects greater flexibility than previous measures have done. Third, the research did not find support for Weiner's attribution-affect-action pathway. And fourth, the relationship between attributions and aggression is normally used to understand the production of aggression rather responses to it. Each of these issues are discussed in more detail below.

The development of the training scheme was influenced by the findings in chapter five. In particular, the finding that nurses who have a tendency to blame themselves for aggression, who bottle-up their feelings of anger, and who experience high levels of stress and negative emotions and lowered confidence, are also the nurses who are emotionally vulnerable to aggression and who select extremely poor methods for handling aggression. These findings led to the conclusion that the aggression training model should be broadly based. Rather than concentrating solely on how to deal with aggression once it has occurred, the approach should be one of prevention through the medium of nurse-patient relationships, and nurse attitudes towards their own self care as well as patient care. This involved helping nurses to become aware of their own internal feelings of anger and stress. Nurses were encouraged to find more open ways of communicating

with both colleagues and patients, and to become aware of their own emotions in relation to patients, as well as how to manage and alleviate stress.

The findings presented in chapter five also make a contribution to methodology concerning the measurement of attribution. Three separate scales were used which measure self-blame, other-blame, and circumstances-blame. In addition, measures of stability and globality were taken. Normally only one scale is used to measure attributions of blame, and this scale runs along the internal-external dimension. Such a scale limits the respondents' options considerably because they cannot allocate blame to themselves, the other and circumstances simultaneously. The fact that three scales were used also allowed far greater flexibility during the analysis phase of the research: by doing a few calculations it was possible to either obtain a simple internal-external measure from them or to examine the independent effects of all three measures of blame.

It was also possible to examine what, if anything, was to be gained from including the globality and stability measure in the calculation of attributional style. In fact, it was found that nothing was gained by including globality and stability in the calculation, because they did not increase the predictive powers of the attribution measure. Overall, these findings suggest that a more elegant method for measuring attributions would be to continue to use three separate scales of self-blame, other-blame and circumstances-blame, while ceasing to use the measures of globality and stability.

The third contribution made by chapter five relates to Weiner's attribution-affect-action pathway. No support was found for such a pathway, although there is evidence of links between attributions and behaviour and between emotions and behaviour. This finding provides another example of how difficult it can be to substantiate experimentally-based models when working in field settings. However, the lack of the attribution-affect-action pathway may partly be explained by the

professional caring role of the nurse - perhaps nurses overcome their natural tendency to allow emotions to influence their behaviour.

And finally, the research in chapter five breaks new ground by examining how attributions effect behavioural responses to aggression rather than the production of aggression. As has been shown, individual nurses do have attributional styles, and these styles relate to their ability to deal with aggression. This information, in its turn, had a practical application in terms of the training of nurses because it suggests that nurses may be helped to become aware of their attributional style, and how it effects their emotions and their actions.

(v) Training and Evaluation

The training programme presented in chapter six tested a model which evolved from theoretical considerations as well as from the research findings reported in chapters two through to five. The training has made several contributions to the literature. First, it has answered an important need because while the widespread use of training to help staff to deal with aggression has been enthusiastically advocated, no-one has evaluated whether or not training provides an effective solution to the problem. Second, the evaluation of the training provided a means with which to assess the causal effects of correlational relationships, such as those between interpersonal skills and the ability to deal with aggression. And third, the training evaluation extends and improves upon the evaluation of aggression training which has been carried out in the United States of America. These issues will be examined in more detail below.

The fact that so many governmental and local bodies have recommended the implementation of training to help staff in high-risk jobs to deal with difficult and aggressive encounters with the public comes as no surprise. What is surprising, however, is the fact that very little is known about what such training should cover, how long it should last, who would benefit from participating,

and, most importantly, whether or not a carefully constructed training programme does actually help staff to deal more effectively with aggression. Certainly, it seems pointless to invest substantial resources in training if training does not work. The development, implementation and evaluation of the training programme reported in chapter six, therefore, answered a very real practical need within the National Health Service, and potentially in other high-risk areas as well, such as the Social Services.

Prior to the training the causal influences of such factors as stress awareness and communication skills on the ability to deal with aggression could only be hypothesised. This was felt to be the case in spite of the use of some statistics like multiple regression and discriminant function analysis which supposedly test causal relations: the only way to be certain of causal relationships between variables is to conduct a carefully controlled intervention. This was done in chapter six in the form of the training scheme, and it was found that the training group did become more skilled at dealing with aggression than the control group. It was therefore demonstrated that there is a causal relationship between the components of the training programme and an increase in skill at dealing with aggression. It was also demonstrated that the training can help to meet practical needs, both within the NHS and, possibly within other high risk organisations.

The training also extends the methodology employed by studies in the USA which have examined aggression training (Infantin and Musingo, 1985; Honeycutt and Worobey, 1987). The current design included the evaluation of a control group of nurses who underwent a simultaneous two-day training programme on the installation of a new computer network into the hospital wards. The control group provided the means to make claims that any pre-post changes could be attributed to the contents of the training, rather than the fact of training per se. Furthermore, measures of both objective and subjective differences between the two groups were taken, so that claims could be made about internal and external change: although it is important for the nurses

to feel more confident in their skills the real test is whether or not there is a demonstrable difference in their skills. Previous evaluations of aggression training have either measured subjective and objective change without a proper control group with which to determine the extent of pre-post training measures (Infantin and Musingo, 1985), or have only measured subjective change (Turnbull et al, 1990). To this extent, the current study has extended the evaluation methodology and, as a consequence, provides firm evidence of the effectiveness of the training.

(vi) Extending the Current Research

The research reported in this thesis has examined the problem of aggression within general hospitals from a psychological perspective, with the primary aim of developing, implementing and evaluating a training programme. It has also provided new insights into a poorly researched area, making contributions both to the theoretical literature and also to the practical needs of staff who work within the National Health Service. There are, however, a number of interesting questions which arise out of this research and which could generate interesting projects for the future.

Unlike many other aggression training programmes, the model reported in chapter six is broadly based and does not simply focus on methods for dealing with aggression. Instead, the approach which informed the training was one where nurses were encouraged to become more aware of themselves, the patients, institutional rules, the role of colleagues, and the dynamic between these variables in the escalation of aggression. In other words, the skills which were developed in nurses during the course of the training could very well generalise to other aspects of their relationships with patients. For example, it is possible that the nurses who participated in the training not only got better at dealing with aggression but increased their skills at communicating with patients in general, and so became more capable of fulfilling their "psychotherapeutic function" (Fabricius, 1991).

Indeed, the work done during training on recognising stress and seeking support structures may have made it more possible for the nurses to deal with patients' anxieties at less cost to themselves. This could be tested empirically, to establish whether or not the training has a wider application than was originally intended. This immediately raises a further question: nurses may change during training, but the influences of both organisational defences and senior staff are extremely powerful (Menzies, 1959). As a consequence, it may be almost impossible for nurses to maintain change once they return to the wards. So how can this be assessed?

If nurses are to deal more effectively with aggression, certain organisational procedures, such as the admission procedure in Accident and Emergency Departments, need to be examined. Take as an example the nurse who has just completed the aggression training described in chapter six. She returns to her job on Accident and Emergency. She is now more sensitive to the role that pain, frustration and anxiety might play in the production of aggression, and perhaps she is keen to practice her new communication skills. However, the environment to which she returns is unchanged. Patients are seen by a receptionist who sits behind a screen and who tells them that the wait is approximately two hours, and the patients get almost no attention after this. How does the newly trained nurse fit into this system? As a consequence of the training she may be highly motivated to spend time talking to the patients and their relatives, finding out how they feel, and she may also want to provide basic physical care to ease their discomfort. In contrast, other nurses who have not been on the two day training programme, and aware that they are short staffed and that the primary function of the nurses is to deal with life and death situations. Under these sorts of circumstances it becomes very relevant to ask 1) how long a nurse can maintain changes that she went through during training, and b) how the organisational aims and nursing aims can be made more compatible. To some extent these are empirical issues, and one project could be to evaluate the maintenance of change over a six or 12 month period, while finding out what helps to either maintain or inhibit change.

The research could also be developed by working with senior staff and management on change, so that environmental factors and the outcome of training are more in tune. This would mean undertaking a project which more closely resembles "action research" (Carr and Kemmis, 1986; Rapoport, 1970; Susman and Evered, 1978). Action research involves observation, interpretation and evaluated change. The first step in such a project would be to observe the environment, including, for example, the prevailing ethos of particular wards, physical care, relationships amongst staff, relationships amongst staff and patients, and organisational structures (such as policies regarding care in Accident and Emergency). Once these observations have been made, the researcher uses his or her skills to assess and interpret what is happening and then takes these assessments back to the staff involved. It is at this stage of the research that it earns its title of "action", because new policies are forged through consultation between staff and researcher, they are applied, and their effects are monitored through observation and feedback from all involved. The effects of such change could also be monitored using more formal measures, such as structured observation of nurse-patient interactions, the effects on recovery rates amongst patients, assault rates, and so on.

One further research project would be to experiment with different methods of training, while keeping the aims and contents of the training stable. One way of doing this would be to work with the nurses in fortnightly meetings. This would provide not only an opportunity for training, but, in addition, would provide support for those nurses who suffer from aggression during the life of the group, thereby providing "victim support" as well as training. Furthermore, the extended nature of such a group might help to maintain change over a longer period of time. Obviously, such a project would have to be carefully assessed and compared with the two-day training programme to find out if it was an improvement.

(vii) Final Summary

The major findings and their theoretical and practical implications are summarised below.

1. The current research has provided information about nurses' theories about how to deal with aggression and what causes aggression. It has also examined what nurses, in their own experience, have found to work when dealing with aggression. No similar research has been done before.

2. The research has shown that there are individual differences between nurses, both in terms of how they react emotionally to aggression as well as how they react behaviourally.

3. It has also been demonstrated that age and experience does not necessarily make a nurse more resilient to, nor more capable of dealing with, aggression.

4. It has been found that there are very few methods of dealing effectively with physical aggression, while there are a number of ways of dealing effectively with verbal aggression.

5. The research has shown that nurses find the best way of dealing with any kind of aggression is to remain calm, gentle and firm. This contrasts with the findings in the psychological literature that such things as humour, excuses, showing distress, and so on, inhibit aggression.

6. It has also been demonstrated that nurses' theories about what causes aggression in hospitals are surprisingly similar to some of the theoretical models in the literature.

7. The research has revealed that nurses who are stressed, angry and who have a tendency to blame themselves are very vulnerable to

aggression. Not only to they have difficulty in selecting ways of responding to it, but they also suffer emotionally as a consequence of it.

8. The research has made methodological contributions to the literature in the forms of a) a new method of measuring attribution as well as b) an extended and improved method for evaluating aggression training.

9. It has been concluded that the aggression training model should rest on a broad-based approach rather than being limited to prescriptions of how to deal with aggression.

10. In addition, several research projects for the future have been proposed, including the assessment of new methods for conducting the training; action research with staff to alter organisational structures; and assessment of the maintenance of change.

REFERENCES

ABRAMSON, L. Y., SELIGMAN, M. E. P., and TEASDALE, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology* **87**, 49-74.

ADAMS, G. and MACILWRAITH, P. (1983). *Geriatric Nursing.* Oxford: Oxford University Press.

ADLER, W. N., KREEGER, C., and ZEIGLER, P. (1983). Patient violence in a private psychiatric hospital. In: J. R. Lion and W. H. Reid (Eds.), *Assaults Within Psychiatric Facilities*. Orlando, Florida: Grune and Stratton.

ANDERSON, E. R. (1973). *The Role of the Nurses.* London: Royal College of Nursing.

ANDERSON, C. A. (1989). Temperature and aggression: the ubiquitous effects of heat on the occurrence of human violence. *Psychological Bulletin* **106**, 74-96.

ARCHER, J. (1989). From the laboratory to the community. In: J. Archer and K. Browne (Eds.), *Human Aggression: Naturalistic Approaches*. London: Routledge.

ARGYLE, M. Ed. (1981). *Social Skills and Work.* London: Methuen.

ASHWORTH, P. (1980). *Care to Communicate.* London: Royal College of Nursing.

AVERILL, J. R. (1980). A constructivist view of emotion. In: R. Plutchik and H. Kellerman (Eds.), *Theories of Emotion*. New York: Academic Press.

AVERILL, J. R. (1982). *Anger and Aggression: An Essay on Emotion.* New York: Springer-Verlag.

AVERILL, J. R. (1983). Studies on anger and aggression: implications for theories of emotion. *American Psychologist* **38**, 1145-1160.

BANDURA, A. (1965). Influence of models' reinforcement contingencies on the acquisition of imitative responses. *Journal of Personality and Social Psychology* **1**, 589-595.

BANDURA, A. (1971). Social learning theory of aggression. In: J. F. Knutson (Ed.), *Control of Aggression: Implications from Basic Research*. Chicago: Aldine-Atherton.

BANDURA, A. (1973). *Aggression: A Social Learning Analysis*. Englewood Cliffs, NJ: Prentice-Hall.

BANDURA, A. (1977). Self-efficacy: towards a unifying theory of behavioral change. *Psychological Review* **84**, 191-215.

BANDURA, A., ROSS, D. and ROSS, S. A. (1963). Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology* **66**, 3-11.

BARNETT, P. A., and GOTLIB, I. H. (1988). Psychosocial functioning and depression: distinguishing among antecedents, concomitants and consequences. *Psychology Bulletin* **104**, 97-126.

BARON, R. A. (1971). Aggression as a function of magnitude of victim's pain cues, level of prior anger arousal, and aggressor-victim similarity. *Journal of Personality and Social Psychology* **18**, 48-54.

BARON, R. A. (1972). Aggression as a function of ambient temperature and prior anger arousal. *Journal of Personality and Social Psychology* **21**, 183-189.

BARON, R. A. (1977). Sexual arousal and aggression by males: effects of type of erotic stimuli and prior provocation. *Journal of Personality and Social Psychology* **35**, 79-87.

BARON, R. A. (1978). Aggression-inhibiting influence of sexual humor. *Journal of Personality and Social Psychology* **36** 189-197.

BARON, R. A. (1988). Negative effects of destructive criticism: impact on conflict, self-efficacy, and task performance. *Journal of Applied Psychology* **73**, 199-207.

BARON, R. A. (1989). Personality and organizational conflict: the Type A behavior pattern and self-monitoring. *Organizational Behavior and Human Decision Processes* **44**, 281-297.

BARON, R. A. and BALL, R. L. (1974). The aggression-inhibiting influence of non-hostile humor. Journal of Experimental Social Psychology **10**, 23-33.

BARON, R. A. and RICHARDSON, D. R. (1991). *Human Aggression* (2nd Edn.). New York: Plenum.

BARON, R. A., RUSSELL, G. W., and ARMS, R. L. (1985). Negative ions and behavior: impact on mood, memory, and aggression among Type A and Type B persons. *Journal of Personality and Social Psychology* **48**, 746-754.

BARRETT, D. E. (1979). A naturalistic study of sex differences in children's aggression. *Merrill-Palmer Quarterly* **25**, 193-207.

BECK, A. T. (1967). *Depression: Clinical, Experimental and Theoretical Aspects.* New York: Harper & Row.

BERKOWITZ, L. (1958). The expression and reduction of hostility. *Psychological Bulletin* **55**, 257-283.

BERKOWITZ, L. (1962). *Aggression: A Social Psychological Analysis*. New York: McGraw-Hill.

BERKOWITZ, L. (1982). Aversive conditions as stimuli to aggression. In: L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*: Vol. 15. New York: Academic Press.

BERKOWITZ, L. (1989a). The frustration-aggression hypothesis: an examination and reformulation. *Psychological Bulletin* **106**, 59-73.

BERKOWITZ, L. (1989b). Laboratory experiments. In: J. Archer and K. Bronne, *Human Aggression: Naturalistic Approaches.* London: Routledge.

BERKOWITZ, L. (due 1992). *On Aggression.*

BERKOWITZ, L. and DONNERSTEIN, E. (1982). External validity is more than skin deep: some answers to the criticism of laboratory experiments. *American Psychologist* **37**, 245-257.

BOND, M. (1986). *Stress and Self-Awareness: A Guide for Nurses.* London: Heinemann Nursing.

BORRILL, J. A., ROSEN, B. K., and SUMMERFIELD, A. B. (1987). The influence of alcohol on judgement of facial expressions of emotion. *British Journal of Medical Psychology* **60**, 71-77.

BOWER, G. H. and HILGARD, E. R. (1981). *Theories of Learning* (5th Edn.). Englewood Cliffs, NJ: Prentice Hall.

BREAKWELL, G. (1989). *Facing Physical Violence.* London: British Psychological Society. (Problems in Practice Series.)

BROWN, R., BUTE, S., and FORD, P. (1986). *Social Workers at Risk: The Prevention and Management of Violence*. London: MacMillan.

BRYANT, J. and ZILLMAN, D. (1979). Effect of intensification of annoyance through unrelated residual excitation on substantially delayed hostile behavior. *Journal of Experimental Social Psychology* **15**, 470-480.

BUSS, A. H. (1961). *The Psychology of Aggression.* New York: Academic Press.

BUSS, A. H. (1963). Physical aggression in relation to different frustrations. *Journal of Abnormal and Social Psychology* **67**, 1-7.

BUSS, A. H., and DURKEE, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consultative Psychology* **21**, 343-349.

BUTE, S. F. (1979). *The Bristol Survey.* Unpublished Paper. Bristol University.

CAMPBELL, A., BIBEL, D., and MUNCER, S. (1985). Predicting our own aggression: person, subculture or situation? *British Journal of Social Psychology* **24**, 169-180.

CAPLAN, R. D., COBB, S., FRENCH, J. R. P., VAN HARRISON, R., and PINNEAU, S. R. (1975). Job demands and worker health. In: *NIOSH Research Report.* Washington D.C.: US Govt. Printing Office.

CARR, W. and KEMMIS, S. (1986). *Becoming Critical: Education, Knowledge and Action Research.* The Falmer Press: Lewes.

CARTWRIGHT, A. (1964). *Human Relations and Hospital Care.* London: Routledge and Kegan Paul.

CARVER, C. S. and GLASS, D. C. (1978). Coronary-prone behavior pattern and interpersonal aggression. *Journal of Personality and Social Psychology* **36**, 361-366.

CHAPMAN, C. M. (1976). Nursing - rhyme or reason? *Nursing Times* **72**, 109-112.

CHIRIBOGA, D. A., JENKINS, G., and BAILEY, J. (1983). Stress and coping among hospice nurses: test of an analytic model. *Nursing Research* **32**, 294-299.

DAVIDSON, C. (1985). Theoretical antecedents to interpersonal skills training. In: C. Kagan (Ed.), *Interpersonal Skills in Nursing: Research and Applications.* London: Croom Helm.

DAVIES, B. (1981). Social skills in nursing. In: M. Argyle (Ed.), *Social Skills and Health.* London: Methuen.

DE FELIPPS, A. M. (1976). Preventing assaultive behaviour on a psychiatric unit. *Supervisor Nurse* **7**(6), 10-15.

DELUTY, R. H. (1985). Consistency of assertive, aggressive, and submissive behaviour for children. *Journal of Personality and Social Psychology* **49**, 1054-1065.

DENGERINK, H. A. (1976). Personality variables as mediators of attack-instigated aggression. In: R. G. Geen and E. C. O'Neal (Eds.), *Perspectives on Aggression.* New York: Academic Press.

DENGERINK, H. A., SCHNEDLER, R. S., and COVEY, M. K. (1978). The role of avoidance in aggressive responses to attack and no attack. *Journal of Personality and Social Psychology* **36**, 1044-1053.

DENNEY, D. R. and FRISCH, M. B. (1981). The role of neuroticism in relation to life stress and illness. *Journal of Psychosomatic Research* **25**, 303-307.

DEPARTMENT OF HEALTH AND SOCIAL SECURITY (1988). *Violence to Staff: Report of the DHSS Advisory Committee on Violence to Staff.* London: Her Majesty's Stationery Office.

DEPARTMENT OF TRANSPORT (1986). *Assaults on Bus Staff and Measures to Prevent Such Assaults: Report on the Working Group on Violence to Road Passenger Transport Staff.* London: Her Majesty's Stationery Office.

DEPP, F. C. (1986). Violent behavior patterns on psychiatric wards. *Aggressive Behavior* **2**, 259-306.

DEWE, P. J. (1987). Identifying the causes of nurses' stress: a survey of New Zealand nurses. *Work and Stress* **1**, 15-24.

DEWEY, J. (1938). *Experience and Education.* London: Collier-Macmillan.

DODGE, K. A., MURPHY, R. R., and BUCHSBAUM, K. (1984). The assessment of intention-cue detection skills in children: implications for developmental psychopathology. *Child Development* **55**, 163-173.

DOLLARD, J., DOOB, L. W., MILLER, M. G., MOWRER, O. H., and SEARS, R. R. (1939). *Frustration and Aggression.* New Haven: Yale University Press.

DRINKWATER, J. (1982). Violence in psychiatric hospitals. In: M. P. Feldman (Ed.), *Developments in the Study of Criminal Behaviour,* Vol. 2: *Violence.* Chichester: Wiley.

DUCKITT, J. and BROLL, T. (1982). Personality factors as moderators of the psychological impact of life stress. *South African Journal of Psychology* **12**, 76-80.

EAGLY, A. H. and STEFFAN, F. J. (1986). Gender and aggressive behavior: a meta-analytic review of the social psychological literature. *Psychological Bulletin* **100**, 309-330.

EDMUNDS, G. and KENDERICK, D. (1980). *The Measurement of Human Aggressiveness.* Chichester: Horwood.

EISENBERG, G. J. (1980). Children and aggression after observed film aggression with sanctioning adults. *Annals of the New York Academy of Science* **347**, 304-318.

EISLER, R. M., HERNSEN, M., MILLER, P. M., and BLANCHARD, E. B. (1975). Situational Determinants of Assertive Behaviors. *Journal of Consultative & Clinical Psychology* **43**, 330-340.

ELLIOT, D. L. and GIRARD, D. E. (1986). Gender and the emotional impact of internship. *Journal of the American Women's Association* **4**, 54-56.

ENDLER, N. S. and HUNT, J. M. (1969). Generalizability of contributions from sources of variance in the S-R inventories of anxiousness. *Journal of Personality* **37**, 1-24.

EPSTEIN, S. and TAYLOR, S. P. (1967). Instigation to aggression as a function of degree of defeat and perceived aggressive intent of the opponent. *Journal of Personality* **35**, 265-289.

EYSENCK, H. J. and EYSENCK, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire.* London: Hodder & Stoughton.

FABRICIUS, J. (1991). Running on the spot or can nursing really change? *Psychoanalytic Psychotherapy* **5**(2), 97-108.

FAULKNER, A. (1980). Communication and the nurse. *Nursing Times,* **76**, 93-95.

FERGUSON, T. J. and RULE, B. J. (1983). An attributional perspective on anger and aggression. In: R. G. Geen and E. Donnerstein (Eds.), *Aggression: Theoretical and Empirical Reviews,* Vol. I: *Theoretical and Methodological Issues.* New York: Academic Press.

FESHBACH, S. (1970). Aggression. In: P. H. Mussen (Ed.), *Carmichael's Manual of Child Psychology.* New York: Wiley, 159-259.

FESHBACH, N. D. (1984). Empathy, empathy training and the regulation of aggression in elementary school children. In: R. M. Kaplan, V. J. Konecni, and R. W. Novaco (Eds.) *Aggression, Children and Youth.* The Hague: Martinus Nijoff.

FESHBACH, N. D. and FESHBACH, S. (1982). Empathy training and the regulation of aggression: potentialities and limitations. *Academic Psychology Bulletin* **4**, 399-413.

FESHBACH, N. D. and ROE, K. (1968). Empathy in six and seven year olds. *Child Development* **39**, 133-145.

FESHBACH, S., STILES, W. B., and BITTER, E. (1967). The reinforcing effect of witnessing aggression. *Journal of Experimental Research in Personality* **2**, 133-139.

FIELD, D. (1984). We didn't want him to die on his own - nurses' accounts of nursing dying patients. *Journal of Advanced Nursing* **9**, 59-70.

FOTTRELL, E. (1980). A study of violent behaviour among patients in psychiatric hospitals. *British Journal of Psychiatry* **136**, 216-221.

FRANKLIN, B. L. (1974). *Patient Anxiety on Admission to Hospital.* London: Royal College of Nursing.

FRISCH, M. B. and FROBERG, W. (1987). Social validation of assertion strategies for handling aggressive criticism - evidence for consistency across situations. *Behavior Therapy* **18**(2), 181-191.

GEEN, R. G. (1968). Effects of frustration, attack, and prior training in aggressiveness upon aggressive behavior. *Journal of Personality and Social Psychology* **9**, 316-321.

GEEN, R. G. (1970). Perceived suffering of the victim as an inhibitor of attack-induced aggression. *Journal of Social Psychology* **81**, 209-215.

GEEN, R. G. (1990). *Human Aggression.* Milton Keynes: Open University Press.

GEEN, R. G. and BERKOWITZ, L. (1967). Some conditions facilitating the occurrence of aggression after the observation of violence. *Journal of Personality* **35**, 666-676.

GEEN, R. G. and McCOWN, E. J. (1984). Effects of noise and attack on aggression and physiological arousal. *Motivation and Emotion* **8**, 231-241.

GEEN, R. G. and STONNER, D. (1971). The context of observed violence: inhibition of aggression through displays of unsuccessful retaliation. *Psychonomic Science* **27**, 242-244.

GLASS, D. C. (1977). *Behavior Patterns, Stress, and Coronary Disease.* Hillsdale, NJ: Erlbaum.

GLASS, D. C. and SINGER, J. E. (1972). *Urban Stress.* New York: Academic Press.

GLICK, B. and GOLDSTEIN, A. P. (1987). Aggression replacement training. *Journal of Counselling Development* **65**, 356-362.

GRAY-TOFT, P. and ANDERSON, J. G. (1981). Stress among hospital nursing staff: its causes and effects. *Social Science & Medicine* **15A**, 639-647.

GRIFFITT, W. and VEITCH, R. (1971). Hot and crowded: influences of population density and temperature on interpersonal affective behavior. *Journal of Personality and Social Psychology* **17**, 92-98.

GULLY, K. J. and DENGERINK, H. A. (1983). The dyadic interaction of persons with violent and nonviolent histories. *Aggressive Behaviour* **7**, 13-20.

HALLER, R. M. and DELUTY, R. H. (1988). Assaults on staff by psychiatric in-patients - a critical review. *British Journal of Psychiatry* **152**, 174-179.

HARBURG, E., ERFURT, J. C., HAUENSTEIN, L. S., CHAPE, C., SCHULL, W., and SCHORK, M. H. (1973). Socio-ecological stress, suppressed hostility, skin color, and black-white male blood pressure. *Psychosomatic Medicine* **41**, 189-202.

HEALTH AND SAFETY EXECUTIVE (1989). *Violence to Staff.* London: HSE.

HEALTH SERVICES ADVISORY COMMITTEE (1987). *Violence to Staff in the Health Service*. London: Her Majesty's Stationery Office.

HEALY, M. J. R. (1988). *Glim: an Introduction.* Oxford: Oxford University Press.

HINDE, R. (1979). *Towards Understanding Relationships*. London: Academic Press.

HINDE, R. (1983). The study of interpersonal relationships. In: J. Miller (Ed.), *States of Mind: Conversations with Psychological Investigators*. London: BBC.

HINGLEY, P. and COOPER, C. L. (1986). *Stress and the Nurse Manager.* London: John Wiley & Sons.

HOCKEY, L. (1976). *Women in Nursing.* London: Hodder and Stoughton.

HODGKINSON, P. E., MCIVOR, L., and PHILLIPS, M. (1985). Patient assaults on staff in a psychiatric hospital: a two-year retrospective study. *Medicine, Science and the Law* **25**, 288-294.

HOLMES, T. H. and RAHE, R. H. (1967). The social readjustment scale. *Journal of Psychosomatic Research* **11**, 213-218.

HOLT, R. R. (1971). *Assessing Personality*. New York: Harcourt Brace Jovanovich.

HONEYCUTT, J. M. and WOROBEY, J. L. (1987). Impressions about communication styles and competence in nursing relationships. *Communication and Education* **36**(3), 217-227.

HOPE, H. F. (1973). Trigger factors. *Nursing Mirror* **137**, 10-15.

HOPE, T. (1985). *Implementing Crime Prevention Measures.* London: Her Majesty's Stationery Office.

HORNBLOW, A. R. (1980). The study of empathy. *New Zealand Psychologist* **9**, 19-28.

HOWELLS, K. (1989). Anger-management methods in relation to the prevention of violent behaviour. In: J. Archer, and K. Brown (Eds.), *Human Aggression: Naturalistic Approaches.* London: Routledge.

HOWELLS, K. and HOLLIN, C., Eds. (1988). *Clinical Approaches to Violence.* New York: Wiley.

HYDE, J. S. (1984). How large are gender differences in aggression? A developmental meta-analysis. *Developmental Psychology* **20**, 722-736.

HYNAN, D. J. and GRUSH, J. E. (1986). Effects of impulsivity, depression, provocation, and time on aggressive behavior. *Journal of Research in Personality* **20**, 158-171.

INFANTIN, J. A. and MUSINGO, S. Y. (1985). Assaults and injuries among staff with and without training in aggression control technique. *Hospital Communication, 36*(12), 1312-1314.

IONNO, J. A. (1983). A prospective study of assaultive behavior in female psychiatric in-patients. In: J. R. Lion and W. H. Reid (Eds.), *Assaults Within Psychiatric Facilities.* Orlando, Florida: Grune and Stratton.

JANOFF-BULMAN, R. J. (1979). Characterological versus behavioral self-blame: inquiries into depression and rape. *Journal of Personality and Social Psychology* **37**, 1798-1809.

JOHNSON, T. E. and RULE, B. G. (1986). Mitigating circumstance information, censure, and aggression. *Journal of Personality and Social Psychology* **50**, 537-542.

JONES, E. E. and NISBETT, R. E. (1971). The actor and the observer: divergent perceptions of the causes of behavior. In: E. E. Jones, D. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, and B. Weiner (Eds.), *Attribution: Perceiving the Causes of Behavior.* Morristown, N.J.: General Learning Press.

KANNER, A. D., COYNE, J. C., SCHAEFER, C., and LAZARUS, R. S. (1981). Comparison of two methods of stress measurement: daily hassles and uplift versus major events. *Journal of Behavioral Medicine* **4**, 1-39.

KATZ, S. E., COHEN, R., and STOCKMAN, C. L. J. (1985). Violence in psychiatric institutions. *New York State Journal of Medicine* **85**, 64-66.

KAY, S. R., WOLKENFELD, F., and MURRILL, L. M. (1988a). Profiles of aggression among psychiatric patients: I. Nature and prevalence. *Journal of Nervous and Mental Disease* **176**, 539-546.

KAY, S. R., WOLKENFELD, F., and MURRILL, L. M. (1988b). Profiles of aggression among psychiatric patients: II. Covariates and predictors. *Journal of Nervous and Mental Disease* **176**, 547-557.

KELLEY, H. H. (1967). Attribution theory in social psychology. In: D. Levine (Ed.), *Nebraska Symposium on Motivation*, Vol. 15. Lincoln: Nebraska Univ. Press.

KOBASA, S. C. (1979). Stressful life events, personality and health: an enquiry into hardiness. *Journal of Personality and Social Psychology* **37**, 1-11.

KOBASA, S. C., MADDI, S. R., and KAHN, S. (1982). Hardiness and health: a prospective study. *Journal of Personality and Social Psychology* **42**, 707-717.

KOLB, D. (1984). *Experiential Learning.* London: Prentice Hall.

KONECNI, V. J. (1984). Methodological issues in human aggression research. In: R. M. Kaplan, V. J. Konecni, and R. W. Novaco (Eds.), *Aggression in Children and Youth.* The Hague: Nijhoff.

KORNADT, H. J. (1974). Toward a motivation theory of aggression and aggression inhibition: some considerations about an aggression motive and its applications to TAT and catharsis. In: J. Dewit and W. W. Hartup (Eds.), *Determinants and Origins of Aggressive Behaviour.* The Hague: Mouton.

LAMPLUGH, D. (1988). *Beating Aggression: a Practical Guide for Working Women.* London: Weidenfeld & Nicolson.

LANZA, M. L. (1985). How nurses react to patient assault. *Journal of Psychosocial Nursing & Mental Health Services* **23**(6), 6-11.

LAZARUS, R. S. and FOLKMAN, S. (1984). *Stress, Appraisal and Coping.* New York: Springer.

LEVANTHAL, H. (1980). Toward a comprehensive theory of emotion. In: L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, Vol. 13. New York: Academic Press.

LEVITT, R. (1975). Attitudes of hospital patients. *Nursing Times* **71**, 497-499.

LEVY, P. and HARTOCOLLIS, P. (1976). Nursing aids and patient violence. *American Journal of Psychiatry* **133**, 429-431.

LION, J. R. and REID, W. H. (Eds.) (1983). *Assaults Within Psychiatric Facilities.* New York: Grune and Stratton.

LION, J. R., SNYDER, W., and MERRILL, G. L. (1981). Underreporting of assaults on staff in a state hospital. *Hospital and Community Psychiatry* **32**, 497-498.

LIVINGSTON, M. and LIVINGSTON, H. (1984). Emotional distress in nurses at work. *British Journal of Medical Psychology* **57**, 291-294.

LOEBER, R. and DISHION, T. J. (1984). Boys who fight at home and school: family conditions influencing cross-setting consistency. *Journal of Consulting and Clinical Psychology* **52**, 759-768.

LYKKEN, D. L. (1968). Statistical significance in psychological research. *Psychology Bulletin* **70**, 151-159.

LYSAK, H., RULE, B. G., and DOBBS, A. R. (1989). Conceptions of aggression: prototype or defining features? *Personality & Social Psychology Bulletin* **15**, 233-243.

MACLEOD CLARKE, J. (1981). Nurse-patient communication. *Nursing Times* 77, 12-18.

MACLEOD CLARKE, J. (1982). *Nurse-Patient Interaction: An Analysis of Conversations on Surgical Wards.* Unpublished PhD Thesis: University of London.

MACLEOD-CLARKE, J. (1984). *Nurse-Patient Interaction. An Analysis of Conversation on Surgical Wards.* Unpublished Ph. D. Thesis: University of London.

MACLEOD CLARKE, J. (1985). Development of research in interpersonal skills in nursing. In: C. M. Kagan (Ed.), *Interpersonal Skills in Nursing.* London: Croom Helm.

MARGALIT, B. A. and MAUGER, P. A. (1985). Aggressiveness and assertiveness: a cross-cultural study of Israel and the United States. *Journal of Cross-Cultural Psychology* **16**, 497-511.

MARTIN, M. and CLARK, D. M. (1985). Cognitive mediation of depressed mood and neuroticism. *IRCS Medical Science: Psychology and Psychiatry* **13**, 352-353.

MASLACH, C. (1976). Burned-out. *Human Behavior* **5**, 16-22.

MASLACH, C. (1979). Understanding burnout: Definitional issues in analysing a complex phenomenon. In: W. S. Paine (Ed.), *Job Stress and Burnout - Research Theory and Intervention Perspectives.* London: Sage Publications Ltd.

MCDOUGALL, W. (1950). *An Introduction to Social Psychology* (30th Edn.) London: Methuen.

MCGEE, A. (1961). *The Patient's Attitude to Nursing Care.* Edinburgh: Livingstone.

MEGARGEE, E. I. (1966). Under-controlled and over-controlled personality types in extreme antisocial aggression. *Psychological Monographs* **80**(3).

MEHRABIAN, A. and EPSTEIN, N. (1972). A measure of emotional empathy. *Journal of Personality and Social Psychology* **40**, 527-543.

MELIA, K. (1981). Student nurses' accounts of their work and training: a qualitative analysis. Unpublished Ph. D. Thesis: University of Edinburgh.

MENZIES, I. M. (1959). The functioning of social systems as a defence against anxiety: a report on a study of the nursing service of a general hospital. *Human Relations* **13**, 95-121.

MENZIES, I. M. (1960). A case study in the functioning of social systems as a defense against anxiety. *Human Relations* **13**, 95-121.

MEYERSCOUGH, R. and TAYLOR, S. P. (1985). The effects of marijuana on human physical aggression. *Journal of Personality and Social Psychology* **67**, 1541-1546.

MILLER, N. E. (1941). The frustration-aggression hypothesis. *Psychological Review* **48**, 155-178.

MILLER, P. A. and EISENBERG, N. (1988). The relation of empathy to aggressive and externalizing/antisocial behaviour. *Psychological Bulletin* **103**, 324-344.

MILLHAM, S., BULLOCK, R., and HOSIE, K. (1978). *Locking Up Children.* Farnborough: Saxon Horse.

MITCHELL, J. V. (1989). Personality correlates of attributional style. *Journal of Psychology* **123**, 447-463.

MONAHAN, J. (1984). The prediction of violent behavior: toward a second generation of theory and policy. *American Journal of Psychiatry* **141**, 10-15.

MONAHAN, J. and STEADMAN, H. J. (1983). Crime and mental disorder: an epidemiological approach. In: N. Morris and M. Tonry (Eds.), *Crime and Justice: An Annual Review of Research* (Vol. 3). Chicago: University of Chicago Press.

MOULT, A., MELIA, K., and PEMBRAY, S. A. M. (1978). *Patterns of Ward Organisation.* Edinburgh: Nursing Research Unit. Unpublished Report.

MUELLER, C. W. (1983). Environmental stressors and aggressive behavior. In: R. G. Geen and E. Donnerstein (Eds.), *Aggression: Theoretical and Empirical Reviews*, Vol. 2: *Issues in Research.* New York: Academic Press.

MUELLER, P. and MAJOR, B. (1989). Self-blame, self-efficacy and adjustment to abortion. *Journal of Personality and Social Psychology* **57**, 1059-1067.

MURPHY, L. R. (1984). Occupational stress management. *Journal of Occupational Psychology* **57**, 1-15.

NATIONAL ASSOCIATION OF SCHOOL MASTERS/UNION OF WOMEN TEACHERS (1986). *Pupil Violence and Serious Disorder in Schools.* Birmingham: NASUWT.

NEZU, A. M., NEZU, C. M., and NEZU, V. A. (1986). Depression, general distress, and causal attribution among university students. *Journal of Abnormal Psychology* **94**, 51-63.

NOBLE, P. and RODGER, S. (1989). Violence by psychiatric in-patients. *British Journal of Psychiatry* **155**, 384-390.

NOVACO, R. W. (1975). *Anger Control: The Development and Evaluation of an Experimental Treatment.* Lexington: Lexington Books.

OFFICE OF POPULATION CENSUS AND SURVEYS (1978). *Occupational Mortality: The Registrar-General's Decennial Supplement for England and Wales, 1970-1972.* London: HMSO.

OHBOCHI, K. I. and OGURA, S. (1984). The experience of anger (1): The survey for adults and university students with Averill's questionnaire. *Japanese Journal of Criminal Psychology* **22**, 15-35.

OLWEUS, D. (1979). Stability of aggressive reaction patterns in males: a review. *Psychological Bulletin* **86**, 852-875.

ORNE, M. T. (1966). On the social psychology of the psychological experiment: with particular reference to the demand characteristics and their implications. In: C. W. Backman and P. F. Secord, *Problems in Social Psychology.* New York: McGraw-Hill.

PARKES, K. R. (1988). The hardy personality and its relationship to extraversion and neuroticism. *Personality & Individual Differences* **9**, 785-790.

PATTERSON, G. R. (1980). Mothers: the unacknowledged victims. *Monographs of the Society for Research in Child Development*, No. 45.

PAULHUS, D. (1983). Sphere specific measures of perceived control. *Journal of Personality and Social Psychology* **44**, 1253-1265.

PAULHUS, D. L. and CHRISTIE, R. (1981). Spheres of control: an interactionist approach to assessment of perceived control. In: H. M. Lefcourt (Ed.), *Research with the Locus of Control Construct* , Vol. 1. New York: Academic Press.

PEARSON, M., WILMOT, E., and PODI, M. (1986). A study of violent behaviour among in-patients in a psychiatric hospital. *British Journal of Psychiatry* **149**, 232-235.

PETERS, R. K. and BENSON, H. (1978). Time out from tension. *Harvard Business Review,* **56**, 120-124.

PETERSON, C., SEMMEL, A., VON BAEYER, C., ABRAMSON, L. Y., METALKSKY, G. I., and SELIGMAN, M. E. P. (1982). The attributional style questionnaire. *Cognitive Therapy and Research* **6**, 287-299.

POYNER, B. and WARNE, C. (1986). *Violence to Staff: A Basis for Assessment and Prevention.* London: Her Majesty's Stationery Office.

POYNER, B. and WARNE, C. (1988). *Violence to Staff: A Basis for Assessment and Prevention.* London: Her Majesty's Stationery Office.

RAPOPORT, R. (1970). Three dilemmas in action research. *Human Relations* **23**, 499-513.

RATHUS, S. A. (1973). A 30-item schedule for assessing assertive behavior. *Behavior Therapy* **4**, 527-543.

RATHUS, S. A. and NEVID, J. S. (1977). Concurrent validity of the 30-item assertiveness schedule with a psychiatric population. *Behavior Therapy* **8**, 393-397.

REINISCH, J. M. and SANDERS, S. A. (1986). A test of sex differences in aggressive response to hypothetical conflict situations. *Journal of Personality and Social Psychology* **50**, 1045-1049.

ROSE, J. S. (1976). *A Study of Violence on London Transport.* Behavioural Science Unit, Establishment Department, Greater London Council.

ROSSI, A. M., JACOBS, M., MONTELEONE, M., OLSEN, R., SURBER, R. W., WINKLER, E. L. and WOMMACK, A. (1986). Characteristics of psychiatric patients who engage in

assaultive or other fear-inducing behaviors. *Journal of Nervous and Mental Disease* **174**, 154-160.

ROTTER, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs* **80**, 1-28.

ROTTON, J., FREY, J., BARRY, T., MILLIGAN, M., and FITZPATRICK, M. (1979). The air pollution experience and physical aggression. *Journal of Applied Social Psychology* **9**, 397-412.

ROWETT, C. (1986). *Violence in social work: a research study of violence in the context of local authority social work.* Institute of Criminology, University of Cambridge, Occasional Paper 14.

RULE, B. G., TAYLOR, B. R., and DOBBS, A. R. (1987). Priming effects of heat on aggressive thoughts. *Social Cognition* **5**, 131-143.

SCHACHTER, S. and SINGER, J. E. (1962). Cognitive, social and psychological determinants of emotional state. *Psychological Review* **69**, 379-399.

SCHMIDT, G. and WEINER, B. (1988). An attribution-affect-action theory of behavior: replication of judgements of help giving. *Personality & Social Psychology Bulletin* **14**, 610-621.

SHADER, R. I., JACKSON, A. H., HARMATZ, J. S., and APPELBAUM, P. S. (1977). Patterns of violent behavior among schizophrenic inpatients. *Diseases of the Nervous System* **38**, 13-16.

SHOPE, G. L., HEDRICK, T. E., and GEEN, R. G. (1978). Physical/verbal aggression: sex differences in style. *Journal of Personality* **46**, 23-42.

SHORTELL, J., EPSTEIN, S., and TAYLOR, S. P. (1970). Instigation to aggression as a function of degree of defeat and capacity for massive retaliation. *Journal of Personality* **38**, 1822-1834.

SHUNTICH, R. J. and TAYLOR, S. P. (1972). The effects of alcohol on human physical aggression. *Journal of Experimental Research in Personality* **6**, 34-38.

SIEGEL, J. M. (1986). The multidimensional anger inventory. *Journal of Personality and Social Psychology* **51**, 191-200.

SMALL, G. W. (1981). House officer stress syndrome. *Psychosomatics,* **22**, 860-869.

SMITH, A. (1948). The theory of moral sentiment. In: H. Scheider (Ed.), *Adam Smith's Moral and Political Philosophy.* New York: Hafner.

SOLOFF, P. H. (1983). Seclusion and restraint. In: J. R. Lion and W. H. Reid (Eds.), *Assaults Within Psychiatric Facilities.* Orlando, Florida: Grune and Stratton.

Erratum

RULE, B.G. and FERGUSON, T.J. (1984). Developmental issues in attribution, moral judgement and aggression. In R.M. Kaplan, V.J. Kronecni and R.W. Novaco (Eds.), *Aggression in Children and Youth.* NATO ASI series D.

STEADMAN, H. J., COCOZZA, J. J., and MELICK, M. E. (1978). Explaining the increased arrest rate among mental patients: the changing clientele of state hospitals. *American Journal of Psychiatry* **135**, 816-820.

STOCKWELL, F. (1972). *The Unpopular Patient.* London: Royal College of Nursing.

STRATHCLYDE SOCIAL WORK DEPARTMENT (1986). *Violence to staff: policies and procedures.* Unpublished Report of the Joint Departmental Trade Union Working Party.

STRAUS, M. A. (1980). A sociological perspective on the causes of family violence. In: M. R. Green (Ed.), *Violence and the Family.* Washington, DC: American Association for the Advancement of Science.

STRUBE, M. J., TURNER, C. W., CERVO, D., STEVENS, J., and HINCHEY, F. (1984). Interpersonal aggression and the Type A coronary-prone behavior pattern: a theoretical distinction and practical implications. *Journal of Personality and Social Psychology* **47**, 839-847.

SURREY SOCIAL SERVICE DEPARTMENT (1987). *Safe and Secure in Surrey: Report of the Working Group on Violence to Staff* (SSSD).

SUSMAN, G. and EVERED, R. (1978). An assessment of the scientific merits of action research. *Administrative Science Quarterly* **23**, 582-603.

TANKE, E. D. and YESAVAGE, J. A. (1985). Characteristics of assaultive patients who do and do not provide visible cues of potential violence. *American Journal of Psychiatry* **142**, 1409-1413.

TARDIFF, K. (1981). Assault in hospital and placement in the community. *Bulletin of the American Academy of Psychiatry and The Law* **93**, 33-39.

TARDIFF, K. (1987). Prediction of violence and epidemiological studies. In: *Continuing Medical Education Syllabus and Scientific Proceedings of the 140th Annual Meeting of the American Psychiatric Association.* Washington, D.C.: American Psychiatric Press.

TARDIFF, K. (1989). *Assessment and Management of Violent Patients.* New York: American Psychology Press, Inc.

TARDIFF, K. and KOENIGSBURG, H. M. (1985). Assaultive behavior among psychiatric outpatients. *American Journal of Psychiatry* **142**, 960-963.

TARDIFF, K. and SWEILLAM, A. (1979). Age and assaultive behavior in mental patients. *Hospital and Community Psychiatry* **30**, 709-711.

TARDIFF, K. and SWEILLAM, A. (1980). Assault, suicide, and mental illness. *Archives of General Psychiatry* **37**, 164-169.

TARDIFF, K. and SWEILLAM, A. (1982). Assaultive behavior among chronic psychiatric inpatients. *American Journal of Psychiatry* **139**, 212-215.

TAYLOR, S. P. and GAMMON, C. B. (1975). Effects of type and dose of alcohol on human physical aggression. *Journal of Personality and Social Psychology* **32**, 169-175.

TAYLOR, S. P. and GAMMON, C. B. (1976). Aggressive behavior of intoxicated subjects: the effect of third-party intervention. *Journal of Studies on Alcohol* **37**, 169-175.

TAYLOR, S. P. and LEONARD, K. E. (1983). Alcohol and human physical aggression. In: R. G. Geen and E. Donnerstein (Eds.), *Aggression: Theoretical and Empirical Reviews*, Vol. 2: *Issues in Research*. New York: Academic Press.

THACKREY, M. (1987). Clinician confidence in coping with patient aggression: assessment and enhancement. *Professional Psychology Research and Practice* **18**(1), 57-60.

THE CONTEMPORARY VIOLENCE RESEARCH CENTRE (1979). *Final Report to Whitbread Limited.* Oxford: CVRC.

TOCH, H. (1969). *Violent Men*. Chicago: Aldine.

TOCH, H. (1980). *Violent Man* (Revised Edn.). Cambridge, Mass: Schenkman.

TURNBULL, J., AITKEN, I., BLACK, L., and PATTERSON, B. (1990). Turn it around: short-term management for aggression and anger. *Journal of Psychosocial Nursing in the Mental Health Service* **28**(6), 6-10.

VINCENT, M. O. (1983). Some sequelae of stress in physicians. *Psychiatric Journal of the University of Ottawa* **8**, 120-124.

WALBEK, N. H. and GORDON, V. C. (1980). Concurrent validity of three self-report measures of assertiveness. *Research in Nursing and Health* **3**, 159-162.

WALTERS, R. H. and BROWN, M. (1963). Studies of reinforcement of aggression. III: Transfer of responses to all interpersonal situations. *Child Development* **34**, 536-571.

WEINER, B. (1980). A cognitive (attribution)-emotion-action model of motivated behavior: an analysis of judgements of help-giving. *Journal of Personality and Social Psychology* **39**, 186-200.

WEINER, B. (1988). An attribution-affect-action theory of behavior: replications of judgements of help-giving. *Personality & Social Psychology Bulletin* **14**, 610-621.

WEINER, B., GRAHAM, S., and CHANDLER, C. (1982). Pity, anger and guilt: an attributional analysis. *Personality & Social Psychology Bulletin* **8**, 226-232.

WHITE, J. W. (1983). Sex and gender issues in aggression research. In: R. G. Geen and E. Donnerstein (Eds.), *Aggression: Theoretical and Empirical Reviews*, Vol. 2: *Issues in Research*. New York: Academic Press.

WHITING, B. and EDWARDS, C. P. (1973). A cross-cultural analysis of sex differences in the behaviour of children aged 3 through 11. *Journal of Social Psychology* **91**, 171-188.

WHITTINGTON, R. and WYKES, T. (1991). *Psychiatric Nurses' Experience of Violence at Work.* Unpublished paper presented at a symposium on "Violence and Health Care Workers", Annual Conference of the British Psychological Society.

WOLFE, B. M. and BARON, R. A. (1971). Laboratory aggression related to aggression in naturalistic social situations: effects of an aggressive model on the behavior of college student and prisoner observers. *Psychonomic Science* **24**, 193-194.

WOLPE, J. (1969). *The Practice of Behavior Therapy.* New York: Pergamon.

ZILLMAN, D. (1978). Attribution and misattribution of excitatory reactions. In: J. H. Harvery, W. J. Ickes, and R. F. Kidd (Eds.), *New Directions in Attribution Research*, Vol. 2. Hillsdale, NJ: Erlbaum.

ZILLMAN, D. (1979). *Hostility and Aggression.* Hillsdale, NJ: Erlbaum.

ZILLMAN, D. and CANTOR, J. R. (1976). Effect of timing of information about mitigating circumstances on emotional responses to provocation and retaliatory behaviour. *Journal of Experimental Social Psychology* **12**, 38-55.

NURSES' QUESTIONNAIRE (Part 1)

AGGRESSIVE INCIDENTS AND THEIR EFFECTS ON NURSING STAFF

The following questionnaire focuses on aggressive incidents that nurses come into contact with during the course of their work. In Part 1, we ask you to give us details about what you think are effective and ineffective ways of handling aggression, and in Part 2, we ask for details of aggressive incidents that you have actually been involved in whilst working as a nurse.

In the questionnaire we refer to aggression directed at nurses from "Patients" or "Patients and Other Members of the Public". Please remember that throughout the questionnaire we want you to think of the aggressors as anybody who is in the hospital and who you have contact with during the course of your work, except other members of staff. We are interested in aggression from patients, their relatives, visitors, intruders or other members of the public.

PART 1

In this section we ask you a number of questions, ranging from details about your work history to your opinions about the best way to handle aggressive patients. We are interested in what you think. This is not a test of ability or knowledge. We therefore ask you to consider your answers carefully and to be as honest as possible. The information you give us will be completely confidential. Please write clearly.

1. Name _____

2. Age _____

3. Sex (circle "M" for male, "F" for female) M / F

4. Do you work full-time? (circle "Yes" or "No") Yes / No

5. i) What is your present job? (Please give a specific job title including grade)

_____

ii) Which ward do you work on?

_____

iii) How long have you worked on this ward?

_____

iv) In total, how many years have you worked as a nurse?

_____

6. In general, how effective do you believe you are when it comes to dealing with aggressive patients or other members of the public? (Please circle the appropriate number)

not at all effective	1	2	3	4	5	extremely effective

7. On average, how stressful do you personally find it when dealing with aggressive patients or other members of the public? (Please circle the appropriate number)

not at all stressful	1	2	3	4	5	extremely stressful

8. On the next page you will find a brief description of a certain type of aggressive incident which nurses sometimes encounter at work. In this case, "Physical Assault/Abuse". Underneath is a list of methods which can be used to deal with physical aggression. Please indicate by putting a circle around the number in the appropriate column, whether you think each method is "guaranteed to fail", "mostly fails", "sometimes fails and sometimes succeeds", "mostly succeeds", or is "guaranteed to succeed".

When you have finished rating the methods for dealing with "Physical Assault/Abuse", move on to rate the methods for dealing with "Verbal Assault/Abuse". A full description of what is meant by physical and verbal assault/abuse is given below.

Physical Assault/Abuse	Aggression involving physical contact. Ranging from pushing or slapping to physical assault resulting in physical injury.
Verbal Assault/Abuse	Aggression not involving physical contact. Ranging from mildly unpleasant language through to seriously threatening behaviour.

- Please turn the page.

A. PHYSICAL ASSAULT/ABUSE. Aggression involving physical contact. Ranging from slapping or pushing through to assault resulting in physical injury.

Rate the following methods for coping with physical assault/abuse. Give each method a rating for success or failure by circling the appropriate number to represent what you would expect to happen if you were to personally use each method. (Please remember, "patient" in the statements below also refers to any other member of the public you might come into contact with during the course of your work).

		Guaranteed to fail	Mostly fails	Sometimes fails & Sometimes succeeds	Mostly succeeds	Guarantee to succeed
1.	Raise one's voice	-2	-1	0	+1	+2
2.	Threaten the patient with higher authority	-2	-1	0	+1	+2
3.	Show the patient that he/she is making you angry	-2	-1	0	+1	+2
4.	Listen carefully to what the patient is saying	-2	-1	0	+1	+2
5.	Become angry	-2	-1	0	+1	+2
6.	Talk softly to the patient	-2	-1	0	+1	+2
7.	Scold the patient for his/her behaviour	-2	-1	0	+1	+2
8.	Look busy	-2	-1	0	+1	+2
9.	Match the patient's tone and manner	-2	-1	0	+1	+2
10.	Remain calm but firm	-2	-1	0	+1	+2
11.	Turn the incident into a joke	-2	-1	0	+1	+2
12.	Walk away from the situation	-2	-1	0	+1	+2
13.	Try and include whoever else is around in the incident	-2	-1	0	+1	+2
14.	Jolly the patient along	-2	-1	0	+1	+2
15.	Show sympathy to the patient	-2	-1	0	+1	+2
16.	Become indignant	-2	-1	0	+1	+2
17.	Look friendly and catch his/her eye	-2	-1	0	+1	+2
18.	Become matter-of-fact	-2	-1	0	+1	+2

		Guaranteed to fail	Mostly fails	Sometimes fails & Sometimes succeeds	Mostly succeeds	Guaranteed to succeed
19.	Let the patient know that his/her behaviour will get him/her nowhere	-2	-1	0	+1	+2
20.	Hide one's feelings	-2	-1	0	+1	+2
21.	Treat the patient like a naughty child	-2	-1	0	+1	+2
22.	Let the patient blow off steam	-2	-1	0	+1	+2
23.	Call another nurse for help	-2	-1	0	+1	+2
24.	Make a joke at the patient's expense	-2	-1	0	+1	+2
25.	Act as though nothing unusual is happening	-2	-1	0	+1	+2
26.	Give the patient one's full attention	-2	-1	0	+1	+2
27.	Look authoritative and stern	-2	-1	0	+1	+2
28.	Gently ask the patient to explain why he/she is angry	-2	-1	0	+1	+2
29.	Let the patient know that you are on his/her side	-2	-1	0	+1	+2
30.	Make it clear you will not stand for any nonsense	-2	-1	0	+1	+2
31.	Remain calm and collected	-2	-1	0	+1	+2

NOW can you answer some questions about the methods that you believe to be the **most effective** and **most ineffective** when dealing with physical assault/abuse whilst at work.

i) Please pick three methods from the 31 shown on the previous two pages that you would personally use, and which you believe would be **most effective**, when dealing with physical assault/abuse. Place the appropriate statement numbers (1-31) on the lines below.

The 3 **most effective** methods are:

1. ___ 2. ___ 3. ___

ii) Please pick the three methods from the 31 shown above that you would **never** use because they would only make matters worse in the case of physical assault/abuse. Place the appropriate statement numbers (1-31) on the lines below.

The 3 **most ineffective** methods are:

1. ___ 2. ___ 3. ___

iii) Are there any methods that you consider to be **effective** and that you would use in the case of physical assault/abuse which are <u>not mentioned</u> in methods 1 to 31? Please list them below.

1. _____

2. _____

3. _____

iv) In general, how effective do you believe <u>you are</u> when dealing with physical assault/abuse at work? (Please circle appropriate number)

not at all effective	1	2	3	4	5	extremely effective

B. VERBAL ASSAULT/ABUSE. Any kind of aggression <u>not</u> involving physical contact. Ranging from mildly unpleasant language to seriously threatening behaviour.

Rate the following methods for coping with verbal assault/abuse. Give each method a rating for succes or failure by circling the appropriate number to represent what you would expect to happen if you were to <u>personally</u> use each method. (Please remember, "patient" in the statements below also refers to any other member of the public you might come into contact with during the course of your work).

		Guaranteed to fail	Mostly fails	Sometimes fails & Sometimes succeeds	Mostly succeeds	Guaranteed to succeed
1.	Raise one's voice	-2	-1	0	+1	+2
2.	Threaten the patient with higher authority	-2	-1	0	+1	+2
3.	Show the patient that he/she is making you angry	-2	-1	0	+1	+2
4.	Listen carefully to what the patient is saying	-2	-1	0	+1	+2
5.	Become angry	-2	-1	0	+1	+2
6.	Talk softly to the patient	-2	-1	0	+1	+2
7.	Scold the patient for his/her behaviour	-2	-1	0	+1	+2
8.	Look busy	-2	-1	0	+1	+2
9.	Match the patient's tone and manner	-2	-1	0	+1	+2
10.	Remain calm but firm	-2	-1	0	+1	+2
11.	Turn the incident into a joke	-2	-1	0	+1	+2
12.	Walk away from the situation	-2	-1	0	+1	+2
13.	Try and include whoever else is around in the incident	-2	-1	0	+1	+2
14.	Jolly the patient along	-2	-1	0	+1	+2
15.	Show sympathy to the patient	-2	-1	0	+1	+2
16.	Become indignant	-2	-1	0	+1	+2
17.	Look friendly and catch his/her eye	-2	-1	0	+1	+2
18.	Become matter-of-fact	-2	-1	0	+1	+2

		Guaranteed to fail	Mostly fails	Sometimes fails & Sometimes succeeds	Mostly succeeds	Guaranteed to succeed
19.	Let the patient know that his/her behaviour will get him/her nowhere	-2	-1	0	+1	+2
20.	Hide one's feelings	-2	-1	0	+1	+2
21.	Treat the patient like a naughty child	-2	-1	0	+1	+2
22.	Let the patient blow off steam	-2	-1	0	+1	+2
23.	Call another nurse for help	-2	-1	0	+1	+2
24.	Make a joke at the patient's expense	-2	-1	0	+1	+2
25.	Act as though nothing unusual is happening	-2	-1	0	+1	+2
26.	Give the patient one's full attention	-2	-1	0	+1	+2
27.	Look authoritative and stern	-2	-1	0	+1	+2
28.	Gently ask the patient to explain why he/she is angry	-2	-1	0	+1	+2
29.	Let the patient know that you are on his/her side	-2	-1	0	+1	+2
30.	Make it clear you will not stand for any nonsense	-2	-1	0	+1	+2
31.	Remain calm and collected	-2	-1	0	+1	+2

NOW can you answer some questions about the methods that you believe to be the **most effective** and **most ineffective** when dealing with verbal assault/abuse whilst at work.

i) Please pick three methods from the 31 shown on the previous two pages that you would personally use, and which you believe would be **most effective**, when dealing with verbal assault/abuse. Place the appropriate statement numbers (1-31) on the lines below.

The 3 **most effective** methods are:

1. ___ 2 ___ 3. ___

ii) Please pick the three methods from the 31 shown above that you would **never** use because they would only make matters worse in the case of verbal assault/abuse. Place the appropriate statement numbers (1-31) on the lines below.

The 3 **most ineffective** methods are:

1. ___ 2. ___ 3. ___

iii) Are there any methods that you consider to be **effective** and which you would use in the case of verbal assault/abuse which are <u>not mentioned</u> in methods 1 to 31? Please list them below.

1. _____

2. _____

3. _____

iv) In general, how effective do you believe <u>you are</u> when dealing with verbal assault/abuse at work? (Please circle appropriate number)

not at all effective	1	2	3	4	5	extremely effective

9. a) Have you received any form of training to cope with aggression from the public? If so, what form did this training take?

Yes / No (Please circle the appropriate statement)

Training details (please state what course you did and when): _____

_____

_____

b) If you have received any training did you find it useful? (Please circle the appropriate number below)

Not at all useful	1	2	3	4	5	Extremely useful

10. Would you like any further training in this area, and if so, what kind of training would be helpful?

Yes / No (Please circle "yes" or "no")

Training suggestions: _____

_____

_____

11. Are there any aspects of your personality and/or abilities which you think are particularly <u>helpful</u> to you at work when dealing with aggression from patients or other members of the public?

- Please turn the page

12. Are there any aspects of your personality and/or abilities which you think make it <u>difficult</u> for you to deal with aggression from patients or other members of the public whilst at work?

13. Would you be willing to participate in an interview at some later stage in this research project?

Yes / No

NURSES' QUESTIONNAIRE (Part 2)

YOUR OWN EXPERIENCES OF AGGRESSION FROM PATIENTS OR OTHER MEMBERS OF THE PUBLIC

In this questionnaire we would like you to give us details of any aggressive incidents which you have experienced whilst nursing. To simplify things we have used the same two categories of aggression used in Part 1 of this questionnaire: Physical Assault/Abuse and Verbal Assault/Abuse.

Categories of Incident

Section A	Physical Assault/Abuse	Aggression involving physical contact. Ranging from pushing or slapping to physical assault resulting in physical injury.
Section B	Verbal Assault/Abuse	Aggression not involving physical contact. Ranging from mildly unpleasant language to seriously threatening behaviour.

Please look at both Sections A and B, even if you have never experienced the aggressive incidents described (in which case you simply answer "NO" to the first question in both sections).

SECTION A

PHYSICAL ASSAULT/ABUSE - Aggression involving physical contact. Ranging from pushing or slapping through to physical assault resulting in physical injury.

1. While working as a nurse, has a patient or other member of the public ever been physically aggressive towards you at work? (Please circle "YES" or "NO")

   If you answer NO, turn to section B on page 19 — NO

   If you answer YES, please continue on this section. — YES

2. Whilst you have been employed as a nurse, how many times have you been physically assaulted/abused? ____

3. In your present job, how many times have you been physically assaulted/abused? ____

4. When was the last time you were physically assaulted/abused at work? (If you can't remember exactly please give an approximate date)

   Year _____

   Month _____

5. How many times have you been physically assaulted/abused at work in the last 12 months (or since starting your present job if this occurred more recently)? ____

We would now like you to give us some more information about the most recent incident of this sort.

6. Who was the person who was physically aggressive to you? (if necessary, please circle more than one number)

Patient	1
Patient's relative/friend	2
Intruder(s)	3
Other (please specify)	
_____	4

7. Where did the incident occur? Please be as specific as possible and give the ward, if it occurred on a ward.

8. Please briefly describe what happened (describe what caused the incident, what you were doing just before the incident, state of the person(s) involved, who he/she/they were, what led up to it, what happened, how you reacted, and the physical/psychological effects on you).

9. What did you do about this behaviour? (please circle "Yes" or "No" for each item)

a)	Nothing	Yes	No
	Reported it to someone at work	Yes	No
	Retaliated	Yes	No
	Discussed it with colleagues	Yes	No
	Considered leaving my job	Yes	No
	Asserted my authority	Yes	No
	Backed down	Yes	No
	Other (please specify)		
	_____	Yes	No

b) If you reported the incident, <u>who</u> did you report it to and <u>what happened</u> as a result of reporting it?

10. What do you think caused this incident? (Please circle the appropriate number)

Factors totally outside my control	1	2	3	4	5	Factors totally within my control

What were these factors? Please describe them below.

1. _____

2. _____

3. _____

11. Was there any warning that the incident would develop in the way that it did? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what were the warning signs? Please comment below.

1. _____

2. _____

3. _____

12. Was the incident caused by a reaction to something? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what was it a reaction to? Please comment below.

1. _____

2. _____

3. _____

13. Looking back on the incident do you think there were any particular factors which increased the likelihood of it ending in physical assault/abuse? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what factors contributed to it resulting in physical assault/abuse? Please comment below.

1. _____

2. _____

3. _____

14. i) **Please use the scales below to indicate how you felt about the incident, both at the time and immediately afterwards.**

		Not at all				Very much indeed
a)	Depressed, miserable	1	2	3	4	5
b)	Tense, anxious	1	2	3	4	5
c)	Frightened to carry out certain duties	1	2	3	4	5
d)	Confused, uncertain	1	2	3	4	5
e)	Demoralised	1	2	3	4	5
f)	Confident that you had handled the situation well	1	2	3	4	5
g)	Guilty or ashamed	1	2	3	4	5
h)	Stressed	1	2	3	4	5
i)	other emotion (please specify below)					
	_____	1	2	3	4	5

ii) Would you like to comment on any lasting effects this incident had on you?

15. How important was the incident to you at the time?

Not at all important	1	2	3	4	5	Very important

16. How much control did you see yourself as having over the outcome of the incident?

No control at all	1	2	3	4	5	Complete control

17. How much had you expected or anticipated that a situation of this kind would arise?

Not at all anticipated	1	2	3	4	5	Very clearly anticipated

18. To what extent to you think the incident might have been avoidable?

Not at all avoidable	1	2	3	4	5	Very avoidable

19. How sure were you about what to do when faced with this incident?

Very unsure	1	2	3	4	5	Very sure

20. Overall, how well do you feel that you coped with this incident?

Not at all well	1	2	3	4	5	Very well indeed

21. Below are 31 methods for dealing with physical assault/abuse. Tell us whether you actually used each of the 31 methods during the incident you have described, by circling either "u" for "used" or "nu" for "not used". If you circle "not used", move on to assess the next method. If, on the other hand, you circle "used", please indicate how effective or ineffective you found the method by circling the appropriate number; taking a score of "-2" as "totally ineffective"; a score of "0" as "Neither Effective nor Ineffective"; and a score of "+2" as "Totally Effective". You may of course use intermediate scores as appropriate. Note: only give an effectiveness rating to the methods that you actually used.

PLEASE DO NOT REFER BACK TO YOUR EARLIER RATINGS.
PLEASE BE AS HONEST AS POSSIBLE.

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
1.	Raised my voice.	u/nu	-2	-1	0	+1	+2
2.	Threatened the patient with higher authority.	u/nu	-2	-1	0	+1	+2
3.	Showed the patient that he/she was making me angry	u/nu	-2	-1	0	+1	+2
4.	Listened carefully to what the patient was saying.	u/nu	-2	-1	0	+1	+2
5.	Became angry.	u/nu	-2	-1	0	+1	+2
6.	Talked softly to the patient.	u/nu	-2	-1	0	+1	+2
7.	Scolded the patient for his/her behaviour.	u/nu	-2	-1	0	+1	+2

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
8.	Looked busy.	u/nu	-2	-1	0	+1	+2
9.	Matched the patient's tone and manner.	u/nu	-2	-1	0	+1	+2
10.	Remained calm but firm.	u/nu	-2	-1	0	+1	+2
11.	Turned the incident into a joke.	u/nu	-2	-1	0	+1	+2
12.	Walked away from the situation.	u/nu	-2	-1	0	+1	+2
13.	Tried to include whoever else was around in the incident.	u/nu	-2	-1	0	+1	+2
14.	Jollied the patient along.	u/nu	-2	-1	0	+1	+2
15.	Showed sympathy to the patient.	u/nu	-2	-1	0	+1	+2
16.	Became indignant.	u/nu	-2	-1	0	+1	+2
17.	Looked friendly and caught his/her eye.	u/nu	-2	-1	0	+1	+2
18.	Became matter-of-fact.	u/nu	-2	-1	0	+1	+2
19.	Let the patient know that his/her behaviour would get him/her nowhere.	u/nu	-2	-1	0	+1	+2
20.	Hid my feelings.	u/nu	-2	-1	0	+1	+2
21.	Treated the patient like a naughty child.	u/nu	-2	-1	0	+1	+2
22.	Let the patient blow off steam.	u/nu	-2	-1	0	+1	+2
23.	Called another nurse for help.	u/nu	-2	-1	0	+1	+2
24.	Made a joke at the patient's expense.	u/nu	-2	-1	0	+1	+2

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
25.	Acted as though nothing unusual was happening.	u/nu	-2	-1	0	+1	+2
26.	Gave the patient my full attention.	u/nu	-2	-1	0	+1	+2
27.	Looked authoritative and stern.	u/nu	-2	-1	0	+1	+2
28.	Gently asked the patient to explain why he/she was angry.	u/nu	-2	-1	0	+1	+2
29.	Let the patient know that I was on his/her side.	u/nu	-2	-1	0	+1	+2
30.	Made it clear I wouldn't stand for any nonsense.	u/nu	-2	-1	0	+1	+2
31.	Remained calm and collected.	u/nu	-2	-1	0	+1	+2

22. Did you use any methods in the incident you describe above which are **not included** in methods 1 to 31? If so, can you comment on what you did below, and rate each one for effectiveness/ inefectiveness on the scales. Please include methods that were **INEFFECTIVE**, as well as **EFFECTIVE**, as long as you used them during the incident.

		Totally ineffective		Neither effective nor ineffective		Totally effective
1.	_____	-2	-1	0	+1	+2
2.	_____	-2	-1	0	+1	+2
3.	_____	-2	-1	0	+1	+2
4.	_____	-2	-1	0	+1	+2
5.	_____	-2	-1	0	+1	+2
6.	_____	-2	-1	0	+1	+2

SECTION B

VERBAL ASSAULT/ABUSE - Aggression <u>not</u> involving physical contact. Ranging from mildly unpleasant language to seriously threatening behaviour.

1. While working as a nurse, has a patient or other member of the public ever been verbally aggressive towards you at work? (Please circle "YES" or "NO")

   If you answer NO, you have completed the questionnaire.
   Many thanks for your help. NO

   If you answer YES, please continue on this section. YES

2. Whilst you have been employed as a nurse, how many times have you been verbally assaulted/abused? ____

3. In your **present job**, how many times have you been verbally assaulted/abused at work? ____

4. When was the last time you were verbally assaulted/abused at work? (if you can't remember exactly, please give an approximate date).

   Year ____

   Month ____

5. How many times have you been verbally assaulted/abused at work in the last 12 months (or since starting your present job if this occurred more recently?). ____

We would now like you to give use some more information about the <u>most recent</u> incident of this sort.

6. Who was the person who was verbally aggressive to you? (if necessary please circle more than one number).

Patient	1
Patient's relative/friend	2
Intruder(s)	3
Other (please specify)	
_____	4

7. Where did the incident occur? Please be as specific as possible and give the ward. if it occurred on a ward.

8. Please briefly describe what happened (describe what caused the incident, what you were doing just before the incident, state of the person(s) involved, who he/she/they were, what led up to it, what happened, how you reacted, and the physical/psychological effects on you).

9. What did you do about this behaviour? (please circle "Yes" or "No" for each item)

a)	Nothing	Yes	No
	Reported it to someone at work	Yes	No
	Retaliated	Yes	No
	Discussed it with colleagues	Yes	No
	Considered leaving my job	Yes	No
	Asserted my authority	Yes	No
	Backed down	Yes	No
	Other (please specify)		
	_____	Yes	No

b) If you reported the incident, who did you report it to and what happened as a result of reporting it?

10. What do you think caused this incident? (Please circle the appropriate number)

Factors totally outside my control	1	2	3	4	5	Factors totally within my control

What were these factors? Please describe them below.

1 _____

2 _____

3 _____

11. Was there any warning that the incident would develop in the way that it did? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what were the warning signs? Please comment below.

1. _____

2. _____

3. _____

12. Was the incident caused by a reaction to something? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what was it a reaction to? Please comment below.

1. _____

2. _____

3. _____

13. Looking back on the incident do you think there were any particular factors which increased the likelihood of it ending in verbal assault/abuse? (Please circle "Yes" or "No")

Yes / No

If you circled "Yes", what factors contributed to it resulting in verbal assault/abuse? Please comment below.

1. _____

2. _____

3. _____

14. i) Please use the scales below to indicate how you felt about the incident, both at the time and immediately afterwards.

		Not at all				Very much indeed
a)	Depressed, miserable	1	2	3	4	5
b)	Tense, anxious	1	2	3	4	5
c)	Frightened to carry out certain duties	1	2	3	4	5
d)	Confused, uncertain	1	2	3	4	5
e)	Demoralised	1	2	3	4	5
f)	Confident that you had handled the situation well	1	2	3	4	5
g)	Guilty or ashamed	1	2	3	4	5
h)	Stressed	1	2	3	4	5
i)	Other emotion (please specify below)					
	_____	1	2	3	4	5

ii) Would you like to comment on any lasting effects this incident had on you?

15. How important was the incident to you at the time?

Not at all important	1	2	3	4	5	Very important

16. How much control did you see yourself as having over the outcome of the incident?

No control at all	1	2	3	4	5	Complete control

17. How much had you expected or anticipated that a situation of this kind would arise?

Not at all anticipated	1	2	3	4	5	Very clearly anticipated

18. To what extent to you think the incident might have been avoidable?

Not at all avoidable	1	2	3	4	5	Very avoidable

19. How sure were you about what to do when faced with this incident?

Very unsure	1	2	3	4	5	Very sure

20. Overall, how well do you feel that you coped with this incident?

Not at all well	1	2	3	4	5	Very well indeed

21. Below are the same 31 methods for dealing with verbal physical assault/abuse that you rated in Part 1 of the questionnaire. Tell us whether you actually used each of the 31 methods during the incident you have described, by circling either "u" for "used" or "nu" for "not used". If you circle "not used", move on to assess the next method. If, on the other hand, you circle "used", please indicate how effective or ineffective you found the method by circling the appropriate number; taking a score of "-2" as "totally ineffective"; a score of "0" as "Neither Effective nor Ineffective"; and a score of "+2" as "Totally Effective". You may of course use intermediate scores as appropriate. Note: only give an effectiveness rating to the methods that you actually used.

PLEASE DO NOT REFER BACK TO YOUR EARLIER RATINGS.
PLEASE BE AS HONEST AS POSSIBLE.

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
1.	Raised my voice.	u/nu	-2	-1	0	+1	+2
2.	Threatened the patient with higher authority.	u/nu	-2	-1	0	+1	+2
3.	Showed the patient that he/she was making me angry	u/nu	-2	-1	0	+1	+2
4.	Listened carefully to what the patient was saying.	u/nu	-2	-1	0	+1	+2
5.	Became angry.	u/nu	-2	-1	0	+1	+2
6.	Talked softly to the patient.	u/nu	-2	-1	0	+1	+2
7.	Scolded the patient for his/her behaviour.	u/nu	-2	-1	0	+1	+2

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
8.	Looked busy.	u/nu	-2	-1	0	+1	+2
9.	Matched the patient's tone and manner.	u/nu	-2	-1	0	+1	+2
10.	Remained calm but firm.	u/nu	-2	-1	0	+1	+2
11.	Turned the incident into a joke.	u/nu	-2	-1	0	+1	+2
12.	Walked away from the situation.	u/nu	-2	-1	0	+1	+2
13.	Tried to include who-ever else was around in the incident.	u/nu	-2	-1	0	+1	+2
14.	Jollied the patient along.	u/nu	-2	-1	0	+1	+2
15.	Showed sympathy to the patient.	u/nu	-2	-1	0	+1	+2
16.	Became indignant.	u/nu	-2	-1	0	+1	+2
17.	Looked friendly and caught his/her eye.	u/nu	-2	-1	0	+1	+2
18.	Became matter-of-fact.	u/nu	-2	-1	0	+1	+2
19.	Let the patient know that his/her behaviour would get him/her nowhere.	u/nu	-2	-1	0	+1	+2
20.	Hid my feelings.	u/nu	-2	-1	0	+1	+2
21.	Treated the patient like a naughty child.	u/nu	-2	-1	0	+1	+2
22.	Let the patient blow off steam.	u/nu	-2	-1	0	+1	+2
23.	Called another nurse for help.	u/nu	-2	-1	0	+1	+2
24.	Made a joke at the patient's expense.	u/nu	-2	-1	0	+1	+2

		used/ not used	Totally ineffective		Neither effective nor ineffective		Totally effective
25.	Acted as though nothing unusual was happening.	u/nu	-2	-1	0	+1	+2
26.	Gave the patient my full attention.	u/nu	-2	-1	0	+1	+2
27.	Looked authoritative and stern.	u/nu	-2	-1	0	+1	+2
28.	Gently asked the patient to explain why he/she was angry.	u/nu	-2	-1	0	+1	+2
29.	Let the patient know that I was on his/her side.	u/nu	-2	-1	0	+1	+2
30.	Made it clear I wouldn't stand for any nonsense.	u/nu	-2	-1	0	+1	+2
31.	Remained calm and collected.	u/nu	-2	-1	0	+1	+2

22. Did you use any methods in the incident you describe above which are **not included** in methods 1 to 31? If so, can you comment on what you did below, and rate each one for effectiveness/ inefectiveness on the scales? Please include methods that were **INEFFECTIVE**, as well as **EFFECTIVE**, as long as you used them during the incident.

		Totally ineffective		Neither effective nor ineffective		Totally effective
1.	_____	-2	-1	0	+1	+2
2.	_____	-2	-1	0	+1	+2
3.	_____	-2	-1	0	+1	+2
4.	_____	-2	-1	0	+1	+2
5.	_____	-2	-1	0	+1	+2
6.	_____	-2	-1	0	+1	+2

YOU HAVE NOW FINISHED THE QUESTIONNAIRE. MANY THANKS FOR ALL YOUR HELP.

NURSES' QUESTIONNAIRE SUPPLEMENT

YOUR OWN EXPERIENCES OF AGGRESSION FROM PATIENTS OR OTHER MEMBERS OF THE PUBLIC

We would like you to give us details of any aggressive incidents which you have experienced whilst nursing. To simplify things we have used two categories of aggression: Physical Assault and Verbal Assault.

Categories of Incident

Section A	Physical Assault	Aggression involving physical contact. Ranging from pushing or slapping to physical assault resulting in physical injury.
Section B	Verbal Assault	Aggression not involving physical contact. Ranging from mildly unpleasant language to seriously threatening behaviour.

Please look at both Sections A and B, even if you have never experienced the aggressive incidents described (in which case you simply answer "NO" to the first question in both sections).

SECTION A

PHYSICAL ASSAULT/ABUSE - Aggression involving physical contact. Ranging from pushing or slapping through to physical assault resulting in physical injury.

1. While working as a nurse, has a patient or other member of the public ever been physically aggressive towards you at work? (Please circle "YES" or "NO")

   If you answer NO, turn to section B on page 19 — NO

   If you answer YES, please continue on this section. — YES

2. Whilst you have been employed as a nurse, how many times have you been physically assaulted/abused? ____

3. In your present job, how many times have you been physically assaulted? ____

4. When was the last time you were physically assaulted at work? (If you can't remember exactly please give an approximate date)

   Year_____

   Month_____

5. How many times have you been physically assaulted at work in the last 12 months (or since starting your present job if this occurred more recently) ____

We would now like you to give us some more information about the most recent incident of this sort.

6. Who was the person who was physically aggressive to you? (if necessary, please circle more than one number)

Patient	1
Patient's relative/friend	2
Intruder(s)	3
Other (please specify)	
_____	4

7. Where did the incident occur? Please be as specific as possible and give the ward, if it occurred on a ward.

8. i) **Please use the scales below to indicate how you felt about the incident, both at the time and immediately afterwards.**

		Not at all				Very much indeed
a)	Depressed, miserable	1	2	3	4	5
b)	Tense, anxious	1	2	3	4	5
c)	Frightened to carry out certain duties	1	2	3	4	5
d)	Confused, uncertain	1	2	3	4	5
e)	Demoralised	1	2	3	4	5
f)	Confident that you had handled the situation well	1	2	3	4	5
g)	Guilty or ashamed	1	2	3	4	5
h)	Stressed	1	2	3	4	5
i)	Other emotion (please specify below)					
	_____	1	2	3	4	5

9. How important was the incident to you at the time?

Not at all important	1	2	3	4	5	Very important

10. How much control did you see yourself as having over the outcome of the incident?

No control at all	1	2	3	4	5	Complete control

11. How much had you expected or anticipated that a situation of this kind would arise?

Not at all anticipated	1	2	3	4	5	Very clearly anticipated

12. To what extent to you think the incident might have been avoidable?

Not at all avoidable	1	2	3	4	5	Very avoidable

13. How sure were you about what to do when faced with this incident?

Very unsure	1	2	3	4	5	Very sure

14. Overall, how well do you feel that you coped with this incident?

Not at all well	1	2	3	4	5	Very well indeed

15. Below are 31 methods for dealing with physical assault/abuse. Tell us whether you <u>actually used</u> each of the 31 methods during the incident you have described, by circling either "u" for "used" or "nu" for "not used". If you circle "not used", move on to assess the next method. If, on the other hand, you circle "used", please indicate how effective or ineffective you found the method by circling the appropriate number; taking a score of "-2" as "totally ineffective"; a score of "0" as "Neither Effective nor Ineffective"; and a score of "+2" as "Totally Effective". You may of course use intermediate scores as appropriate. <u>Note</u>: only give an effectiveness rating to the methods that you <u>actually used</u>.

		used not used	Totally ineffective		Neither effective nor ineffective		Totally effective
1.	Raised my voice.	u/nu	-2	-1	0	+1	+2
2.	Threatened the patient with higher authority.	u/nu	-2	-1	0	+1	+2
3.	Showed the patient that he/she was making me angry	u/nu	-2	-1	0	+1	+2
4.	Listened carefully to what the patient was saying.	u/nu	-2	-1	0	+1	+2
5.	Became angry.	u/nu	-2	-1	0	+1	+2
6.	Talked softly to the patient.	u/nu	-2	-1	0	+1	+2
7.	Scolded the patient for his/her behaviour.	u/nu	-2	-1	0	+1	+2
8.	Looked busy.	u/nu	-2	-1	0	+1	+2
9.	Matched the patient's tone and manner.	u/nu	-2	-1	0	+1	+2
10.	Remained calm but firm.	u/nu	-2	-1	0	+1	+2
11.	Turned the incident into a joke.	u/nu	-2	-1	0	+1	+2
12.	Walked away from the situation.	u/nu	-2	-1	0	+1	+2
13.	Tried to include whoever else was around in the incident.	u/nu	-2	-1	0	+1	+2
14.	Jollied the patient along.	u/nu	-2	-1	0	+1	+2
15.	Showed sympathy to the patient.	u/nu	-2	-1	0	+1	+2
16.	Became indignant.	u/nu	-2	-1	0	+1	+2
17.	Looked friendly and caught his/her eye.	u/nu	-2	-1	0	+1	+2

		used not used	Totally ineffective		Neither effective nor ineffective		Totally effective
18.	Became matter-of-fact.	u/nu	-2	-1	0	+1	+2
19.	Let the patient know that his/her behaviour would get him/her nowhere.	u/nu	-2	-1	0	+1	+2
20.	Hid my feelings.	u/nu	-2	-1	0	+1	+2
21.	Treated the patient like a naughty child.	u/nu	-2	-1	0	+1	+2
22.	Let the patient blow off steam.	u/nu	-2	-1	0	+1	+2
23.	Called another nurse for help.	u/nu	-2	-1	0	+1	+2
24.	Made a joke at the patient's expense.	u/nu	-2	-1	0	+1	+2
25.	Acted as though nothing unusual was happening.	u/nu	-2	-1	0	+1	+2
26.	Gave the patient my full attention.	u/nu	-2	-1	0	+1	+2
27.	Looked authoritative and stern.	u/nu	-2	-1	0	+1	+2
28.	Gently asked the patient to explain why he/she was angry.	u/nu	-2	-1	0	+1	+2
29.	Let the patient know that I was on his/her side.	u/nu	-2	-1	0	+1	+2
30.	Made it clear I wouldn't stand for any nonsense.	u/nu	-2	-1	0	+1	+2
31.	Remained calm and collected.	u/nu	-2	-1	0	+1	+2

SECTION B

VERBAL ASSAULT/ABUSE - Aggression <u>not</u> involving physical contact. Ranging from mildly unpleasant language to seriously threatening behaviour.

1. While working as a nurse, has a patient or other member of the public ever been verbally aggressive towards you at work? (Please circle "YES" or "NO")

   If you answer NO, you have completed the questionnaire.
   Many thanks for your help. NO

   If you answer YES, please continue on this section YES

2. Whilst you have been employed as a nurse, how many times have you been verbally assaulted/abused? ____

3. In your **present job**, how many times have you been verbally assaulted at work? ____

4. When was the last time you were verbally assaulted at work? (if you can't remember exactly, please give an approximate date).

   Year _____

   Month _____

5. How many times have you been verbally assaulted at work in the last 12 months (or since starting your present job if this occurred more recently?). ____

We would now like you to give use some more information about the <u>most recent</u> incident of this sort.

6. Who was the person who was verbally aggressive to you? (if necessary please circle more than one number).

Patient	1
Patient's relative/friend	2
Intruder(s)	3
Other (please specify)	
_____	4

7. <u>Where</u> did the incident occur? Please be as specific as possible and give the ward, if it occurred on a ward.

8. i) Please use the scales below to indicate how you felt about the incident, both at the time and immediately afterwards.

		Not at all				Very much indeed
a)	Depressed, miserable	1	2	3	4	5
b)	Tense, anxious	1	2	3	4	5
c)	Frightened to carry out certain duties	1	2	3	4	5
d)	Confused, uncertain	1	2	3	4	5
e)	Demoralised	1	2	3	4	5
f)	Confident that you had handled the situation well	1	2	3	4	5
g)	Guilty or ashamed	1	2	3	4	5
h)	Stressed	1	2	3	4	5
i)	Other emotion (please specify below)					
	_____	1	2	3	4	5

9. How important was the incident to you at the time?

Not at all important	1	2	3	4	5	Very important

10. How much control did you see yourself as having over the outcome of the incident?

No control at all	1	2	3	4	5	Complete control

11. How much had you expected or anticipated that a situation of this kind would arise?

Not at all anticipated	1	2	3	4	5	Very clearly anticipated

12. To what extent to you think the incident might have been avoidable?

Not at all avoidable	1	2	3	4	5	Very avoidable

13. How sure were you about what to do when faced with this incident?

Very unsure	1	2	3	4	5	Very sure

14. Overall, how well do you feel that you coped with this incident?

Not at all well	1	2	3	4	5	Very well indeed

15. Below are 31 methods for dealing with physical assault/abuse. Tell us whether you actually used each of the 31 methods during the incident you have described, by circling either "u" for "used" or "nu" for "not used". If you circle "not used", move on to assess the next method. If, on the other hand, you circle "used", please indicate how effective or ineffective you found the method by circling the appropriate number; taking a score of "-2" as "totally ineffective"; a score of "0" as "Neither Effective nor Ineffective"; and a score of "+2" as "Totally Effective". You may of course use intermediate scores as appropriate. Note: only give an effectiveness rating to the methods that you actually used.

		used not used	Totally ineffective		Neither effective nor ineffective		Totally effective
1.	Raised my voice.	u/nu	-2	-1	0	+1	+2
2.	Threatened the patient with higher authority.	u/nu	-2	-1	0	+1	+2
3.	Showed the patient that he/she was making me angry	u/nu	-2	-1	0	+1	+2
4.	Listened carefully to what the patient was saying.	u/nu	-2	-1	0	+1	+2
5.	Became angry.	u/nu	-2	-1	0	+1	+2
6.	Talked softly to the patient.	u/nu	-2	-1	0	+1	+2
7.	Scolded the patient for his/her behaviour.	u/nu	-2	-1	0	+1	+2
8.	Looked busy.	u/nu	-2	-1	0	+1	+2
9.	Matched the patient's tone and manner.	u/nu	-2	-1	0	+1	+2
10.	Remained calm but firm.	u/nu	-2	-1	0	+1	+2
11.	Turned the incident into a joke.	u/nu	-2	-1	0	+1	+2
12.	Walked away from the situation.	u/nu	-2	-1	0	+1	+2
13.	Tried to include whoever else was around in the incident.	u/nu	-2	-1	0	+1	+2
14.	Jollied the patient along.	u/nu	-2	-1	0	+1	+2
15.	Showed sympathy to the patient.	u/nu	-2	-1	0	+1	+2
16.	Became indignant.	u/nu	-2	-1	0	+1	+2
17.	Looked friendly and caught his/her eye.	u/nu	-2	-1	0	+1	+2

		used not used	Totally ineffective		Neither effective nor ineffective		Totally effective
18.	Became matter-of-fact.	u/nu	-2	-1	0	+1	+2
19.	Let the patient know that his/her behaviour would get him/her nowhere.	u/nu	-2	-1	0	+1	+2
20.	Hid my feelings.	u/nu	-2	-1	0	+1	+2
21.	Treated the patient like a naughty child.	u/nu	-2	-1	0	+1	+2
22.	Let the patient blow off steam.	u/nu	-2	-1	0	+1	+2
23.	Called another nurse for help.	u/nu	-2	-1	0	+1	+2
24.	Made a joke at the patient's expense.	u/nu	-2	-1	0	+1	+2
25.	Acted as though nothing unusual was happening.	u/nu	-2	-1	0	+1	+2
26.	Gave the patient my full attention.	u/nu	-2	-1	0	+1	+2
27.	Looked authoritative and stern.	u/nu	-2	-1	0	+1	+2
28.	Gently asked the patient to explain why he/she was angry.	u/nu	-2	-1	0	+1	+2
29.	Let the patient know that I was on his/her side.	u/nu	-2	-1	0	+1	+2
30.	Made it clear I wouldn't stand for any nonsense.	u/nu	-2	-1	0	+1	+2
31.	Remained calm and collected.	u/nu	-2	-1	0	+1	+2

YOU HAVE NOW FINISHED THE QUESTIONNAIRE. MANY THANKS FOR ALL YOUR HELP.

AYLESBURY NURSES QUESTIONNAIRE 1

This questionnaire asks you some questions about what you would do when faced with various types of verbal aggression and how you would feel as a result.

The reason we devised the questionnaire is so that we can build up a picture of what nurses feel after experiencing aggression and how they respond to an aggressor. We are relying on you to provide us with this information. For this reason, there are no 'right' or 'wrong' answers. Just try to be as accurate as possible about your feelings and responses.

PART 1

The information you give us will be *completely* confidential. Please write clearly.

1. Name _____

2. Age _____

3. Sex (circle "M" for male, "F" for female) M / F

4. Do you work full-time? (circle "Yes" or "No") Yes / No

5. i) What is your present job and grading? (Please give a specific job title including grade)

_____

ii) Which ward do you work on?

_____

iii) How long have you worked on this ward?

_____

iv) In total, how many years have you worked as a nurse? (Please include any training in this calculation)

_____

6. In general, how effective do you believe *you are* when it comes to dealing with aggressive patients or other members of the public? (Please circle the appropriate number)

not at all effective	1	2	3	4	5	extremely effective

7. a) On average, how stressful do *you personally* find it when dealing with aggressive patients or other members of the public? (Please circle the appropriate number)

not at all stressful	1	2	3	4	5	extremely stressful

b) Overall, how stressful do you find nursing?

not at all stressful	1	2	3	4	5	extremely stressful

8. a) Have you received any form of training to cope with aggression from the public? (Please circle "Yes" or "No")

Yes / No

b) If you have received any training, did you find it useful? (Please circle the appropriate number)

not at all useful	1	2	3	4	5	extremely useful

PART 2

This part of the questionnaire asks you various questions about verbal aggression. By verbal aggression we mean any aggression *not* involving physical contact, ranging from mildly unpleasant language to seriously threatening behaviour.

We know that every incident of verbal aggression is different, and that what one person thinks of as aggressive does not appear aggressive to someone else. In spite of this, we would like you to try and make general statements in response to the questions below. If you have never personally experienced verbal aggression at work, try to generalise from what you know of yourself and imagine how you would feel if someone were rude or abusive to you. Remember, think of aggression as anything which you consider aggressive, and think of the aggressor as anybody you might come into contact with during the course of your work, except other members of staff.

1. While you have been employed as a nurse, how many times have you been verbally abused? _____

2. How many times have you been verbally abused in the last week?

3. How many times have you been verbally abused at work in the last 12 months (or since starting your present job, if this occurred more recently)? _____

4. In general, when someone is verbally aggressive to you how does it make you feel. Please circle the appropriate number on each of the scales below.

	Not at all						Extremely
Depressed, miserable	1	2	3	4	5	6	7
Tense, anxious	1	2	3	4	5	6	7
Frightened	1	2	3	4	5	6	7
Confused, uncertain	1	2	3	4	5	6	7
Demoralised	1	2	3	4	5	6	7
Guilty or ashamed	1	2	3	4	5	6	7
Stressed	1	2	3	4	5	6	7
Angry	1	2	3	4	5	6	7
Upset	1	2	3	4	5	6	7
Pleased with how you handled it	1	2	3	4	5	6	7

5. Below is a list of thirteen factors that can cause a patient, relative or other member of the public, to become aggressive. Look at each one individually and try to assess how often you think that particular factor gives rise to outbursts of verbal aggression. Then circle the appropriate number on each scale, taking "1" to mean that that factor never gives rise to verbal aggression, "4" to mean that that factor gives rise to verbal aggression in approximately 50% of cases, and "7" to indicate that that factor gives rise to incidents of verbal aggression in approximately 100% of cases.

If you have never actually experienced verbal aggression yourself, please answer the questions below to reflect what you <u>think</u> might be the case.

	Never a cause						Always a cause
A side-effect of medication	1	2	3	4	5	6	7
The person feels neglected	1	2	3	4	5	6	7
Medical/clinical causes (eg. hypoxia, detoxification, psychiatric illness, dementia, head injury, etc)	1	2	3	4	5	6	7
Staff and bed shortages	1	2	3	4	5	6	7
Fear or anxiety	1	2	3	4	5	6	7
A member of staff being off-hand (this can include yourself)	1	2	3	4	5	6	7
In response to physical nursing care	1	2	3	4	5	6	7
Grief	1	2	3	4	5	6	7
Dissatisfaction with care given	1	2	3	4	5	6	7
Pain	1	2	3	4	5	6	7
Being asked not to do something (eg. not to smoke)	1	2	3	4	5	6	7
Drunkeness or being high on non-prescribed drugs	1	2	3	4	5	6	7
Because they are a difficult person	1	2	3	4	5	6	7

PART 3

Over the next few pages you will find five scenarios involving aggression. Each scenario is drawn from the real life experiences of a nurse who told us about the incident in her own words. We want you to read through each scenario and try to imagine it happening to you. After each of the scenarios are a set of questions which are designed, a) to find out what <u>you</u> think might have caused the aggressive outburst, and b) to find out how you would react in that situation. Please remember to give answers that reflect what you might do in reality if faced with a similar incident. Once again, there are no 'right' or 'wrong' answers.

SCENARIO 1

A patient lights up a cigarette on the ward, even though he has been asked not to do so on previous occasions. You ask him either to stop smoking or to go to the smoking room. He becomes abusive.

1. a) What do you think was the cause of the patient's anger? Please circle the appropriate number on each of the scales below.

	Not at all						Entirely
Something to do with the patient.	1	2	3	4	5	6	7
Something that you had said or done.	1	2	3	4	5	6	7
Something to do with circumstances outside the control of either yourself or the patient.	1	2	3	4	5	6	7

b) How likely do you think it is that this patient would get angry in other situations?

Not at all likely	1	2	3	4	5	6	7 Highly likely

c) How likely do you think it is that this patient would get angry in the same circumstances in future?

Not at all likely	1	2	3	4	5	6	7 Highly likely

d) How easy do you think it would have been for the patient to have controlled his anger?

Not at all easy	1	2	3	4	5	6	7 Extremely easy

2. Now can you tell us how you think you would respond to the patient's abuse? Please circle the appropriate number on each scale. (Please rate <u>all</u> the response approaches given below)

	Not at all						Very Much so
Would you remain softly spoken and gentle, giving your full attention to the patient and trying to find out why he is so angry?	1	2	3	4	5	6	7
Would you remain passive and just let him blow-off steam?	1	2	3	4	5	6	7

Would you be abusive back?	1	2	3	4	5	6	7
Would you try to make him feel foolish, by scolding him or by joking at his expense?	1	2	3	4	5	6	7
Would you raise your voice and become indignant?	1	2	3	4	5	6	7
Would you try to ignore the abuse?	1	2	3	4	5	6	7
Would you stay calm and assertive, showing in your manner that you won't take any nonsense?	1	2	3	4	5	6	7
Would you become matter-of-fact and try to include others in the incident?	1	2	3	4	5	6	7
Would you try to introduce humour into the situation?	1	2	3	4	5	6	7
Would you go and get help?	1	2	3	4	5	6	7

SCENARIO 2

A patient calls out to you that she needs some eyedrops while you are attending to another patient who is very sick. You come back twenty minutes later with the eyedrops and the patient refuses them. She is very cross and demands to see the doctor.

1. a) What do you think was the cause of the patient's anger? Please circle the appropriate number on each of the scales below.

	Not at all						Entirely
Something to do with the patient.	1	2	3	4	5	6	7
Something that you had said or done.	1	2	3	4	5	6	7
Something to do with circumstances outside the control of either yourself or the patient.	1	2	3	4	5	6	7

b) How likely do you think it is that this patient would get angry in other situations?

Not at all likely	1	2	3	4	5	6	7 Highly likely

c) How likely do you think it is that this patient would get angry in the same circumstances in future?

Not at all likely	1	2	3	4	5	6	7 Highly likely

d) How easy do you think it would have been for the patient to have controlled her anger?

Not at all easy	1	2	3	4	5	6	7 Extremely easy

2. Now can you tell us how you think you would respond to the patient's abuse? Please circle the appropriate number on each scale. (Please rate <u>all</u> the response approaches given below)

	Not at all						Very Much so
Would you remain softly spoken and gentle, giving your full attention to the patient and trying to find out why she is so angry?	1	2	3	4	5	6	7
Would you remain passive and just let her blow-off steam?	1	2	3	4	5	6	7
Would you be abusive back?	1	2	3	4	5	6	7
Would you try to make her feel foolish, by scolding her or by joking at her expense?	1	2	3	4	5	6	7
Would you raise your voice and become indignant?	1	2	3	4	5	6	7
Would you try to ignore the abuse?	1	2	3	4	5	6	7
Would you stay calm and assertive, showing in your manner that you won't take any nonsense?	1	2	3	4	5	6	7
Would you become matter-of-fact and try to include others in the incident?	1	2	3	4	5	6	7
Would you try to introduce humour into the situation?	1	2	3	4	5	6	7
Would you go and get help?	1	2	3	4	5	6	7

SCENARIO 3

A patient awaiting abdominal surgery is very anxious but you have been busy doing your duties. Now you have a moment you go to talk to him but you find him in a rather grumpy mood. As you ask him questions he becomes ruder and ruder, until he tells you to "get lost".

1. a) What do you think was the cause of the patient's anger? Please circle the appropriate number on each of the scales below.

	Not at all						Entirely
Something to do with the patient.	1	2	3	4	5	6	7
Something that you had said or done.	1	2	3	4	5	6	7
Something to do with circumstances outside the control of either yourself or the patient.	1	2	3	4	5	6	7

b) How likely do you think it is that this patient would get angry in other situations?

Not at all likely	1	2	3	4	5	6	7	Highly likely

c) How likely do you think it is that this patient would get angry in the same circumstances in future?

Not at all likely	1	2	3	4	5	6	7	Highly likely

d) How easy do you think it would have been for the patient to have controlled his anger?

Not at all easy	1	2	3	4	5	6	7	Extremely easy

2. Now can you tell us how you think you would respond to the patient's abuse? Please circle the appropriate number on each scale. (Please rate <u>all</u> the response approaches given below)

	Not at all						Very Much so
Would you remain softly spoken and gentle, giving your full attention to the patient and trying to find out why he is so angry?	1	2	3	4	5	6	7
Would you remain passive and just let him blow-off steam?	1	2	3	4	5	6	7
Would you be abusive back?	1	2	3	4	5	6	7
Would you try to make him feel foolish, by scolding him or by joking at his expense?	1	2	3	4	5	6	7
Would you raise your voice and become indignant?	1	2	3	4	5	6	7
Would you try to ignore the abuse?	1	2	3	4	5	6	7
Would you stay calm and assertive, showing in your manner that you won't take any nonsense?	1	2	3	4	5	6	7
Would you become matter-of-fact and try to include others in the incident?	1	2	3	4	5	6	7
Would you try to introduce humour into the situation?	1	2	3	4	5	6	7
Would you go and get help?	1	2	3	4	5	6	7

SCENARIO 4

You are performing a stomach wash-out on a young female patient. Her mother is with her and refuses to leave the room during the SWO. The patient is not co-operating and you raise your voice in an attempt to control her. The mother gets angry at this and starts screaming at you, threatening to slap your face.

1. a) What do you think was the cause of the mothers anger? Please circle the appropriate number on each of the scales below.

	Not at all						Entirely
Something to do with the mother.	1	2	3	4	5	6	7
Something that you had said or done.	1	2	3	4	5	6	7
Something to do with circumstances outside the control of either yourself or the patient.	1	2	3	4	5	6	7

b) How likely do you think it is that the mother would get angry in other situations?

Not at all likely	1	2	3	4	5	6	7	Highly likely

c) How likely do you think it is that the mother would get angry in the same circumstances in future?

Not at all likely	1	2	3	4	5	6	7	Highly likely

d) How easy do you think it would have been for the mother to have controlled her anger?

Not at all easy	1	2	3	4	5	6	7	Extremely easy

2. Now can you tell us how you think you would respond to the mothers abuse? Please circle the appropriate number on each scale. (Please rate <u>all</u> the response approaches given below)

	Not at all						Very Much so
Would you remain softly spoken and gentle, giving your full attention to her and trying to find out why she is so angry?	1	2	3	4	5	6	7
Would you remain passive and just let her blow-off steam?	1	2	3	4	5	6	7
Would you be abusive back?	1	2	3	4	5	6	7
Would you try to make her feel foolish, by scolding her or by joking at her expense?	1	2	3	4	5	6	7
Would you raise your voice and become indignant?	1	2	3	4	5	6	7
Would you try to ignore the abuse?	1	2	3	4	5	6	7
Would you stay calm and assertive, showing in your manner that you won't take any nonsense?	1	2	3	4	5	6	7
Would you become matter-of-fact and try to include others in the incident?	1	2	3	4	5	6	7
Would you try to introduce humour into the situation?	1	2	3	4	5	6	7
Would you go and get help?	1	2	3	4	5	6	7

SCENARIO 5

The brother of a patient who is seriously ill is upset. He approaches you and tells you angrily that he believes his brothers' operation was mis-handled and that nobody has bothered to tell the family how seriously ill he is. He becomes more and more agitated as you try to explain things to him, until eventually he walks off as you are talking.

1. a) What do you think was the cause of the brother's anger? Please circle the appropriate number on each of the scales below.

	Not at all						Entirely
Something to do with the brother.	1	2	3	4	5	6	7
Something that you had said or done.	1	2	3	4	5	6	7
Something to do with circumstances outside the control of either yourself or the brother.	1	2	3	4	5	6	7

b) How likely do you think it is that the brother would get angry in other situations?

Not at all likely	1	2	3	4	5	6	7 Highly likely

c) How likely do you think it is that the brother would get angry in the same circumstances in future?

Not at all likely	1	2	3	4	5	6	7 Highly likely

d) How easy do you think it would have been for the brother to have controlled his anger?

Not at all easy	1	2	3	4	5	6	7 Extremely easy

2. Now can you tell us how you think you would respond to the brothers anger? Please circle the appropriate number on each scale. (Please rate <u>all</u> the response approaches given below)

	Not at all						Very Much so
Would you remain softly spoken and gentle, giving your full attention to him, trying to find out why he is so angry?	1	2	3	4	5	6	7
Would you remain passive and just let him blow-off steam?	1	2	3	4	5	6	7
Would you be abusive back?	1	2	3	4	5	6	7
Would you try to make him feel foolish, by scolding him or by joking at his expense?	1	2	3	4	5	6	7
Would you raise your voice and become indignant?	1	2	3	4	5	6	7
Would you try to ignore the abuse?	1	2	3	4	5	6	7
Would you stay calm and assertive, showing in your manner that you won't take any nonsense?	1	2	3	4	5	6	7
Would you become matter-of-fact and try to include others in the incident?	1	2	3	4	5	6	7
Would you try to introduce humour into the situation?	1	2	3	4	5	6	7
Would you go and get help?	1	2	3	4	5	6	7

AG1 QUESTIONNAIRE

Everybody gets angry from time to time. A number of statements that people have used to describe the times that they get angry are included below. Read each statement and circle the number to the right of the statement that best describes you. Immediately below is a full description of what each of the numbers on each of the scales mean. There are no right or wrong answers. Please try to be as honest as possible.

1 completely undescriptive of me
2 mostly undescriptive of me
3 partly undescriptive and partly descriptive of me
4 mostly descriptive of me
5 completely descriptive of me

1. I tend to get angry more frequently than most people.

1 2 3 4 5
completely undescriptive ——— completely descriptive

2. Other people seem to get angrier than I do in similar circumstances.

1 2 3 4 5
completely undescriptive ——— completely descriptive

3. I harbour grudges that I don't tell anyone about.

1 2 3 4 5
completely undescriptive ——— completely descriptive

4. I try to get even when I'm angry with someone.

1 2 3 4 5
completely undescriptive ——— completely descriptive

5. I am secretly quite critical of others.

1 2 3 4 5
completely undescriptive ——— completely descriptive

6. It is easy to make me angry.

1 2 3 4 5
completely undescriptive ——— completely descriptive

7. When I am angry with someone, I let that person know.

1 2 3 4 5
completely undescriptive ——— completely descriptive

8. I have met many people who are supposed to be experts who are no better than I am.

1 2 3 4 5
completely undescriptive ——— completely descriptive

9. Something makes me angry almost every day.

1 2 3 4 5
completely undescriptive ——— completely descriptive

10. I often feel angrier than I think I should.

1 2 3 4 5
completely undescriptive — completely descriptive

11. I feel guilty about expressing my anger.

1 2 3 4 5
completely undescriptive — completely descriptive

12. When I am angry with someone, I take it out on whoever is around.

1 2 3 4 5
completely undescriptive — completely descriptive

13. Some of my friends have habits that annoy and bother me very much.

1 2 3 4 5
completely undescriptive — completely descriptive

14. I am surprised at how often I feel angry.

1 2 3 4 5
completely undescriptive — completely descriptive

15. Once I let people know I'm angry, I can put it out of my mind.

1 2 3 4 5
completely undescriptive — completely descriptive

16. People talk about me behind my back.

1 2 3 4 5
completely undescriptive — completely descriptive

17. At times, I feel angry for no specific reason.

1 2 3 4 5
completely undescriptive — completely descriptive

18. I can make myself angry about something in the past just by thinking about it.

1 2 3 4 5
completely undescriptive — completely descriptive

19. Even after I have expressed my anger, I have trouble forgetting it.

1 2 3 4 5
completely undescriptive — completely descriptive

20. When I hide my anger from others, I think about it for a long time.

1 2 3 4 5
completely undescriptive — completely descriptive

21. People can bother me just by being around.

1 2 3 4 5
completely undescriptive — completely descriptive

22. When I get angry, I stay angry for hours.

1 2 3 4 5

completely undescriptive — completely descriptive

23. When I hide my anger from others, I forget about it pretty quickly.

1 2 3 4 5

completely undescriptive — completely descriptive

24. I try to talk over problems with people without letting them know I'm angry.

1 2 3 4 5

completely undescriptive — completely descriptive

25. When I get angry, I calm down faster than most people.

1 2 3 4 5

completely undescriptive — completely descriptive

26. I get so angry, I feel like I might lose control.

1 2 3 4 5

completely undescriptive — completely descriptive

27. If I let people see the way I feel, VXK be considered a hard person to get along with.

1 2 3 4 5

completely undescriptive — completely descriptive

28. I am on my guard with people who are friendlier than I expected.

1 2 3 4 5

completely undescriptive — completely descriptive

29. It's difficult for me to let people know I'm angry.

1 2 3 4 5

completely undescriptive — completely descriptive

30. I get angry when:

a: someone lets me down

1 2 3 4 5

completely undescriptive — completely descriptive

b: people are unfair

1 2 3 4 5

completely undescriptive — completely descriptive

c: something blocks my plans

1 2 3 4 5

completely undescriptive — completely descriptive

d: I am delayed

1 2 3 4 5

completely undescriptive — completely descriptive

e: someone embarrasses me

1 2 3 4 5

completely undescriptive — completely descriptive

f: I have to take orders from someone less capable than I

1 2 3 4 5

completely undescriptive — completely descriptive

g: I have to work with incompetent people

1 2 3 4 5

completely undescriptive — completely descriptive

h: I do something stupid

1 2 3 4 5

completely undescriptive — completely descriptive

i: I am not given credit for something I have done

1 2 3 4 5

completely undescriptive — completely descriptive

APPENDIX 6

CON1 QUESTIONNAIRE

Please indicate the extent to which you agree or disagree with each of the statements below as they apply to your views, taking a score of 1 as "strongly disagree"; a score of 4 as having no views either way; and 7 as "strongly agree". You may of course use intermediate scores as appropriate.

Some of these items are negatively worded, so please ensure that you endorse the "agree" or "disagree" end of the scale appropriately.

		STRONGLY DISAGREE						STRONGLY AGREE
1.	When I get what I want it's usually because I worked hard for it.	1	2	3	4	5	6	7
2.	In attempting to smooth over a disagreement I usually make it worse.	1	2	3	4	5	6	7
3.	I like to have a place for everything and everything in its place.	1	2	3	4	5	6	7
4.	I usually don't set goals because I have a hard time following through on them.	1	2	3	4	5	6	7
5.	I have no trouble making and keeping friends.	1	2	3	4	5	6	7
6.	When I make plans I am almost certain to make them work.	1	2	3	4	5	6	7
7.	I prefer games involving some luck over games requiring pure skill.	1	2	3	4	5	6	7
8.	Once I have made up my mind I seldom change it.	1	2	3	4	5	6	7
9.	When being interviewed I can usually steer the interview toward the topics I want to talk about and away from those I wish to avoid.	1	2	3	4	5	6	7
10.	I can learn almost anything if I set my mind to it.	1	2	3	4	5	6	7
11.	I don't like to work on a problem unless there is the possibility of coming out with a clear-cut answer.	1	2	3	4	5	6	7
12.	Competition discourages excellence.	1	2	3	4	5	6	7
13.	I often find it hard to get my point of view across to others.	1	2	3	4	5	6	7
14.	Often people get ahead just by being lucky.	1	2	3	4	5	6	7
15.	It's pointless to keep on working on something that's too difficult for me.	1	2	3	4	5	6	7
16.	My major accomplishments are entirely due to my hard work and ability.	1	2	3	4	5	6	7
17.	I'm not good at guiding the course of a conversation with several others.	1	2	3	4	5	6	7
18.	I think I am stricter about right and wrong than most people.	1	2	3	4	5	6	7

		STRONGLY						STRONGLY
STRONGLY		DISAGREE						AGREE
19.	I can usually establish a close personal relationship with someone I find attractive.	1	2	3	4	5	6	7
20.	I find it easy to play an important part in most group situations.	1	2	3	4	5	6	7
21.	On any sort of exam or competition I like to know how well I do relative to everyone else.	1	2	3	4	5	6	7
22.	Even when I'm feeling self-confident about most things, I still seem to lack the ability to control situations.	1	2	3	4	5	6	7
23.	If there's someone I want to meet I can usually arrange it.	1	2	3	4	5	6	7
24.	The trouble with many people is that they don't take things seriously enough.	1	2	3	4	5	6	7
25.	If I need help in carrying off a plan of mine, it's usually difficult to get others to help.	1	2	3	4	5	6	7

		VERY						NOT AT
		MUCH						ALL
26.	Would you say you are an extraverted sort of person?	1	2	3	4	5	6	7

EMP1 QUESTIONNAIRE

Indicate how much you agree or disagree with the following statements by circling the number on the scale next to each statement that best describes your feelings. Immediately below is a full description of what each of the numbers on each of the scales mean. There are no right or wrong answers. Please try to answer as honestly as possible.

3	agree very strongly
2	agree strongly
1	agree fairly strongly
0	neither agree nor disagree
-1	disagree fairly strongly
-2	disagree strongly
-3	disagree very strongly

1. It makes me sad to see a lonely stranger in a group.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

2. People make too much of the feelings and sensitivity of animals.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

3. I often find public displays of affection annoying.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

4. I am annoyed by unhappy people who are just sorry for themselves.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

5. I become nervous if others around me seem to be nervous.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

6. I find it silly for people to cry out of happiness.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

7. I tend to get emotionally involved with a friend's problems.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

8. Sometimes the words of a love song can move me deeply.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

9. I tend to lose control when I am bringing bad news to people.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

10. **The people around me have a great influence on my moods.**

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

11. **Most foreigners I have met seemed cool and unemotional.**

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

12. I would rather be a social worker than work in a job training centre.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

13. I don't get upset when a friend is acting upset.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

14. I like to watch people open presents.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

15. Lonely people are probably unfriendly.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

16. Seeing people cry upsets me.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

17. Some songs make me happy.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

18. I really get involved with the feelings of the characters in a novel.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

19. I get very angry when I see someone being ill-treated.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

20. I am able to remain calm even though those around me worry.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

21. When a friend starts to talk about his problems, I try to steer the conversation to something else.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

22. Another's laughter is not catching for me.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

23. **Sometimes at the movies I am amused by the amount of crying and sniffling around me.**

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

24. **I am able to make decisions without being influenced by people's feelings.**

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

25. I cannot continue to feel OK if people around me are depressed.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

26. It is hard for me to see how some things upset people so much.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

27. I am very upset when I see an animal in pain.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

28. Becoming involved in books or movies is a little silly.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

29. It upsets me to see helpless old people.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

30. I become more irritated than sympathetic when I see someone's tears.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

31. I become very involved when I watch a movie.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

32. I often find that I can remain cool in spite of the excitement around me.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

33. Little children sometimes cry for no apparent reason.

3 2 1 0 -1 -2 -3

agree very strongly — disagree very strongly

APPENDIX 8

ASS1 QUESTIONNAIRE

Indicate how characteristic or descriptive each of the following statements is of you by circling the number to the right of each statement that best describes you. Immediately below is a full description of what each of the numbers on each of the scales mean. There are no right or wrong answers. Please try and be as honest as possible.

+3	very characteristic of me, extremely descriptive
+2	rather characteristic of me, quite descriptive
+1	somewhat characteristic of me, slightly descriptive
-1	somewhat uncharacteristic of me, slightly nondescriptive
-2	rather uncharacteristic of me, quite nondescriptive
-3	very uncharacteristic of me, extremely nondescriptive

1. Most people seem to be more aggressive and assertive than I am.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

2. I have hesitated to make or accept dates because of "shyness".

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

3. When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

4. I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

5. If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time in saying "No".

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

6. When I am asked to do something, I insist upon knowing why.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

7. There are times when I look for a good, vigorous argument.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

8. I strive to get ahead as much as most people in my position.

+3 +2 +1 -1 -2 -3

very characteristic ——— very uncharacteristic

9. To be honest, people often take advantage of me.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

10. I enjoy starting conversations with new acquaintances and strangers.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

11. I often don't know what to say to attractive persons of the opposite sex.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

12. I will hesitate to make phone calls to business establishments and institutions.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

13. I would rather apply for a job or for admission to a college by writing letters than by going through with personal interviews.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

14. I find it embarrassing to return merchandise.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

15. If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

16. I have avoided asking questions for fear of sounding stupid.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

19. I avoid arguing over prices with clerks and salesmen.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

20. When I have done something important or worthwhile, I manage to let others know about it.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

21. I am open and frank about my feelings.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

22. If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

23. I often have a hard time saying "No".

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

24. I tend to bottle up my emotions rather than make a scene.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

25. I complain about poor service in a restaurant and elsewhere.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

26. When I am given a compliment, I sometimes just don't know what to say.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

27. If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

28. Anyone attempting to push ahead of me in a line is in for a good battle.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

29. I am quick to express an opinion.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic

30. There are times when I just can't say anything.

+3 +2 +1 -1 -2 -3

very characteristic — very uncharacteristic