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Abstracts

Critical Review of the Literature

Negative voice content and distress in voice hearers is associated with ongoing negative health outcomes. Developmental trauma is common in people who hear voices. However, the role of early trauma on voice content and distress is unclear. The current review sought to determine the relationship between developmental trauma with voice content and distress in clinical and non-clinical voice hearers. A systematic search conducted in May 2023 using PsycINFO, CINAHL, PubMed, EMBASE and MEDLINE identified 15 studies. The majority of the studies were conducted with clinical voice hearers. Six studies assessed the relationship between developmental trauma and voice content in a voice hearing population and found that early trauma directly or indirectly influenced the content of voices. However, ten studies looking at the relationship between developmental trauma and subsequent distress reported mixed findings. Priorities for future research and clinical implications based on the findings from the present review are explored.

Service Improvement Project

Objectives: The aim of this service improvement project was to improve cultural competency of clinicians in an older adult psychological service. Cultural competency refers to promoting cultural awareness, humility, and sensitivity in the service, and developing clinician's skills to integrate culture in assessment and therapy. Methods: Consultations with the service and racial and ethnic minoritised patients were

conducted to inform the project. A mixed methods design was carried out with three phases: (i) an audit to review information from racial and ethnic minoritised patients accessing the service, (ii) focus groups with psychologists, and (iii) development of a guidance for clinicians and set of recommendations for the service, adapted with service feedback. Results: A total of 20 (10%) older adult patients accessing the service between 2018 to 2022 were from a racial and ethnic minoritised background. The findings of the project suggest that culture can impact presentation of mental health difficulties, beliefs and values about seeking help, and can also be a protective factor for patients. Conclusion: The current project helped draw out cultural factors that are important to address when working therapeutically with older racial and ethnic minoritised patients and culminated in guidelines and recommendations for the older adult psychological service.

Theory Driven Research Project

Young voice hearers who experience distress and persistent voices are vulnerable to negative health outcomes, especially if seeking help from mental health services. However, little is known about the voice hearing phenomenon in an adolescent help-seeking population without a diagnosis of a psychotic disorder. The current longitudinal study aimed to assess the relationship between negative voice content and distress, and identify potential predictors of voice persistence, in an adolescent help-seeking population. Thirty adolescents aged 13-18 years with various clinical presentations and no diagnosed psychotic disorder were recruited from two NHS sites. Baseline measures were conducted, and 16 adolescents were followed-up after three months. Young voice hearers mostly reported voices with a derogatory and threatening content, although also

heard other voice content. Around 80% of young voice hearers heard persistent voices. Derogatory and threatening voice content, and reasons for listening to and believing this content, was significantly associated with distress. Derogatory and threatening voice content, reasons for listening to and believing this content, and social isolation showed small to medium effects on voice persistence. This study highlights the role of voice content as a predictor of distress, and potential factors that may drive voice persistence in younger people.

Critical Review of the Literature

The relationship between developmental trauma with voice content and distress in a voice-hearing population: A systematic review

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Proposed Journal: This paper is targeted towards the journal Clinical Psychology and Review as this journal publishes reviews related to many different areas of clinical psychology. The journal also publishes narrative reviews such as in the current paper.

Embedded Abstract

Negative voice content and distress in voice hearers is associated with ongoing negative health outcomes. Developmental trauma is common in people who hear voices. However, the role of early trauma on voice content and distress is unclear. The current review sought to determine the relationship between developmental trauma with voice content and distress in clinical and non-clinical voice hearers. A systematic search conducted in May 2023 using PsycINFO, CINAHL, PubMed, EMBASE and MEDLINE identified 15 studies. The majority of the studies were conducted with clinical voice hearers. Six studies assessed the relationship between developmental trauma and voice content in a voice hearing population and found that early trauma directly or indirectly influenced the content of voices. However, ten studies looking at the relationship between developmental trauma and subsequent distress reported mixed findings. Priorities for future research and clinical implications based on the findings from the present review are explored.

Keywords: developmental trauma; childhood trauma; voice hearing; auditory verbal hallucinations; voice content; distress

Highlights:

- Negative voice content and distress are associated with negative health outcomes
- A systematic review explored voice content and distress in people with early trauma
- Early trauma is related to voice content in clinical and non-clinical populations
- Relationship between early trauma and distress in voice hearers remains unclear

Introduction

Voice hearing, or auditory verbal hallucinations, is defined as the experience of hearing voices in the absence of external stimuli (Shinn et al., 2020). Voice hearing is most frequently associated with disorders such as psychosis but is not unique to this clinical disorder and can also be experienced by non-clinical populations (Shinn et al., 2020).

Voice content and distress

Auditory verbal hallucinations have a heterogenous phenomenology in clinical and non-clinical populations and as such the content of voices can be diverse (McCarthy-Jones et al., 2014; Woods, Jones, Alderson-Day, Callard, & Fernyhough, 2015). Voices can be positive or neutral in content (i.e., kind, encouraging, informative) or more negative (i.e., threatening, abusive, critical of person, derogatory). Cognitive theories of auditory hallucinations state that voice content, as well as how people appraise that content, can influence how people react to the voices they hear and subsequent distress (Chadwick & Birchwood, 1994; Larøi et al., 2019). For instance, voices that are threatening may be appraised as malevolent or having unlimited power (Larøi et al., 2019) and this can lead to subsequent distress and impairment in functioning (Beavan & Read, 2010; de Boer et al., 2021). The degree of negative voice content can also predict whether an individual will go on to use mental health services (Beavan & Read, 2010), and voice content alone has been shown to predict clinical versus non-clinical voice hearing with 88% positive predictive value (Daalman et al., 2011). Psychological distress experienced by people who hear voices can also lead to negative health outcomes (Andrew, Gray, & Snowden, 2008; Baumeister, Sedgwick, Howes, & Peters, 2017). However, not all people who hear voices necessarily experience psychological distress or require need

for care (Baumeister et al., 2017), and this may be related to appraisals of the voices they hear.

Developmental trauma and voice hearing

Developmental trauma is defined as childhood adversity experienced before the age of 18 years (Sideli et al., 2020). This can include physical, sexual, and emotional abuse experienced in childhood, as well as physical and emotional neglect, and parental separation and death (Sideli et al., 2020). Developmental trauma can elevate the risk of developing a range of mental health issues (McLaughlin, Colich, Rodman, & Weissman, 2020). People experiencing one or more traumatic events in childhood are likely to experience neurobiological changes, may respond differently to their environment, and have generally high levels of stress which results in increased vulnerability to negative health outcomes (McLaughlin et al., 2020; Popovic et al., 2019). Developmental trauma can also increase the likelihood of hearing voices (Bloomfield et al., 2021; Longden, Madill, & Waterman, 2012; Luhrmann et al., 2019) and a large number of voice hearers report experiencing a prior traumatic event regardless of their clinical status (Baumeister et al., 2017; Longden et al., 2012; Luhrmann et al., 2019).

Many voice hearers find that the content of their voices is linked to previous life events such as past trauma (Larøi et al., 2019; McCarthy-Jones et al., 2014; Woods et al., 2015). In some cases, voices are reported as being that of a past abuser, while other voice hearers report an indirect relationship between voices and a previous traumatic memory (e.g. voices that are malevolent, derogatory or commanding inducing similar feelings to the trauma) (Longden et al., 2012; McCarthy-Jones, 2011). Much of the research however does not clearly distinguish between trauma experienced in childhood

compared to other adverse life events (Larøi et al., 2019), and synthesis of the research is required to establish the role of developmental trauma specifically on content of voices. Developmental trauma is also related to general psychological distress and ongoing mental health problems in adulthood (Hayward, Vartanian, Kwok, & Newby, 2020; Norman et al., 2012). It is possible that this relationship may also persist in people who hear voices, but this has not been clearly explored.

Aims

There is variability in the content of voices and distress experienced by both clinical and non-clinical voice hearers. Understanding the factors associated with voice content and distress can support early intervention. Developmental trauma is common amongst voice hearers and is likely to be associated with negative voice content and distress, but a synthesis of the literature is needed to determine the strength of this relationship.

This systematic review will aim to answer the following research questions:

1) Is developmental trauma associated with voice content in a voice-hearing population?

2) Is developmental trauma associated with psychological distress in a voice-hearing population?

3) What is the quality of evidence looking at the association between developmental trauma with voice content and psychological distress in a voice-hearing population?

Method

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations were used as guidelines to report this review (Moher et al., 2015). A protocol for the review was registered with PROSPERO (CRD42022350670).

Systematic literature search

The systematic literature search was conducted in May 2023 using the following databases: PsycINFO, CINAHL, PubMed, EMBASE and MEDLINE. Search terms were developed by authors and were adapted for each database as necessary (see Appendix B). Relevant articles were also identified by screening references of review papers, discussion with a colleague (JE), and searching manually through three key journals ('Psychosis', 'Psychology and Psychotherapy', and 'Journal of Child Sexual Abuse') using key words ("voice hearing childhood trauma").

Eligibility criteria

Studies were included in the review if the following criteria were met: peer-reviewed, in English, any year, any country, sample of adults aged 18 years or over, either clinical or non-clinical population. Clinical population was defined as voice hearers with a diagnosis of a mental health condition or seeking mental health support at the time of recruitment, whereas a non-clinical group was defined as voice hearers with no known mental health condition or those who were not questioned about having a mental health condition. Studies were only included if at least some of the population experienced developmental trauma, voice hearing, and a measure of voice content or distress was present.

Developmental trauma was defined as childhood adversity experienced before the age of 18 years and was based on the definition used in a recently conducted review (Sideli et al., 2020). Specifically, the following types of traumas were included in the review: physical, sexual, and emotional abuse, as well as physical and emotional neglect, plus parental separation and death. Any description of the emotional valence of voice content was considered relevant for this review. This includes studies that stated whether the voices were negative or positive, as well as studies describing the emotional content of the voices in some way (e.g., voices that were kind or voices that were controlling). Psychological distress for the purpose of this review was defined as general measures of distress (e.g., depression, anxiety, self-harm), or voice-related distress specifically.

Studies were excluded if traumatic life events were measured without specifying whether the trauma was experienced in childhood. Studies describing indirect forms of childhood abuse and maltreatment (e.g., parental discord, witnessing interpersonal violence) or peer victimisation (e.g. bullying) only were also excluded. Studies were also excluded if measures of developmental trauma, voice hearing, and voice content or distress were present, but it was not possible to make inferences about the relationship between these variables (e.g., studies only including these measures as part of sample demographics). Studies with qualitative descriptions of voice content only, or reviews, commentaries or discussion pieces were excluded.

Screening and data extraction

All titles and abstracts were screened. A total of 1336 papers were identified from the search after removing duplicates, of which 24 papers were identified from other sources. Papers from additional sources includes those identified from screening

references of review papers (n= 18), discussion with a colleague (n=2), and searching through key journals (n=4). An initial screen of titles and abstracts were conducted by the primary reviewer (GR) and a random sample of 20% (n=270) was also screened by an additional reviewer (JE). The kappa statistic (0.84) suggests a high inter-rater agreement in screening titles and abstracts. After initial screening, 191 studies were considered eligible for the review and full texts were accessed and screened by the primary reviewer and a random 25% of full texts (n=48) were also screened by the second reviewer. The kappa statistic (0.85) further suggested high inter-rater agreement. Relevant data from full-texts were extracted using author-developed data extraction forms. A total of 15 studies were included into the final review (see Figure 1). These 15 studies did not include any papers that had been identified from additional sources.

Quality assessment

All studies were evaluated for quality using the Standard Quality Assessment Criteria for quantitative studies (Kmet, Lee, & Cook, 2004). This tool was chosen as it can rate the quality of quantitative studies across all study designs and shows high inter-rater reliability (Kmet, Lee, & Cook, 2004). The quality rating tool has also been used in other systematic reviews (e.g., (Lee et al., 2020)). The final quality rating of each study was derived from the ratings on the following fourteen items: description of question/objectives, appropriate study design, appropriate methods of participant selection, adequate description of baseline measures, describing and reporting of random allocation, randomised blinding of participants, randomised blinding of researchers, robust description of outcome measures, appropriate sample size, reporting of variance for the main results, controlling for confounding, appropriate reporting of results, and conclusions supported by results. Some of the items were not applicable for

all study designs (e.g., randomised blinding of participants). The final quality rating was derived from summing the score for each study and dividing this by the total possible scores on all items (excluding items that were not applicable). This was then converted to a percentage. Studies were considered to be of a high quality if the score was above 80% as proposed by other systematic reviews using the tool (Lee et al., 2020).

All studies were rated for quality by the primary reviewer and a random 30% of studies (n=5) were independently rated for quality by the secondary reviewer (JE). Differences in ratings were discussed until sufficient inter-rater agreement was reached. No studies were excluded from this review based on the quality rating.

Data synthesis

Studies were grouped by those assessing the relationship between developmental trauma and voice content and those looking at distress in a voice-hearing population. Some studies were eligible to be included in both groups. Studies that collapsed measures of voice content and distress were synthesised separately.

Studies were further grouped by any comparisons made between voice hearers with or without developmental trauma. If this was not possible, studies were grouped by type of population (e.g. clinical or non-clinical), by the type of developmental trauma assessed, by the type of analysis conducted, or by the direction of the results. Where possible, the review also noted the influence of any mediating factors.

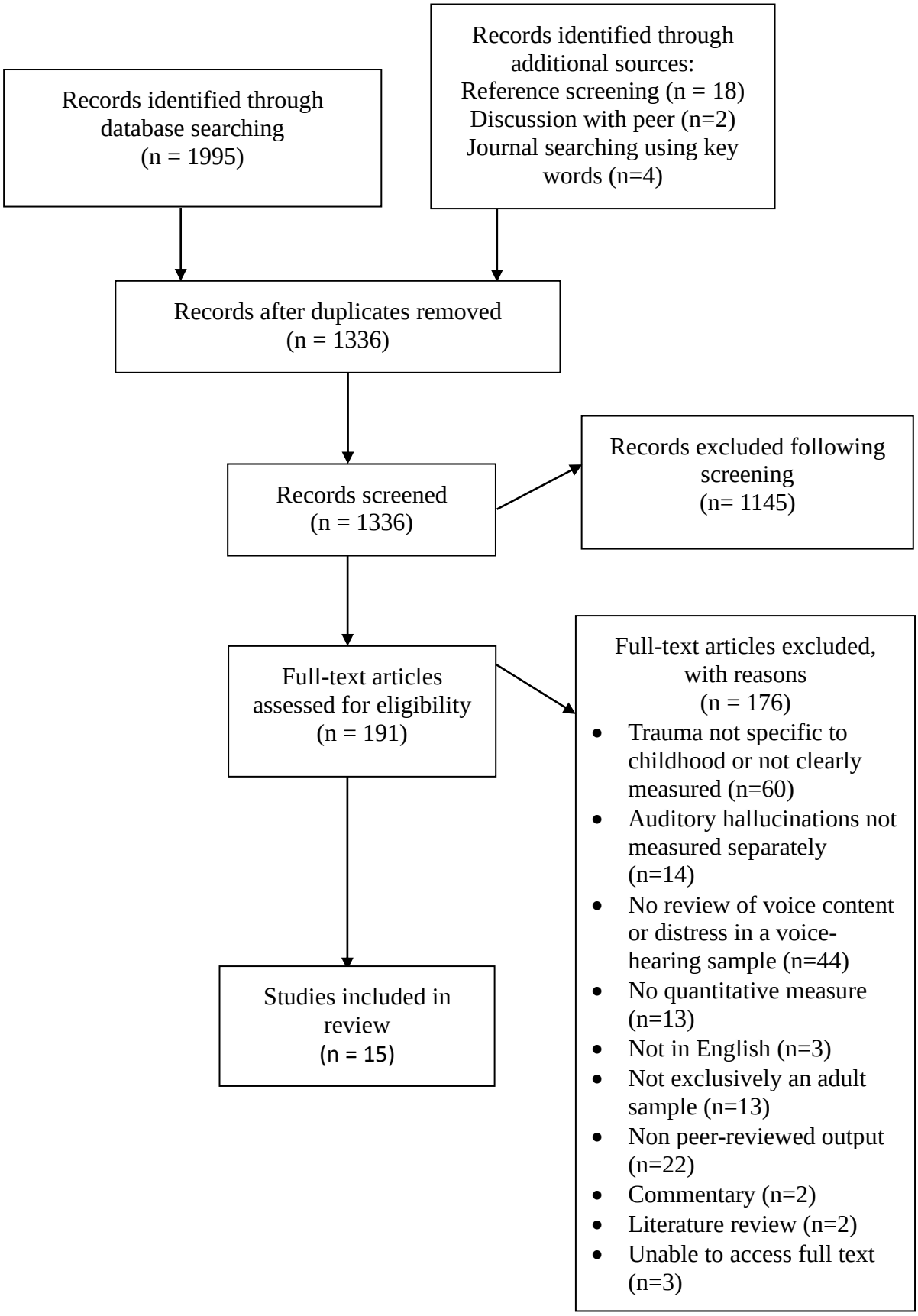


Figure 1. PRISMA flow chart for selection process of studies in systematic review

Results

Study characteristics

A total of 15 studies were included in the current review. The study designs were either cross-sectional (n=10) or quasi experimental (n=5). Most of the studies were conducted in the UK (n=5), followed by The Netherlands (n=4), Australia (n=4), Poland (n=1), Germany (n=1), New Zealand (n=1), and US (n=1). Two studies recruited participants from more than one location (Begemann et al., 2022; Nesbit et al., 2022).

Quality rating

The quality rating scores given to all studies on all items of the quality assessment tool are shown in Table 4. An overall percentage of quality for the studies, based on these scores, ranged from 64% to 91% (see Appendix C). Seven out of the 15 studies had a quality rating of over 80% which was considered as high for the purpose of this review.

Participant characteristics

A total of 1395 participants included in the review heard voices, of which 999 (71.6%) people were from a clinical population and 396 (28.4%) were non-clinical voice hearers (see Appendix D). Some studies included both clinical and non-clinical voice hearers.

Clinical voice hearers

Fourteen studies in the review recruited a clinical voice hearing population. Seven of these studies included clinical voice hearers with different diagnoses, and six studies included patients with similar diagnoses (e.g. types of psychotic disorder). One study did not clearly report diagnosis (Andrew et al., 2008). Across all studies, clinical voice hearers had a diagnosis of psychotic disorder (n=770, 77%), affective or mood disorder

(n=86, 8.6%), dissociative disorder (n=50, 5%), post-traumatic stress disorder (n=34, 3.4%), and personality disorder (borderline and schizoid) (n=33, 3.3%). Diagnosis was not reported or was unclear for 26 (2.6%) clinical voice hearers. Clinical voice hearers were recruited from mental health inpatient wards, mental health outpatient wards, university sites, and voluntary services.

Clinical voice hearers had a mean age of 38.61 years. One study only reported age range from 26-65 years (Blom & Mangoenkarso, 2018). A total of 549 (55%) clinical voice hearers were female, 445 (45.5%) were males, and one study did not report gender for 5 (0.5%) participants. Four out of the fourteen studies reported ethnicity for participants. The studies reported that 141 (57%) participants were ethnically White and 106 participants were from a minority ethnic group (n=106, 42.9%) (Baumeister et al., 2021; Connor & Max, 2012; Pilton et al., 2016; Rosen, McCarthy-Jones, Jones, Chase, & Sharma, 2018). The mean age of voice hearing onset was 21.88 years (Begemann et al., 2022; Pilton et al., 2016; Scott, Rossell, Meyer, Toh, & Thomas, 2020) and mean length of voice hearing was 14.85 years (Andrew et al., 2008; Pilton et al., 2016).

Non-clinical voice hearers

Five studies included non-clinical voice hearers (Andrew et al., 2008; Baumeister et al., 2021; Begemann et al., 2022; Daalman, 2012; Daalman, Diederen, Hoekema, van Lutterveld, & Sommer, 2016). Non-clinical voice hearers were recruited from word-of-mouth, specialist sources such as spiritual organisations, university sites and targeted websites.

The mean age of non-clinical voice hearers was 44.16 years. A total of 277 (69.9%) non-clinical voice hearers were female and 119 (30.1%) were males. Ethnicity was reported by only one study (Baumeister et al., 2021). According to this study, most non-

clinical voice hearers were White (n=41, 91.1%). The mean age of voice hearing onset was 13.59 years (Begemann et al., 2022).

Outcomes

Studies used a variety of outcome measures to assess the emotional valence of voice content and distress in both clinical and non-clinical populations (see Tables 1-3). There were also other variations across studies such as different comparison groups and differences in analysis. Due to the heterogeneity between studies, a narrative synthesis was considered the most suitable method to report the findings.

Table 1. Study outcomes: Relationship between developmental trauma and voice content (n=6)

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content	Results
Andrew, 2008	Quasi-experimental	UK	Clinical voice hearers (n=22) Non-clinical voice hearers (n=21)	PSYRATS-AH	PDS, ticking which trauma experienced in childhood (<16)	PSYRATS-AH	No sig difference in childhood trauma between clinical and non-clinical groups; Sig. high childhood sexual abuse in clinical population vs non population (p<.006) Negative voice content sig high in clinical population (majority negative, p<.001)
Begemann, 2022	Quasi-experimental	Netherlands; Australia	Clinical voice hearers (n=166)	PSYRATS-AH; Adapted version of LSHS	CTQ-SF	PSYRATS-AH	Clinical and non-clinical voice hearers scored sig. higher on overall childhood trauma overall compared to the non-clinical group without voices (p<.001), had sig. higher sexual abuse scores than non-clinical group without voices (p<.001) and sig emotional abuse scores than non-clinical group without voices (p<.001) Three clusters identified: 1) Low trauma (n=299) – sig low overall

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content	Results
							childhood trauma 2) Emotion-focused trauma (n=71) – most met criteria for emotional abuse and neglect 3) Multi-trauma (n=43) – sig. higher scores on all trauma types compared to other clusters Sig. effect for voice content – multi-trauma trauma cluster experienced greater negative content compared to the low trauma cluster (p=0.025) and emotion-focused trauma cluster (p = 0.015)
Misiak, 2016	Cross sectional	Poland	Clinical voice hearers: With childhood trauma (n=37); Without childhood trauma (n=57)	PANSS	ETISR-SF	'Abusive/accusatory/precatory voices' based on OPCRIT checklist	Patients with abusive/accusatory/persecutory voices had significantly higher total trauma score in comparison with patients who did not experience negative voices (p = 0.047) Clinical voice hearers with childhood trauma had sig. higher number of

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content	Results
							abusive/accusatory/persecutory voices compared to clinical voice hearers without childhood trauma (p<.001) There was a sig. effect of childhood trauma on abusive/accusatory/persecutory voices (F = 10.17, p = 0.002), after covarying for education, depression and chlorpromazine equivalent.
Scott, 2020	Cross sectional	Australia	Clinical voice hearers (n=140)	Reported experience of hearing voices in the last 2 weeks or lifetime	CTQ-SF	Proportion of negative voice content, recorded as percentage	Negative AVH content was not directly related to total childhood trauma scores (r=.12, p>.05) or any of the specific indices of childhood trauma. Negative AVH content was significantly predicted by negative self schemas. In turn, negative self schemas were significantly predicted by insecure anxious attachment and childhood emotional neglect.

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content	Results
Toeschke, 2014	Cross sectional	Germany	Clinical voice hearers: Schizophrenia (n=21); Borderline personality disorder (n=23)	Relevant Items from SCID-D	CTQ-SF	Author-developed questions assessing character of voices	Point-biserial correlational analysis found associations between childhood trauma and voice phenomenology for the items ‘‘voices control behavior’’ ($p < 0.01$)
Wearne, 2017	Cross sectional, cluster analysis	Australia	Clinical voice hearers (n=56) Cluster 1 (n=36) Cluster 2 (n=20)	PSYRATS-AH	Questions about childhood abuse (emotional, sexual and physical)	PSYRATS-AH	K-means cluster analysis showed a significant cluster (Cluster 1) distinguished by high negative voice content ($p<.001$) and childhood sexual abuse ($p=.029$), as well as other variables

AVH= Auditory verbal hallucinations, PSYRATS-AH = Psychotic Symptom Rating Scales – Auditory Hallucinations Subscale, PDS = Post-traumatic Diagnostic Scale, CTQ-SF = Childhood Trauma Questionnaire – Short form, PANSS = Positive and Negative Syndrome Scale, ETISR-SF = Early Trauma Inventory Self-Report — Short Form, OPCRIT = Operational Criteria for Psychotic Illness, SCID-D = Structured Clinical Interview for DSM-IV Dissociative Disorders

Table 2. Study outcomes: Relationship between developmental trauma and distress (n=10)

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
Andrew, 2008	Quasi-experimental	UK	Clinical voice hearers (n=22) Non-clinical voice hearers (n=21)	PSYRATS-AH	PDS, ticking which trauma experienced in childhood (<16)	Anxiety: BAI-II Depression: BDI-II	No sig difference in childhood trauma between clinical and non-clinical groups; Sig. high childhood sexual abuse in clinical population vs non population ($p<.006$) Regression showed that childhood trauma was not sig. predictive of distress as measured by BDI-II and BAI
Baumeister, 2021	Quasi-experimental	UK	Clinical voice hearers (n=57) Non-clinical voice hearers (n=45)	Score of ⩾2 on the Scale for the Assessment of Positive Symptoms (SAPS) AVH item	Victimisation experiences schedule: Frequency, duration and subjective impact of 14 victimisation items were assessed, Split into childhood and	PSS	No sig. difference between childhood adversity on any items between clinical and non-clinical voice hearers Childhood adversity overall significantly associated with perceived stress, explaining 6.5% of the variance after controlling for group (clinical or non-clinical voice hearers); but not individual adversity variables

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
					adolescent/adulthood – our focus on childhood		
Begemann, 2022	Quasi-experimental	Netherlands; Australia	Clinical voice hearers (n=166) Non-clinical voice hearers (n= 122) Non-clinical controls (n=125)	PSYRATS-AH; Adapted version of LSHS	CTQ-SF	PSYRATS (voice-related distress)	Clinical and non-clinical voice hearers scored sig. higher on overall childhood trauma compared to the non-clinical group without voices (p<.001), had sig. higher sexual abuse scores than non-clinical group without voices (p<.001) and sig emotional abuse scores than non-clinical group without voices (p<.001) Three clusters identified: 1) Low trauma (n=299) – sig low overall childhood trauma 2) Emotion-focused trauma (n=71) – most met criteria for emotional abuse and neglect 3) Multi-trauma (n=43) – sig. higher scores on all trauma types compared to other clusters

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
							Trend-level effects for distress – multi-trauma and low-trauma had more distress than emotion-focused trauma (p=0.056)
Blom, 2018	Cross sectional	Netherlands	Clinical with auditory sexual hallucination (n=5)	Author-developed questionnaire to assess phenomenology of sexual hallucinations	CTQ-SF	Author-developed questionnaire	All patients experienced trauma; 3 out of 5 patients who heard voices experienced distress (including anger, helplessness, depression and anxiety)
Connor, 2012	Cross sectional	UK	Clinical voice hearers (n=74)	Reported having auditory hallucinations within the last three months	CTQ-SF	CDSS	Sig correlation between depression and emotional abuse only (p<.001), no sign correlation with other trauma type
Daalman. 2012	Quasi experimental	Netherlands	Clinical voice hearers (n=100)	Clinical sample: PSYRATS Non-clinical	CTQ-SF	PSYRAT-AH: sum of two items: 'intensity of distress' and	No significant relationships were found between sexual abuse and emotional abuse and AVH characteristics such as total associated distress

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
			Non-clinical voice hearers (n=127) Non-clinical controls (n=124)	sample: Min reported voice hearing once a month, with an onset of minimum 1 year		'disruption to life caused by voices' = total distress	
Daalman 2016	Quasi-experimental (Follow-up study	Netherlands	Non-clinical voice hearers (n=81) Non-clinical controls (n=49)	PSYRATS-AH	CTQ-SF	Need for mental healthcare	Prevalence of childhood trauma did not predict need for mental healthcare
Offen, 2003	Cross sectional	UK	Clinical voice hearers (n=26)	Reported voice hearing in the previous 3 years	Childhood sexual abuse: 'Did you have any frightening experiences of	BDI-II	The sexually abused group reported significantly higher levels of depression ($p<.02$) There were significant negative

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
					a sexual nature as you were growing up, such as childhood sexual abuse or sexual assault?'		correlations of age at first abuse and depression (p<.01) (i.e. the younger the age, the more depression there is)
Rosen, 2018	Cross sectional	US	Clinical voice hearers (n=61)	PSYRATS-AH	ACE questionnaire	Depression factor of PANSS	A significant total effect of childhood trauma on voice-related distress was found, p = .006. There only significant indirect effect of ACE scores on voice-related distress was via negative voice-content (ACE → negative voice-content → voice-related distress), b = 0.10, SE = 0.04, 99% CI 0.02–0.23, p <0.01

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for distress	Results
Wearne, 2017	Cross sectional, cluster analysis	Australia	Clinical voice hearers (n=56) Cluster 1 (n=36) Cluster 2 (n=20)	PSYRATS-AH	Questions about childhood abuse (emotional, sexual and physical)	PSYRATS (voice-related distress)	K-means cluster analysis showed a significant cluster (Cluster 1) distinguished by high negative voice content (p<.001), high distress (p<.001) and childhood sexual abuse (p=.029), as well as higher scores on dissociation (p<.001)

AVH= Auditory Verbal Hallucination, PANSS = Positive and Negative Syndrome Scale, PSYRATS-AH = Psychotic Symptom Rating Scales – Auditory Hallucinations Subscale, PDS = Post-traumatic Diagnostic Scale, PSS = Perceived Stress Scale, BAI = Beck Anxiety Inventory, BDI-II = Beck Depression Inventory, LSHS = Launay and Slade Hallucinations Scale, CTQ-SF = Childhood Trauma Questionnaire – Short form, CDSS = Calgary Depression Scale for Schizophrenia, ACE = Adverse Childhood Experiences

Table 3. Study outcomes: Relationship between developmental trauma on a combined measure of voice content and distress (n=3)

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content and distress	Results
Daalman, 2012	Quasi experimental	Netherlands	Clinical voice hearers (n=100) Non-clinical voice hearers (n=127) Non-clinical controls (n=124)	Clinical sample: PSYRATS Non-clinical sample: Min reported voice hearing once a month, with an onset of minimum 1 year	CTQ-SF	PSYRATS-AH: sum of three items 'amount of negative content of voices', 'degree of negative content' and ' amount of distress' = emotional valence of content	Predictive models indicated that no childhood trauma distinguished positive or negative emotional valence of voices.
Nesbit, 2022	Cross sectional	Australia; New Zealand	Clinical voice hearers: Schizophrenia (n=49); Dissociative identity	PSYRATS-AH	CTQ-SF	PSYRATS-AH: sum of five items; amount of negative content, degree of negative content, amount	Childhood trauma not correlated with voice hearing content/distress in either group: Clinical voice hearers with schizophrenia (p=0.23) Clinical voice hearers with dissociative identity disorder (p=.08)

Study (first author name, year)	Study design	Country of recruitment	Sample size	Voice hearing measure	Childhood trauma measure	Outcome measures for voice content and distress	Results
			disorder (n=50)			of distress, intensity of distress and controllability	
Pilton, 2016	Cross sectional	UK	Clinical voice hearers (n=55)	PSYRATS-AH	CTQ-SF	PSYRATS-AH: sum of five items; amount of negative content, degree of negative content, amount of distress, intensity of distress and controllability	The findings showed that anxious attachment mediated the relationship between: 1)sexual abuse and voice distress/content; 2) emotional abuse and voice distress/content and; 3) physical neglect and voice distress/content

PSYRATS-AH = Psychotic Symptom Rating Scales – Auditory Hallucinations Subscale, CTQ-SF = Childhood Trauma Questionnaire – Short form

Table 4. Quality ratings for included studies (n=15) based on the Standard Quality Assessment Criteria for quantitative studies (Kmet, Lee, & Cook, 2004).

Study (first author name, year)	Objectives	Study design	Participant selection	Baseline measures	Random allocation	Blinding of participants	Blinding of researchers	Outcome measures	Sample size	Variance of results	Confound	Reporting of results	Conclusions
Andrew, 2008	2	1	1	1	NA	NA	NA	2	2	1	0	NA	2
Baumeister, 2021	2	1	1	2	NA	NA	NA	2	2	2	2	2	2
Begemann, 2022	2	2	1	2	NA	NA	NA	2	2	2	1	2	2
Blom, 2018	2	2	2	2	NA	NA	NA	2	1	2	0	2	2
Connor, 2012	2	1	1	2	NA	NA	NA	2	2	2	2	1	2
Daalman, 2012	2	1	2	2	NA	NA	NA	2	2	2	1	2	2
Daalman 2016	2	1	2	2	NA	NA	NA	1	1	2	0	NA	2
Misiak, 2016	2	1	2	2	NA	NA	NA	2	1	1	2	NA	2
Nesbit, 2022	2	1	1	1	NA	NA	NA	2	2	1	2	2	2
Offen, 2003	2	2	1	2	NA	NA	NA	1	1	2	0	NA	2

Pilton, 2016	2	1	2	1	NA	NA	NA	1	1	1	1	2	2
Rosen, 2018	2	1	1	2	NA	NA	NA	2	1	1	1	2	2
Scott, 2020	2	1	1	2	NA	NA	NA	2	2	1	2	2	2
Toeschke, 2014	2	1	1	2	NA	NA	NA	2	1	1	1	1	2
Wearne, 2017	2	1	1	1	NA	NA	NA	2	1	2	1	NA	1

Scores refers to whether the study appropriately conducted or described each item. A score of 2 indicates that the study did this fully; a score of 1 indicates that the study did this only partially; a score of 0 indicates that the study did not do this appropriately or this was not described. NA was used to denote non applicable items. The final quality rating was derived from summing the scores given to a study and then dividing by the total number of possible scores (excluding NA items). This score was then converted to a percentage.

Relationship between developmental trauma and voice content

Six studies assessed the relationship between developmental trauma and voice content. Only two out of the six studies could be considered to be of a high quality (Begemann et al., 2022; Scott et al., 2020).

Two studies showed a significant relationship between developmental trauma and degree of negative voice content (Misiak, Moustafa, Kiejna, & Frydecka, 2016; Tschoeke, Steinert, Flammer, & Uhlmann, 2014). The study by Tschoeke and colleagues measured voice content using an author-developed questionnaire, only one question of which asked clinical participants to state whether their voices were controlling. They found that controlling voices were related to childhood trauma, based on a total score of trauma on the childhood trauma questionnaire -short form (CTQ-SF) (Tschoeke et al., 2014). Another study compared a clinical group of voice hearers with and without developmental trauma (Misiak et al., 2016). Clinical voice hearers were grouped into the trauma group if they had experienced traumatic events and related intense negative emotions and dissociation (Misiak et al., 2016). Negative voice content was assessed by one question checking whether the voices were abusive, accusatory or persecutory. The study found that clinical voice hearers in the trauma group had significantly high rates of negative voice content compared to the non-trauma group, even after controlling for education, depression, and medication (Misiak et al., 2016).

Three studies found that childhood sexual abuse rather than other childhood trauma subtypes was more likely to be associated with negative voice content. One study conducted a cluster analysis to group clinical voice hearing populations by key symptoms and found a separate cluster of symptoms which could be predicted by negative voice content and high rates of childhood sexual abuse, indicating a

relationship between these factors (Wearne, Curtis, Genetti, & Samuel, 2017). However, it was not clear from the study how childhood sexual abuse was assessed (Wearne et al., 2017). Another study found that the clinical population had high rates of negative content in voices compared to the non-clinical population (Andrew et al., 2008). The clinical population also experienced significantly more childhood sexual abuse compared to non-clinical population (Andrew et al., 2008). The study by Begemann and colleagues (2022) split all voice hearers into different characteristics of developmental trauma based on a cluster analysis. The study found that voice hearers experiencing multiple types of developmental trauma were significantly more likely to have negative voice content, compared to individuals with low trauma or those experiencing emotional abuse and emotional neglect (Begemann et al., 2022). To note, all three studies measured childhood trauma by cumulatively adding up the number of traumatic events people were exposed to rather than checking their impact on individuals. All three studies also assessed voice content using only one item which does not provide for a sensitive assessment of voice content.

Only one high-quality study found no significant relationship between developmental trauma and voice content (Scott et al., 2020). This study assessed a clinical sample of voice hearers and found that negative voice content (rated as a percentage by participants) was not related to developmental trauma. However, negative voice content was significantly related to negative self-schemas which were in turn predicted by childhood emotional neglect (Scott et al., 2020), indicative of a more indirect relationship between content and early emotional neglect mediated by negative self-schemas.

Relationship between developmental trauma and distress

Ten studies looked at the relationship between developmental trauma and distress in a voice hearing population. Half of these studies were of a high quality (Baumeister et al., 2021; Begemann et al., 2022; Blom & Mangoenkarso, 2018; Connor & Max, 2012; Daalman, 2012).

One study found that the relationship between developmental trauma and perceived stress in voice hearers was only significant when considering overall scores on developmental trauma rather than specific types of traumas in both clinical and non-clinical populations (Baumeister et al., 2021). This study used a more comprehensive measure of developmental trauma, which looked at the frequency, duration, and impact of traumatic incidents (Baumeister et al., 2021). Another study with clinical voice hearers found only an indirect relationship between overall developmental trauma and distress, mediated by negative voice content (Rosen et al., 2018). Distress scores encompassed multiple items such as somatic concern, anxiety, guilt feelings, depression, and preoccupation from the validated Positive and Negative Syndrome Scale measure, allowing for a sensitive assessment (Rosen et al., 2018). Another study reported that out of five clinical voice hearers who had experienced a type of childhood trauma, three reported some level of distress which ranged from anxiety to hopelessness (Blom & Mangoenkarso, 2018). No further analysis was conducted in this study to assess the relationship between distress and early trauma due to the very small sample size.

Three studies with clinical voice hearers found that specific types of developmental trauma were associated with distress. One study found a significant relationship between distress, assessed using a validated measure of depression in schizophrenia,

with childhood emotional abuse only (Connor & Max, 2012). This study used the validated CTQ-F to assess many different subtypes of developmental trauma (Connor & Max, 2012). Whereas other studies used author-developed questions to assess specific subtypes of developmental trauma. The study by Offen and colleagues (2003) asked one question to check whether patients had experienced childhood sexual abuse. Results showed that childhood sexual abuse was significantly related to higher levels of distress in voice hearers (Offen, Waller, & Thomas, 2003). Another study asked questions about emotional, physical or sexual abuse in childhood only, though the questions were not clearly reported (Wearne et al., 2017). The study found that a separate cluster emerged which could be predicted by high rates of childhood sexual abuse and high levels of distress (Wearne et al., 2017). This cluster also included negative voice content and measures of dissociation. This indicated a relationship between childhood sexual abuse and developmental trauma in clinical voice-hearers, if negative voice content and dissociation were also present.

Four studies showed no significant relationship between developmental trauma and distress in a voice hearing population (Andrew et al., 2008; Begemann et al., 2022; Daalman et al., 2016). Two of these studies were of a high quality (Daalman et al., 2012; Begemann et al., 2022). Three studies found no relationship between prevalence of developmental trauma on anxiety, depression or voice-related distress (Andrew et al., 2008; Daalman et al., 2016). However, all four studies only assessed number of traumatic events that an individual was exposed to in childhood.

Relationship between developmental trauma on combined measure of voice content and distress

Three studies combined measures of voice content and distress and compared this to developmental trauma in a voice-hearing population, but with mixed results. Two of these studies were of a high quality (Daalman, 2012; Nesbit et al., 2022).

Two high-quality studies did not find any direct relationship between overall developmental trauma with a combined measure of voice-content and distress, either in clinical populations (Daalman, 2012; Nesbit et al., 2022) or non-clinical populations (Daalman, 2012). Another study found no direct relationship between certain types of developmental trauma (childhood sexual abuse, emotional abuse and physical neglect) with a combined measure of voice content and distress, though the relationship was present when mediated by anxious attachment styles (Pilton et al., 2016).

Discussion

Developmental trauma is commonly reported by people who hear voices (Baumeister et al., 2017; Bloomfield et al., 2021; Longden et al., 2012; Luhrmann et al., 2019). However, it is unclear how developmental trauma relates to the degree of negative voice content or psychological distress, both of which are associated with negative health outcomes in voice-hearers (Baumeister et al., 2017; Beavan & Read, 2010; de Boer et al., 2021). The current systematic review identified 15 studies which assessed the relationship between developmental trauma with voice content and psychological distress in both clinical and non-clinical voice hearers. Findings showed that having experienced some developmental trauma in the past was related with negative voice content. However, the strength of the relationship between developmental trauma and psychological distress was unclear and seemed to be mediated by other factors such as

dissociation, voice content, or self-schemas. Three out of the fifteen studies also combined voice content and distress into a single measure, but this was not directly related with developmental trauma in a voice-hearing population.

Role of developmental trauma in voice content

One possible explanation for the relationship between developmental trauma and negative voice content observed in the current review could be because auditory hallucinations may have similar attributes to the experienced traumatic event. For instance, voice hearers in qualitative studies report sexual content in voices if they had been a victim of childhood sexual abuse, while others report hearing the same voice as the person that abused them in childhood (Larøi et al., 2019). Yet, such direct links between trauma and voice content is not always present (Hardy et al., 2005). It is possible that the relationship between developmental trauma and voice content is instead mediated by how people cope with a developmental trauma. For instance, threat to one's sense of self following the trauma may result in feelings of shame or guilt which could result in the development of voices and influence the content of voices (Larøi et al., 2019), though this was not assessed in the current review. It is also possible that dissociation following developmental trauma could further have an impact on the content of voices. Existing research demonstrates that dissociative processes can mediate the relationship between developmental trauma and the development of hallucinations (Varese et al., 2012; Perona-Garcelan et al., 2012; Longden et al., 2012; Pilton et al., 2016), and it would be important to investigate its role in voice content. Negative schemas about oneself following a childhood traumatic event could also colour the content of voices (Larøi et al., 2019) and this was reported by one study in the current review (Scott et al., 2020). The role of negative schemas on voice content

has been proposed in cognitive models of voice hearing (Beck & Rector, 2003) though it is not always present in voice hearers (Larøi et al., 2019). It is possible that negative schemas following a developmental trauma are more likely to have an impact on voice content than negative schemas about oneself in general, but further research is needed to examine this relationship.

The type of developmental trauma could also influence voice content. Three studies in this review found that childhood sexual abuse in voice hearers was related to negative voice content (Andrew et al., 2008; Begemann et al., 2022; Wearne et al., 2017). This is supported by the existing literature. Exposure to childhood sexual abuse has shown to be an established risk factor for the development of voices (Bentall, Wickham, Shevlin, & Varese, 2012; McCarthy-Jones, 2011; Read, Van Os, Morrison, & Ross, 2005; Sheffield, Williams, Blackford, & Heckers, 2013). This may be due to neurobiological changes following sexual childhood abuse which is associated with negative outcomes and persistent voice hearing (Blanco et al., 2015; Millman et al., 2022), as well as factors such as dissociation that may help an individual to cope with the trauma (Longden et al., 2012; Pilton et al., 2016). One study in the current review did find that clinical voice hearers could be grouped into a cluster of having experienced childhood sexual abuse, negative content, and dissociation (Wearne et al., 2017). Further studies are required to explore the role of dissociation in mediating relationship between childhood sexual abuse and the content of voices specifically.

Role of developmental trauma in psychological distress

Though developmental trauma is commonly reported by voice hearers, the current review did not find a clear association between early trauma with psychological distress in this population. One study in the current review found that only general

developmental trauma rather than any one subtype was related to distress (Baumeister et al., 2021). This study was of a high-quality and assessed both exposure to and impact of childhood trauma, which could be a more meaningful measure of early trauma rather than noting only exposure to incidents. Other studies found that childhood sexual abuse and emotional abuse in particular led to more psychological distress (Connor & Max, 2012; Offen et al., 2003; Wearne et al., 2017). On the other hand, four studies did not find any meaningful relationship between developmental trauma and distress at all. These studies all measured cumulative childhood trauma only and measure of distress was assessed differently in each study. Other studies found that negative voice content and dissociation influenced whether an individual with voices and past trauma experienced distress (Rosen et al., 2018; Wearne et al., 2017), suggesting a more complex relationship between developmental trauma and distress mediated by dissociation (for instance as demonstrated in the cognitive attachment model of voices (Berry et al., 2017)). This is supported by a study which found reductions in anxiety, depression, and stress, when treatment targeted the dissociative processes in individuals with auditory hallucinations and a history of interpersonal developmental trauma (Varese et al., 2021). It should be noted that the present review included studies with many different measures of distress so the findings across studies may not be comparable. Having a clinical disorder could also in itself indicate that an individual is experiencing distress, but this was not used as a definition of distress in the current review. Future research is needed to clarify these relationships further.

Priorities for future research

More research is needed to understand the role of developmental trauma on symptoms of voice hearing, specifically voice content and distress. Voice hearing is also not

necessarily a unitary concept and there may be multiple pathways leading to specific content of voices. To best establish how developmental trauma is related to these symptoms, studies must isolate and assess these factors separately. Three studies in the present review collapsed distress and content into one measure which did not allow for meaningful conclusions to be made about the role of developmental trauma on both these factors (Daalman, 2012; Nesbit et al., 2022; Pilton et al., 2016). More controlled study designs are also needed. Only one study in the current review compared voice-hearers with and without developmental trauma (Misiak et al., 2016) and this type of study design should be considered by future research. Appropriate measures also need to be used. Majority of the trauma measures used in the current study are limited to noting the prevalence of trauma and tell us nothing about the impact that the trauma may have had on the individual. Indeed, not all people experiencing a traumatic event respond the same after a trauma, and this may be influenced by many factors such as how people defensively cope with the traumatic event and the subsequent impact on their lives (Fang, Chung, & Wang, 2020; Frans, Rimmö, Åber, & Fredrikson, 2005). Only two studies in the current review looked at exposure to as well as impact of early trauma (Misiak et al., 2016; Baumeister et al., 2021). Assessing the impact of trauma is more likely to be informative than simply noting the prevalence of trauma, and greater impact of trauma rather than the trauma itself may have been more likely to be related to distress in voice hearers.

Many studies only used one or two items to assess voice content which may not be useful to assess differences, often using the PSYRAT-AH measure. A more comprehensive measure of voice content may be more useful for the purpose of research. Several other contributing factors such as dissociation or schemas may influence how developmental trauma may impact the content of voices or psychological

distress (Larøi et al., 2019; McLaughlin et al., 2020; Popovic et al., 2019). Indeed, cognitive models illustrate that dissociative disorders and psychosis share similar features in onset and maintenance of symptoms (Farrelly et al., 2016; Hunter, Salkovskis & David, 2014), and some studies theorise that auditory hallucinations itself may be a dissociative phenomenon (Longden et al., 2012; Longden et al., 2018). Further research focusing on the relationship between dissociative experiences with voice content and distress is needed, as well as how this relates to experiences of developmental trauma.

Clinical implications

Improving our theoretical understanding of how developmental trauma could influence voice content and distress is crucial to provide the most effective interventions. Cognitive behavioural therapy for voices derived from cognitive models typically emphasise working with the individuals appraisal of voices (Beck & Rector, 2003). Given the findings of the current review, it could be useful to provide support for the underlying trauma that could have influenced the content of voices. There is some evidence that exposure-based trauma-focused therapies may improve psychosis symptoms and voices, though this seems to be the case only if the voices are experienced as direct intrusions of the traumatic event (Brand, Hardy, Bendall, & Thomas, 2020; Van Den Berg et al., 2018). Therapeutic interventions that allow patients to dialogue with the voices in a safe way may also prove effective to target the content of voices that have emerged as a result of past trauma (Steel, 2017), but need to be empirically tested. Based on the present review, interventions targeting negative schemas or dissociation may also be effective for voice-hearers with developmental trauma though further research is required to understand the role of these factors.

Limitations

The current review is not without its limitations. Firstly, only peer-reviewed studies in English were considered eligible for this review, possibly missing out research in other formats or in different languages. Secondly, studies were only included for adult voice-hearers and relied on a retrospective measure of childhood trauma which may not be reliable. Finally, only a narrative synthesis of findings was possible based on the large variability between studies and may have introduced bias in the reporting of the results.

Conclusion

Negative voice content and psychological distress in voice hearers can lead to complex mental health issues and negative outcomes. Developmental trauma is common amongst voice hearers and was found to be associated with negative voice content in the present review. The association between developmental trauma and distress was unclear, though a more complex relationship mediated by factors such as dissociation and even negative voice content seems possible and has been demonstrated in cognitive models, and therefore needs to be explored further. All studies in the current review varied considerably in their methodologies and analytical techniques limiting the strengths of the conclusions. Additional research is still needed to improve our understanding of the role that developmental trauma plays on voice-hearing symptoms in clinical and non-clinical populations.

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Service Improvement Project

Improving cultural competency of clinicians in an older adult psychology service: Service Improvement Project

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Embedded Abstract

Objectives: The aim of this service improvement project was to improve cultural competency of clinicians in an older adult psychological service. Cultural competency refers to promoting cultural awareness, humility, and sensitivity in the service, and developing clinician's skills to integrate culture in assessment and therapy. Methods: Consultations with the service and racial and ethnic minoritised patients were conducted to inform the project. A mixed methods design was carried out with three phases: (i) an audit to review information from racial and ethnic minoritised patients accessing the service, (ii) focus groups with psychologists, and (iii) development of a guidance for clinicians and set of recommendations for the service, adapted with service feedback. Results: A total of 20 (10%) older adult patients accessing the service between 2018 to 2022 were from a racial and ethnic minoritised background. The findings of the project suggest that culture can impact presentation of mental health difficulties, beliefs and values about seeking help, and can also be a protective factor for patients. Conclusion: The current project helped draw out cultural factors that are important to address when working therapeutically with older racial and ethnic minoritised patients and culminated in guidelines and recommendations for the older adult psychological service.

Keywords: cultural competency; ethnic minority; older adults; service improvement; older adult psychology service

Introduction

The terms race, ethnicity, and culture have continued to evolve in meaning since first coined and can be conflated in their usage (Stamper, 2019). Most recent definitions refer to ‘race’ as a category of grouping people based on ancestral origin and shared physical characteristics (especially skin colour), and ‘ethnicity’ as a person’s cultural identity, including national or regional identity, language, and religion (Stamper, 2019; Flanagin, Frey, & Christiansen, 2021). ‘Culture’ is therefore an umbrella term which encompasses the values and behaviours shared by a group (in this case ethnic groups) (Gopalkrishnan, 2018).

The following service improvement project focuses on cultural factors of people from minoritised racial and ethnic backgrounds in the United Kingdom (UK), defined as “all ethnic groups except the White British group”, which includes people from Black ethnic groups, Asian ethnic groups, Mixed ethnic background, Irish travellers, and Roma group (referring to migrants from Central and Eastern Europe) (UK Government, 2021; The Law Society of England and Wales, 2023). However, it was acknowledged that even within these subcategories, cultural identity can be subjective and unique to an individual based on their lived experience as well as the context in which this is discussed (Stamper, 2019; Naz, Gregory & Bahu, 2019).

Prevalence of mental health in older racial and ethnic minoritised groups

The proportion of older people (over the age of 65 years) from racial and ethnic minoritised groups in the UK is small but steadily increasing. Around 715,000 older adults in England and Wales were from minoritised racial and ethnic group in 2021 (6.5% of the older adult population), compared to 414,000 people in 2011 (4.5% of the older adult population) (Office for National Statistics, 2021). The prevalence of mental

health difficulties in this population is equivalent to people from White British groups, though varies by symptoms and ethnicity (Katbamna & Matthews, 2007; Mansour et al., 2020). For instance, older racial and ethnic minoritised patients with depression experienced fewer symptoms of hopelessness and suicidal thoughts compared to White British groups but were more likely to present with a co-morbid psychotic disorder (highest in Black ethnic groups) and substance abuse (highest in White Irish groups) (Mansour et al., 2020).

Older racial and ethnic minoritised populations are underrepresented in mental health services for psychological therapy (Bhattacharyya & Benbow, 2013; Mansour et al., 2020). When older racial and ethnic minoritised adults do access psychological support, their cultural needs may not adequately be addressed leading to distrust in health professionals in the service (Choi & Gonzalez, 2005; Rawlings & Bains, 2020; Bailey & Tribe, 2021).

The impact of culture on older adult's mental health

To address the cultural needs of patients, it is important to establish the dynamic role that culture plays on an individual's mental health such as those from racially and ethnic minoritised groups. This is highlighted by the Cultural Influences on Mental Health (CIMH) model ((Hwang, Myers, Abe-Kim, & Ting, 2008); see Figure 1).

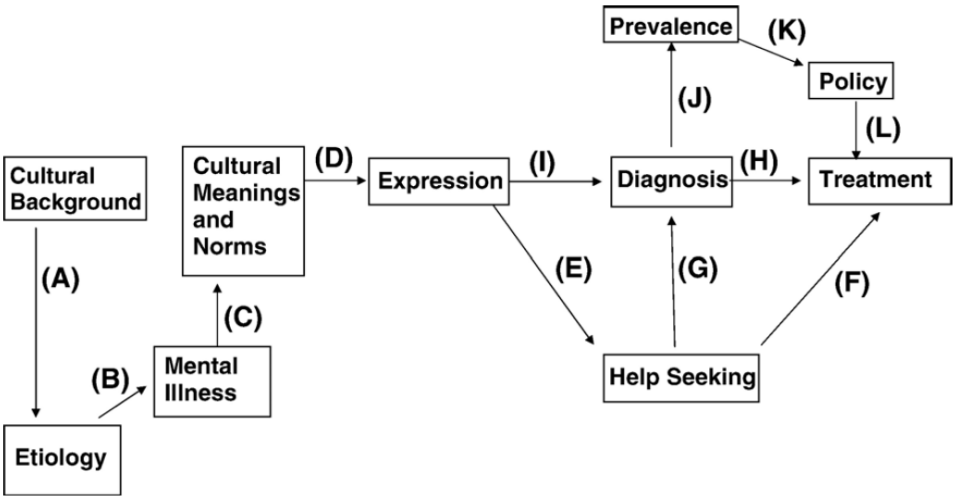


Figure 1. The Cultural Influences on Mental Health (CIMH) model (Hwang et al., 2008)

The CIMH model states that culture contributes to the aetiology of mental illness, as people from racial and ethnic minoritised groups can experience a disproportionate burden of unique stressors (Hwang et al., 2008). In particular, the intersection between being from a minoritised racial and ethnic background and factors such as social marginalisation, tenuous social circumstances, and limited support networks, can contribute to inequalities in mental health for this population (Commission on Race and Ethnic Disparities, 2021; Bansal et al., 2022). In older adults, traumatic experiences of being a refugee and unique challenges due to migration were also linked to increased mental health difficulties (Frost et al., 2019; Guruge, Thomson, & Seifi, 2015). Experiences of systemic, institutional and interpersonal racism (defined as disadvantaging individuals and communities based on their race), as well as 'othering' of individuals despite their experiences in all aspects of life being similar to their White British counterparts, can also contribute to mental health difficulties (Bansal et al., 2022; Nazroo, Bhui, & Rhodes, 2020; Naz et al., 2019). For example, experiences of

discrimination (including racism) in older Black ethnic groups were significantly related to higher rates of depressive symptoms (Yoon, Coburn, & Spence, 2019).

An individual's perception and expression of their symptoms, and help-seeking behaviour, can also be affected by culture according to the CIMH model. Some older patients attribute their mental health difficulties to inter-generational conflicts (Rawlings & Bains, 2020; Jimenez et al., 2012) or external forces such as spirits (Choi & Gonzalez, 2005). Mental health disorders can also be expressed as somatic symptoms, for instance in older Asian ethnic groups (Jimenez et al., 2012). Older adults may face unique barriers to accessing mental health support, such as stigma within their own ethnic communities reported by older Asian ethnic groups (Jiminez et al., 2012), and language differences, social isolation, and limited knowledge about mental health systems reported by older immigrants (Guruge et al., 2015). Institutional racism within UK mental health systems (Nazroo et al., 2020) and mistrust of healthcare professionals (Guruge et al., 2015; Jimenez et al., 2012) can further negatively influence help-seeking behaviours.

Given the impact of culture on mental health aetiology, expression and help-seeking behaviours, services should integrate culture into the therapeutic care they provide for older racial and ethnic minoritised patients.

What constitutes a culturally competent service?

A service could integrate culture into therapeutic care by promoting cultural competency. This refers to promoting cultural awareness, humility and sensitivity, and developing clinician's skills to adapt assessment and treatment for patients based on cultural needs (Lin, Lee, & Huang, 2017). This also includes equipping clinicians with the skills to address racism with patients (Beck, 2019; Williams, Faber, & Duniya,

2022), consider patient's beliefs about mental health and treatment (Reder & Fredman, 1996), be cognisant of the social climate (Naz et al., 2019), and aware of the interaction between clinician's own race, ethnicity and culture with the patient's (Burnham, 2012; Totsuka, 2014).

However, clinicians face barriers in implementing culturally competent care such as lack of time, discomfort when talking about race and ethnicity, and fear of calling out racist practices, often due to limited training and resources (Bansal et al., 2022). Recent policies promoting cultural competency are also directed at adult services only (e.g., Beck et al., 2019), and much of the research about mental health in older racial and ethnic minoritised groups is disadvantaged by low sample sizes and is mostly conducted in countries outside the UK or with patients diagnosed with depression. Further work is needed to develop resources for clinicians to implement culturally competent care specifically in older adult mental health services.

Service context

This service improvement project was conducted in a Step-4 community older adult psychology service covering South and North Buckinghamshire. Buckinghamshire county has a diverse population, with around 20% of people from a racial and ethnic minority group (around 110,000 in 2021), slightly higher than 18% of racial and ethnic minority population in England and Wales (Office for National Statistics, 2021). Around 19% of the population in Buckinghamshire county is aged older than 65 years (around 105,000 in 2021), similar to England and Wales (Office for National Statistics, 2021). Almost a third of people from minoritised racial and ethnic backgrounds live in the most deprived areas in Buckinghamshire (More, 2016), similar to much of England (Ministry of Housing Communities and Local Government, 2019).

The service provides psychological therapies for adults over the age of 65 who are typically referred from community mental health teams, and this includes cognitive behavioural therapy with some third-wave adaptions based on systemic thinking. The service comprises one consultant clinical psychologist, four clinical psychologists, and four assistant psychologists. The service also regularly invites trainee clinical psychologists for six months to a year at a time. Initial discussions with clinical psychologists in the service highlighted that staff do not feel confident in incorporating an individual's culture into assessment and treatment due to limited availability of tools and research with this population. It was recognised that the needs of this patient group were possibly not being addressed.

Aims

The service improvement project aimed to improve cultural competency of the Buckinghamshire Older Adults Service via:

(i) the development of a guidance for clinicians to use when supporting racial and ethnic minoritised older adults

(ii) recommendations for the service on how to embed cultural competency in practice

This project was primarily based on clinician's perspectives, and it was expected that the findings produced will only be the first step in improving cultural competency for the service.

Methods

Design

A mixed-methods design was used with an explorative approach. The project consisted of three phases: 1) an audit of clinical notes, 2) focus groups with psychologists working with older adults within the service and across Oxford Health NHS Trust, and 3) development of a guidance for clinicians and recommendations for the service, adapted with feedback from the service. The project was informed by consultations with racial and ethnic minoritised patients. The project began in January 2021 and was completed in July 2022.

Ethical Considerations

The project received approval from the Clinical Audit Team within the Trust in June 2021 (full NHS ethics was not required) and information governance approval in July 2021 (see Appendix F).

Consultations with patients

Consultations were conducted with three racial and ethnic minoritised older adults from the service. All patients were consulted individually by GR for approximately an hour. Questions were derived from previous research, consultations with the service, and generally mapped onto the CIMH model (see Appendix G for questions). Extensive notes were made during consultations, but the responses were not recorded. The main focus while reviewing the notes was how cultural factors impacted on mental health, expression of difficulties, and help-seeking behaviours based on the CIMH model. Due to the small sample size, descriptive analysis was used to summarise the main themes from patient's responses. Themes emerging from these consultations informed the audit and focus groups with clinicians, as well as the output of the project.

Phase 1: Audit

An audit of racial and ethnic minoritised patients who had been accepted into the service between February 2018 and March 2022 was conducted. This period was chosen due to the availability of routinely collected data across the service. The audit was conducted using an author-developed tool, which was based on analysing a sample of patient notes (n=3), as well as information likely to be relevant for this population (e.g., migration, family and community values, and religion) (see Appendix H for audit tool). The purpose of the audit was to determine the proportion of racial and ethnic minoritised patients in the service, and gather information about their demographics, mental health presentation, cultural factors that impacted their mental health, and whether culture was incorporated in assessment and therapy. This was achieved by collating patient information from referral spreadsheets, as well as the demographic section, assessment letters and outcome letters. If assessment or outcome letters were not available, the most recent clinical notes from the electronic health system were consulted.

Phase 2: Focus groups with psychologists

Two focus groups were conducted remotely with clinical psychologists, trainee psychologists and assistant psychologists within the service (n=12) and clinical psychologists across Oxford Health NHS Trust who worked with older adults (n=6). Informed consent was collected prior to beginning the focus group. Questions were developed by consulting supervisors, feedback from patient consultations, and considering the treatment process in the service (e.g., assessment and therapy). Questions also referred to specific cultural competency skills (e.g., considering racism in sessions) (Beck, 2019) (see Appendix I for questions). Questions were kept broad due to the exploratory nature of the study, but generally mapped onto the CIMH model

(Hwang et al., 2008). Questions were aimed at all psychologists irrespective of their experience of working with racial and ethnic minoritised older patients.

Thematic analysis was used to analyse the data collected from both focus groups, which is a method of identifying and interpreting patterns of meaning or themes within qualitative data. The analysis followed the six-step process recommended by Braun and Clarke (2006), and also adhered to their 15-point criteria of a good thematic analysis such as accurate transcription, themes that match the data, and an active role of the researcher. Data was transcribed by GR. The data was read multiple times before generating initial codes and subsequent themes. Similar codes and themes emerged from both focus groups and hence their responses were combined for analysis. To reduce risk of bias, initial codes and themes were independently checked by RV alongside extracts from both focus groups. Any discrepancies from this independent review were used to further refine the codes and themes. The original transcripts were then re-read to identify any further codes. These were regrouped as needed and themes were refined iteratively until a final set of themes were established.

Given the researcher actively takes part in the thematic analysis process, the position of the researcher should be considered when interpreting the themes. The analysis was conducted by GR who is a trainee clinical psychologist from an ethnic minority background and had consulted with older racial and ethnic minoritised patients for this project prior to the focus groups. GR had not worked therapeutically with the patient population or worked with any of the psychologists in the focus group.

Phase 3: Development of guidance and recommendations, with feedback from the service

By assimilating the findings from patient consultations, audit and focus groups, as well as evidence from research and policy, a guidance for psychologists and a set of recommendations for the service were developed. This was shared with the service. Six psychologists provided comprehensive feedback through remote interviews lasting 45 minutes to an hour. Changes were made to the guidance and recommendations based on this feedback.

Results

Descriptive analysis of patient consultations

Consultations were conducted with three older adults (one male and two females) from different racial and ethnic minortisied groups (South Asian, Mixed Asian, and Black). All patients had completed treatment in the service. Key themes from these consultations are summarised below:

<u>Stigma</u>

Two patients cited stigma of having a mental health condition as a barrier to seeking support. One patient also felt stigmatised by their own religious and ethnic community, and therefore did not feel comfortable being 'matched' to a clinician from the same ethnicity.

<u>Impact of lived experience</u>

All three patients discussed the impact of their lived experience in the UK. Two patients had migrated to the UK in childhood; however, one patient felt a greater sense of

belonging to their ethnic community due to experiences of racism. One patient was born in the UK and did not feel that their lived experience was different to White British groups and referenced their social network which consisted of people from different cultures.

Mental health presentation

Two patients stated that their mental health issues were impacted by their culture, specifically inter-generational differences in values, and experiences of racism. The third patient stated that their mental health symptoms were related to their race (i.e., hallucinations of people from the same race as the patient).

Therapeutic relationship

All patients stated that they felt comfortable talking about their culture in therapy once they had established a safe therapeutic relationship.

Phase 1: Audit

Proportion of racial and ethnic minoritized patients

A total of 196 older adults had been accepted for therapy following referral into the service from February 2018 to March 2022. Of these, 20 patients (10%) were from a racial and ethnic minoritised background, and the remaining patients were White-British (n=101; 51%) or their ethnicity could not be easily determined due to missing data (n=75; 39%).

Demographics and culture background

A detailed audit was completed of the 20 patients from a racial and ethnic minortised background. This includes patients noted as being White-British or of an unknown

ethnicity but were found to have ancestral roots from outside Britain or belonged to a religious minority. Demographics and cultural background of patients are summarised in Tables 1 and 2.

Table 1. Demographic information of racial and ethnic minortised patients in the service between February 2018 and March 2022 (total patients=20)

Demographics		Number of patients (%)
Gender		
	Female	16 (80%)
	Male	4 (20%)
Marital status		
	Married/Living with partner	8 (40%)
	Divorced	5 (25%)
	Widowed	5 (25%)
	Single	1 (5%)
	Unclear	1 (5%)
Mental health presentation		
	Low mood	6 (30%)
	Low mood with anxiety	6 (30%)
	Psychotic symptoms	2 (10%)
	Personality disorder	2 (10%)
	Bipolar disorder	1 (5%)

Table 2. Cultural background of racial and ethnic minoritised patients in the service between February 2018 and March 2022 (total patients=20)

Cultural background		Number of patients (%)
Ethnicity		
	Asian/Asian British	4 (20%)
	White-Other	4 (20%)
	White-British	3 (15%)
	White-Irish	2 (10%)
	Black/Black British	1 (5%)
	Multi-ethnic	1 (5%)
	Unclear	5 (25%)
Religion		
	Muslim	3 (15%)
	Jewish	3 (15%)
	Catholic Christian	3 (15%)
	Christian	2 (10%)
	Spiritualist	1 (5%)
	Unclear	8 (40%)
Religious activity		
	Religious	5 (25%)
	Not religious	3 (15%)
	Unclear	12 (60%)
Country of birth		
	Western Europe (excluding UK)	5 (25%)
	UK	4 (20%)
	Southeast Asia	3 (15%)
	Africa	1 (5%)
	Central America	1 (5%)
	North America	1 (5%)
	Unclear	5 (25%)
Country(ies) lived in childhood [a]		
	Western Europe	5 (25%)

Cultural background		Number of patients (%)
	UK	6 (30%)
	Southeast Asia	2 (10%)
	Africa	2 (10%)
	Central America	1 (5%)
	Unclear	6 (30%)
Country(ies) lived in adulthood [a]		
	Western Europe	5 (25%)
	Unclear	5 (25%)
Country(ies) lived in childhood [a]		
	Western Europe	5 (25%)
	UK	6 (30%)
	Southeast Asia	2 (10%)
	Africa	2 (10%)
	Central America	1 (5%)
	Unclear	6 (30%)
Country(ies) lived in adulthood [a]		
	Western Europe	5 (25%)
	UK	13 (65%)
	Southeast Asia	1 (5%)
	Africa	1 (5%)
	Central America	1 (5%)
	Australia	1 (5%)
	Unclear	6 (30%)
Date of move to the UK [b]		
	Recorded	8 (73%)
	Not recorded	3 (27%)
First language		
	English	4 (20%)
	Dutch	1 (5%)
	Portuguese	1 (5%)
	Punjabi	1 (5%)
	Unclear	13 (65%)

Cultural background		Number of patients (%)
Interpreter required		
	Yes/sometimes	2 (10%)
	No	6 (30%)
	Unclear	12 (60%)

Note. a = Total over 20 as some people lived in more than one country; b = Relevant for 11 patients who had moved to the UK

Impact of culture on mental health

The impact of culture on mental health presentation was noted for ten racial and ethnic minoritised patients (50%), some of whom had multiple reasons listed. These were: family secrets of traumatic events, religious identity, lack of belonging to own ethnic group, racism, religious discrimination, stigma, inter-generational conflict, intersectionality between gender and ethnicity, perception of divorce in culture, and migration.

Incorporating culture into assessment and therapy

Key events that a patient lived through were noted for seven patients (35%). These events included: war, being adopted, and migration challenges. Role of family and community were noted for 15 patients (75%) and these included: patient's role within family, relationships with family members, patient's identity within their community, the importance of a patient's community, expectations of the family and community, and bereavement.

The way culture was incorporated into treatment was recorded for three patients (15%). This included: giving space in therapeutic session to reflect on patient's cultural

experience, exploring how discrimination impacted current relationships, and using family members to translate therapy content. Cultural factors as being protective was noted for seven patients (35%), and included: family and extended family relationships, friends, religion, and faith leaders.

Phase 2: Thematic analysis of focus groups with psychologists

Qualitative data from two focus groups with psychologists indicated two primary themes: perception of patient's cultural factors and clinician's cultural competency, each with several subthemes (see Table 3 for an overview and Appendix J for further details of codes and example quotes).

Table 3. Overview of themes and subthemes from the thematic analysis

Theme	Subthemes
Perception of patient's cultural factors	Language Family Life events Beliefs and values Barriers to help-seeking Differences arising due to culture
Clinician's cultural competency	Cultural humility and curiosity Adapting therapy Purpose of cultural competency Barriers to cultural competency Clinician's position

Theme 1: Perception of patient's cultural factors

Language. Clinicians spoke about differences in language: "There were often sort of words and phrases that that he would use that came across this sort of quite concerning to me…". Clinicians recognised that language differences could impact the intervention

and the therapeutic relationship: “…many other languages don't work so well with CBT types of question…”, and “…how people pronounce their names is important to ask about”. The “power of language” and how it is “socially constructed” was also acknowledged, in particular that language had the power to be stigmatising or validating for the patient.

Family. Clinicians acknowledged that it was important to ask about family and navigating family relationships, such as being aware of the differences in how families spoke about the patient: "So, the daughter spoke in one way about mum, but their son spoke in a different way…”, and aspects of confidentiality: “..the son in law insisted on staying in a big open plan room where he could hear.”

Life events. Clinicians noted several “different events and time frames” that may be important to consider for racial and ethnic minoritised older patients. This includes the impact of migration: “…if people have had experiences of migration or races …. that will inevitably impact on their views about themselves and their values, core beliefs, exceptions.”

Beliefs and values. The role of culture in shaping patient’s beliefs and values were also noted: “It's about you know a challenge between good or bad, and I think we've got to be mindful of where Western therapy ideas are, are not really there.” The importance of religion was also noted: “the religious practises… how an older member of the family practice”. In addition, clinician’s acknowledged that patients could have different beliefs about mental health and treatment due to their culture: “she then didn't think she should have any help …culturally that was partly around their opinion about how treatable psychosis was”.

Barriers to help seeking. Many clinicians mentioned that “stigma is such a huge part” to consider when working with racial and ethnic minoritisted older adults: “she found it difficult to come along here and talk about these things” and “some people would feel ashamed and whether that then impacts how much they share” in therapy. They also noted that patients felt stigmatised with people outside their community: “what they think about you (the clinician) thinking of them” and felt stigmatised by people within their community, such as expressing concerns about interpreters with a similar racial and ethnic “background”.

Differences arising due to culture. Clinicians acknowledged that differences arising due to culture could affect racial and ethnic minoritised patients. This includes differences in lived experiences: “the younger generation to be their sort of, access point, maybe, to the newer culture”, and inter-generation differences such as children stating that “it’s actually really hard to communicate with” their parent. People experiencing "really racist and abusive ideas” from others was also discussed. The historical context of these experiences was mentioned: “when you look at those in historical documents of having come over in the 50s, and no blacks no Irish no, no dogs in the windows of hotels…”.

Theme 2: Clinician’s cultural competency

Cultural humility and curiosity. Clinicians found it important to be curious when talking to patients about their culture: “…spend more time asking about what times of their lives may have been like”. This could be facilitated by "having an informant who is able to provide some of that background” such as family members. Clinicians also noted that they had “to be really careful not to make assumptions about people's

experiences” and be willing to have “permission to explore and be honest”, which includes “saying what you know or don't know”.

Adapting therapy. Clinicians stated that they may adapt their communication in therapy by “making sure that you feel that your person has a window to talk to you openly and honestly” and “recognising that there's even more of a reason to explain what you're going to do and how you do it in the way that you do it”. Adaptations can also extend to using tools and techniques including: “social graces”, “timelines” and “Laidlaw’s models”.

Purpose of cultural competency. The reason for being culturally competent was also discussed: “to elicit those values that may be relevant to what's going on in the person’s life now” and “to reduce the risk, but also to help improve quality of life”. This can in turn also impact the intervention which should ideally be “culturally appropriate”.

Barriers to cultural competency. Clinicians stated that there were some barriers to being culturally competent as it could be “really difficult actually… probably the most complicated”. This was due to “limited experience working with different ethnic backgrounds” and feeling “uncomfortable”.

Clinician’s position. Clinicians noted that to be culturally competent, they had to be aware of their “own culture first” and assume “that we are maybe culturally different to the person that you're with”.

Phase 3: Development of guidance and recommendations, with feedback from service

At this stage, a guidance for psychologists was produced with prompts for assessment and therapy when working with older racial and ethnic minoritised patients, as well as prompts for reflection and supervision when supporting this population.

Recommendations to the service for improving cultural competency were also listed. Both the guidance and recommendations were based on the findings of the current project and existing research and policy (e.g., Rawlings & Bains, 2020; Tan et al., 2020, Bhattacharyya & Benbow, 2013; Beck, 2019; Williams, Faber, & Duniya, 2022). Research was also used to define commonly used words such as race, ethnicity, culture, as well as to incorporate the Cultural Competency Assessment (CCA) tool to support reflection of cultural competency skills (Doorenbos, Schim, Benkert, & Borse, 2005; Lin et al., 2017).

Six psychologists provided comprehensive verbal feedback on the guidance and recommendations (see appendix K and L). Feedback was used to develop the final version of the guidance and recommendations, and changes beyond the scope of the project were noted as gaps for the future (see appendix M for the final version of the guidance and recommendations). To embed this into routine practice, it was suggested that the service organise a team meeting to review the guidelines and recommendations, make a plan on how these will be stored and used, and use the audit tool provided in the recommendations to plan next steps. The team were also encouraged to complete the CCA tool for personal reflection. It was also made clear that the service should continue to update and refine the guidance and recommendations over time.

Discussion

This service improvement project was conducted to improve the cultural competency of the Buckinghamshire older adult psychological service. Findings from the audit, focus groups with clinicians, as well as research and policy, culminated in the development of a guidance for clinicians and a set of recommendations for the service. Although the

project was informed by patient consultations, the guidance and recommendations were primarily based on staff views. Given the limited research and policy aimed at older racial and ethnic minoritised patients, the current service improvement project helped to draw out the most relevant cultural factors that should be considered for this specific population.

An important finding that emerged from this project, according to staff perspectives and the audit, is that many cultural factors can contribute to mental health distress in older racial and ethnic minoritised patients, including inter-generational differences, racism, lack of belonging to own ethnic group, internalised stigma, and experience of migration. This is supported by the CIMH model and research which proposes that racial and ethnic minoritised groups are vulnerable to experiencing mental distress due to unique stressors (e.g. racism, being 'othered' despite similar lived experience to White British groups, traumas related to migration) (Naz et al., 2019; Hwang et al., 2008). However, an individual's cultural identity can also be used to develop resilience and coping skills for patients. According to the current audit, protective factors include relationships with family and friends, religion, and connections with faith leaders. Clinicians also indicated that interventions are likely to be successful if culturally appropriate for patients. This is further supported by research. Religion and spirituality have been shown to become important for some older racial and ethnic minoritised adults (Tan et al., 2020) and for highly religious individuals, prayer and spirituality could reduce symptoms of depression (Rawlings & Bains, 2020; Tan et al., 2020). Harmony within families is also a protective factor for some older adult groups (Rawlings & Bains, 2020), though some elderly patients may not feel comfortable sharing information about their family to strangers due to a sense of betrayal (Rawlings

& Bains, 2020). This indicates the need for services to personalise the work depending on the individual and their specific cultural needs.

The present study also identified barriers to help-seeking. Older adults from racial and ethnic minoritised group are faced with multiple layers of stigma – being minoritised, being of an older age, and experiencing a mental health difficulty. The current project found that older adults report stigma from people within and outside their community. This can prevent them from seeking mental health support and make it challenging to speak to interpreters or clinicians from the same race and ethnicity (Jiminez et al., 2012; Rawlings & Bains, 2020). Distrust of healthcare professionals can also prevent patients from accessing psychological support (Nazroo et al., 2020; Guruge et al., 2015). This could be a factor in the low uptake of psychological therapy for older racial and ethnic minoritised patients in the current service (only 10%), similar to low rates reported elsewhere (Mansour et al., 2020). It is possible that culturally competent care could minimise distrust in healthcare professionals for this patient population and improve access to psychological therapy in the future.

The current findings also demonstrated how psychologists could adapt assessment, formulation, and treatment with older racial and ethnic minoritised patients. Being sensitively curious and showing cultural humility emerged as important factors according to clinicians. Although clinicians stated that they felt overwhelmed and found it challenging to consider culture in sessions, they generally agreed the need to be proactive in introducing culture and supporting patients to elaborate on their beliefs and values. This is supported by recommendations for clinicians to address topics such as racism (Beck, 2019; Williams et al., 2022), and show cultural humility when working with patients (Owen et al., 2016). Consultations with patients and audit of notes also

indicated that patients felt comfortable talking about their culture when given the space to reflect on their experiences. Clinicians also felt that they could adapt tools and techniques for this client group, such as 'social graces' (Burnham, 2012), timelines (Laidlaw, Kishita, & Chellingsworth, 2016), and the Laidlaw formulation model (Laidlaw, Thompson, & Gallagher-Thompson, 2004). Indeed, the current findings and the research support the need to integrate culture into routine formulation and treatment, rather than considering this as a separate topic in psychotherapy (Hays, 2009).

While the present study identified cultural competency skills for clinicians working in an older adult psychology service, these should be implemented within the context of national policies and recommendations. For instance, the Equality Act (Equality Act, 2010) prevents discrimination based on protected characteristics, including race, and provides a benchmark for clinicians working with patients from racial and ethnic minoritised groups. The Patients and Carers Race Equality Framework (NHS England, 2020) and the Equality, Diversity and Inclusion strategy by the Health and Care Professions Council (HCPC, 2020) also sets out expectations for clinicians and services, such as anti-racist policies, routes to obtain patient and carer feedback, and encouraging diversity in recruitment. The call to acknowledge the 'whiteness' of the clinical psychology profession has also led to key recommendations in the field (e.g., anti-racist teaching and equitable access into the profession) which could impact on delivering a culturally competent service in the future (Ahsan, 2020; Wood & Patel, 2017). The guidance and recommendations produced in the current project should be implemented and adapted with these wider policies in mind to provide equitable care for patients in mental health services.

Limitations

There are a number of limitations that should be considered. First, the findings of the current project were based on consultations with only a small number of older racial and ethnic minoritised patients. While the project aimed to understand the perspectives of staff as the first step to a culturally competent service, it is important that the voices of patients and carers are heard, and their feedback incorporated in subsequent versions of the guidance. Second, future research should assess if the guidance and recommendations can improve clinician's cultural competency and patient outcomes (e.g., better quality care and improved clinical outcomes). The service should also prioritise improving psychology access for older racial and ethnic minoritised patients. In addition, the trainee and two supervisors were themselves from an ethnic minority background. Their cultural beliefs and values may have had an impact on the project, including the interpretation of findings and the development of the guidance and recommendations. It is important that the guidance and recommendations continue to be updated and refined overtime to minimise any biases. Finally, this project was conducted within the context of an ongoing pandemic. This could have impacted the older racial and ethnic minoritised patients coming into the service and how therapeutic care was adapted for this population. This was not addressed in the current project and could be explored further.

Conclusion

Cultural factors have an impact on the mental health difficulties experienced by people from racial and ethnic minoritised backgrounds. Mental health services should be culturally competent to better integrate culture into therapeutic care. Research and policies have not typically focused on improving cultural competency for older adult mental health services. The current service improvement project was conducted with

the Buckinghamshire older adult psychological service. Consultations with patients, an audit of the service, and focus groups with psychologists helped draw out cultural factors that could be relevant for older racial and ethnic minoritised patients. This led to the development of a guidance for clinicians and recommendations for the service with the aim to improve the service's culturally competency. It is important that further updates are made to the guidance with feedback from patients.

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Theory Driven Research Project

Voice phenomenology, distress, and persistence of voice hearing in an adolescent help-seeking population without a psychotic disorder

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Proposed Journal: This paper was targeted towards the Psychiatry Research journal which publishes original articles assessing possible mechanisms of psychiatric symptoms. This journal has previously published research about auditory verbal hallucinations which is the topic of the current paper.

Embedded Abstract

Young voice hearers who experience distress and persistent voices are vulnerable to negative health outcomes, especially if seeking help from mental health services. However, little is known about the voice hearing phenomenon in an adolescent help-seeking population without a diagnosis of a psychotic disorder. The current longitudinal study aimed to assess the relationship between negative voice content and distress, and identify potential predictors of voice persistence, in an adolescent help-seeking population. Thirty adolescents aged 13-18 years with various clinical presentations and no diagnosed psychotic disorder were recruited from two NHS sites. Baseline measures were conducted, and 16 adolescents were followed-up after three months. Young voice hearers mostly reported voices with a derogatory and threatening content, although also heard other voice content. Around 80% of young voice hearers heard persistent voices. Derogatory and threatening voice content, and reasons for listening to and believing this content, was significantly associated with distress. Derogatory and threatening voice content, reasons for listening to and believing this content, and social isolation showed small to medium effects on voice persistence. This study highlights the role of voice content as a predictor of distress, and potential factors that may drive voice persistence in younger people.

Keywords: auditory hallucinations; voice hearing; voice content; distress; persistence; young people; adolescent

Highlights:

- Help-seeking adolescents without a psychotic disorder report hearing voices
- Voices in this population are mostly of negative content and impacts functioning

- Around 80% of young people heard persistent voices after three months
- Negative voices and reasons to listen to and believe them was related to distress
- Young people without a psychotic disorder may benefit from support for their voices

1. Introduction

Auditory verbal hallucinations or 'hearing voices' is the phenomenon of hearing verbal content in the absence of external stimuli (Morrison et al., 2002; Pilton et al., 2015; Shinn et al., 2020). The vividness of the auditory experience is particularly notable, for example one voice hearer describes: "*... I struggle with it feeling so real. I will look around, I will try and work out who is saying it, why they are saying it, I don't understand?"* (Sheaves et al., 2020, pg. 365). Cognitive theories propose that voice hearing can arise due to misclassification of internally generated events, such as intrusive negative thoughts, as externally generated based on patient's prior beliefs of what is likely to occur (e.g., a bias in top down processing of information) (Morrison and Renton, 2001). Although not all voices require a need for care (Maijer et al., 2018; Peters et al., 2016), cognitive models find that the content of voices and voice related appraisals can influence and maintain distress (Chadwick and Birchwood, 1994).

Voice hearing is most prevalent clinically within psychotic disorders, with a lifetime prevalence rate of 60-80% in people with these diagnoses (Lim et al., 2016). Voice hearing can also occur in other mental health conditions, occurring in up to 25% of people with borderline personality disorder, 5-7% of people with major depression, and 22% of people with bipolar disorder (Baethge et al., 2005; Ohayon and Schatzberg, 2002; Slotema et al., 2018). Voice hearing also occurs in the context of severe anxiety, eating disorder, autism, and post-traumatic stress disorder (Aya et al., 2019; de Leede-Smith and Barkus, 2013; Toh et al., 2022; Waters et al., 2018).

1.1. Voice hearing in adolescents

Voice hearing is more prevalent in younger people (12%) compared to older populations (4-6%) (Maijer et al., 2018). In younger people without a need for care,

voices are usually transient and can reflect a normal stage of development (Maijer et al., 2018; Van Os et al., 2009). The typical age of voice onset also occurs earlier in life, anywhere from the ages of 9 to 22 years (Daalman et al., 2011; Parry and Varese, 2021; Peters et al., 2016). Yet, research with young voice hearers is sparse relative to the adult literature. Research with young people mostly focuses on voice hearing in non-clinical groups (Bartels-Velthuis et al., 2011; Coughlan et al., 2022; De Loore et al., 2011; Parry et al., 2020; Parry and Varese, 2021), and find that some voices in this population can be helpful and be experienced positively, whereas other voices can be negative and distressing (Parry and Varese, 2021). In young voice hearers with psychosis and bipolar disorder, voices are mostly experienced as negative, distressing, appraised as omnipotent, and typically resisted (Cavelti et al., 2019) and young voice hearers with PTSD experience voices phenomenologically similar to voices heard within a psychotic disorder (Scott et al., 2007). Despite this, adequate treatment is not offered by mental health services to younger people when voices occur outside of a psychotic disorder (Kapur et al., 2014). Voice hearers often report feeling lost and unheard by clinical services (Kapur et al., 2014) or not always believed by clinicians (Sheaves et al., 2021). Clinicians may consider voices to be a secondary symptom which could resolve if addressing the main presenting mental health problem. Further research is needed to understand the phenomenon of voice hearing in a help-seeking adolescent population hearing voices without a diagnosed psychotic disorder, to ascertain whether specialist support for voices is needed in this population.

1.2. Distress and persistent voices in adolescents

Whilst the majority of voices are transitory and benign in younger people, for a minority of people voices are associated with significant distress (Maijer et al., 2019).

Distress is significantly higher for younger people who seek support from mental health services than those who do not (Escher et al., 2002a), and distress also predicts the later formation of delusional ideation in young people who hear voices (Escher et al., 2002b). Most concerningly, voices are associated with three times greater odds of attempting suicide in help-seeking adolescents (Fujita et al., 2015).

Around 20-35% of adolescents in the general population experience voices that persist over 2 to 4 years, as shown by studies with larger samples (N>1000) (Brink et al., 2020; De Loore et al., 2011; Steenkamp et al., 2021). In a smaller sample of young people (N=80), half of whom were help-seeking, voices persisted in 40% across 3 years (Escher et al., 2002a). Young people with persistent voices are likely to be negatively impacted in their daily functioning and have an increased likelihood of developing severe mental health difficulties (Bartels-Velthuis et al., 2011; De Loore et al., 2011; Kelleher et al., 2012). It is crucial to identify predictors of voice distress and persistence in younger populations, particularly those seeking help from mental health services, to identify young people most at risk and offer early intervention.

1.3. Study aims

- To describe the phenomenology of voices in a help-seeking adolescent population without a diagnosed psychotic disorder.
- To assess predictors of distress.
- To assess predictors of voice persistence over three months.

1.4. Primary hypothesis

1. The degree of derogatory and threatening voice content predicts distress

Cognitive models of voice hearing based on adult populations propose a central role for appraisal of voices in fuelling distress (Chadwick and Birchwood, 1994; Larøi et al., 2019). For instance, voices appraised as having a malevolent intent are experienced as more distressing (Larøi et al., 2019). Evidence for the association between negative appraisals and voice distress is now well established in adult populations (Mawson et al., 2010; Tsang et al., 2021). More recently, the direct impact of voice content on distress has been examined. Clinical versus healthy voice hearing can be predicted by voice content alone with 88% positive predictive value (Daalman et al., 2011). Negative voice content is also strongly associated with distress and poor functioning in adults (de Boer et al., 2021), and studies with younger people have begun to demonstrate a direct relationship between negative content and distress (Cavelti et al., 2019; Rammou et al., 2022). The present study will investigate this in a help-seeking adolescent sample who hear voices without a psychotic disorder. The focus will be on derogatory and threatening voices (DTVs), which are a common and clearly defined negative voice presentation that has recently been the focus of investigation (Sheaves et al., 2023, 2020).

1.5. Exploratory hypotheses

2. The degree of derogatory and threatening voice content predicts persistence of voice hearing

Cognitive models state that negative voice content and appraisals contribute to negative affect and influence behaviours that can drive the maintenance of voices (Morrison and Renton, 2001). In turn, voices are likely to occur in people experiencing acute stress

and negative affect (Beck and Rector, 2003; Morrison, 2003; Parry and Varese, 2021). Psychological factors found to predict voice persistence in help-seeking adolescents hearing voices include low self-esteem, increased anxiety and depression, and negative appraisals (Escher et al., 2002a; Steenkamp et al., 2021). However, the role of negative voice content in driving voice persistence has not been examined in younger people.

3. Reasons for listening to and believing derogatory and threatening voice content predict distress

DTVs are reported by two thirds of patients aged >14 years (McCarthy-Jones et al., 2014). A new cognitive framework for understanding voice distress centres on reasons for listening to and believing DTVs (Sheaves et al., 2023). Voice hearers with DTVs report these voices as real, believable and difficult to ignore, and for many understandable reasons will continue to listen to these voices (McCarthy-Jones et al., 2014; Sheaves et al., 2020). Yet, listening to and believing theses voices was associated with significant depression and anxiety (Sheaves et al., 2023). Cognitive models typically focus on negative appraisals of malevolence and omnipotence to explain distress in voice-hearers, but unexplained variance remains (Tsang et al., 2021). Considering the reasons why people listen to and believe DTVs can help to identify other routes to understanding distress in voice hearers (Sheaves et al., 2023), but this has not been tested in young people.

4. Reasons for listening to and believing DTVs predicts persistence of voice hearing

Listening to and believing DTVs is associated with increased distress (Sheaves et al., 2023), and cognitive models find that distress can further drive voices to recur (Morrison and Renton, 2001). Cognitive theories also state that voice hearing can arise

due to a mismatch between the input of auditory stimuli and an individual's prior beliefs (i.e. strong prior beliefs about the presence of stimuli can lead to the perception of voices despite no auditory input) (Corlett et al., 2019; Powers et al., 2017). It is plausible that endorsing reasons for listening to DTVs more strongly leaves the patient more inclined to listen out for voices, and hence have a greater expectation that a subsequent voice will be heard. This expectation (or stronger prior belief) will increase bias towards top-down information processing (i.e. perception of a voice) and therefore the chance of subsequently hearing a voice (Corlett et al., 2019; Powers et al., 2017). This study will conduct the first exploratory investigation of this hypothesis.

5. Greater social isolation predicts the persistence of voice-hearing

Voice hearing can lead to internalised stigma, shame and fear of judgment from others, which can increase social isolation in both adults (Sheaves et al., 2021) and young voice hearers (Mayer et al., 2022; Parry et al., 2020; Parry and Varese, 2021). Social isolation has also been found to increase the chance of hearing voices (Brederoo et al., 2023). One possible route by which social isolation may contribute to voice hearing is the cognitive theory which proposes that voice hearing occurs when individuals have strong prior beliefs about the presence of auditory stimuli despite no external auditory input (Corlett et al., 2019; Powers et al., 2017). It is possible that being socially isolated and experiencing less external auditory (particularly verbal) stimuli, could bias one's perceptual system towards internally generated events (i.e. increase their prior beliefs about hearing voices) (Powers et al., 2017). Thus, social isolation could increase voice persistence in young people. This study will conduct the first exploratory investigation of this hypothesis.

2. Methods

2.1. Design

A longitudinal study with two time points (T0=baseline and T1=3 months) was conducted.

2.2. Participants

Patients were recruited from two UK NHS Trusts in England, UK from November 2022 to May 2023. Inclusion criteria were: 11-18 years, seeking help from children and adolescent mental health services, hearing auditory verbal hallucinations in the last two weeks of any frequency, able to provide informed consent (or parents able to provide informed consent and young person provide assent for <16 years); and ability to complete questionnaires in English. Exclusion criteria were: a current diagnosis of a psychotic disorder or a moderate to severe learning disability. The study received NHS ethical approval (Reference: 22/EM/0171).

2.3. Procedure

Patients completed measures at T0 and a subset of measures (assessing voice characteristics, frequency, content, and impact on functioning) at T1 (3 month follow up). All participants chose to complete the measures over the phone or online, although a face-to-face meeting was also offered. The chief investigator was contactable during study completion to provide clarification or support if needed. After each time point, young people (and parents if <16 years) were provided with details of how to seek support in the event of distress. After T1 completion, young people (and parents if <16 years) were provided with psychoeducation about coping with voices, specifically

designed for younger people and carers of younger people, adapted from online resources (Voice collective, 2022, 2015).

2.4. Measures

Participant demographics were collected at recruitment, including age, gender, main presenting mental health problem (collected from clinical notes where possible and coded based on a recent paper (Bird et al., 2021)), and whether the patient received treatment for their voices. Clinical characteristics of the sample were collected using measures of voice characteristics and impact on functioning. The measures used for the main regression analysis were distress, frequency of voice hearing, derogatory and threatening subscale from the voice content measure, reasons for listening to and believing derogatory and threatening voice content scale, and social isolation scale.

2.4.1. Voice characteristics. 10 items from the Psychotic Symptom Rating Scale – Auditory Hallucinations (PSYRATS-AH) (Haddock et al., 1999) assessed voice duration, loudness, location, distress, beliefs about origin of voices, and the number of voices heard. This assessment tool is valid for both adult and younger voice hearers (Haddock et al., 1999; Newton et al., 2005).

2.4.2. Impact on functioning. The youth version of the Work and Social Adjustment Scale (WSAS-Y) (De Los Reyes et al., 2019) was used to assess daily functioning. This scale has been validated with over 500 young people and has high internal consistency, good concurrent validity and good test-retest reliability (Jassi et al., 2020). The scale was worded to assess the impact of voice hearing on functioning.

2.4.3. Distress. The Revised Children's Anxiety and Depression Scale, short version (RCADS) (Ebesutani et al., 2012) assessed depression and anxiety symptoms in

younger people, as a measure of distress in the regression analysis. Items are scored on a 0-3 scale (0 = never, 3 = always), with higher scores indicating greater symptoms. Anxiety scores can be obtained from 15 items and depression scores from 10 items. This scale has been adapted from the original RCADS measure (Chorpita et al., 2000), which shows good internal consistency, concurrent validity and test-retest validity in a clinical sample of over 500 younger people (Chorpita et al., 2005). There are clinical cut-offs for the total anxiety and depression scores (Chorpita et al., 2013).

2.4.4. Frequency of voice hearing. Frequency of voices was assessed by summing two items from the PSYRATS-AH scale (Haddock et al., 1999). The questions asked participants to rate how often they heard voices over the past week and rate voice duration. The response options were changed from a 5-point to 7-point scale to increase sensitivity to change (see Appendix R). Persistent voice hearing was an outcome measure in the main analysis and was defined as voices that stayed the same or increased in frequency at T1 compared to T0, and was used as an outcome measure in the regression analysis.

2.4.5. Voice content. An author-developed measure assessed voice content (see Appendix S). Participants rated 18 questions (e.g., ‘Do the voices compliment you?’) on a 5-point Likert scale ranging from ‘never’ to ‘all of the time’. Prior to the study, young people were consulted to help adapt phrasing of items for adolescents. Scale items were used to categorise voice content: derogatory and threatening (six items as defined by Sheaves et al., 2020), neutral and positive voices (six items), and grandiose voices (four items: voices telling the hearer that they have special powers, talent, identity or purpose, as outlined in Isham et al., 2022). One item on the scale assessed negative commands.

For the main regression analysis, only the derogatory and threatening subscale was used (six items, each on a 5-point Likert scale).

2.4.6. Reasons for listening and believing derogatory and threatening voices. The Listening and Believing – reasons scale (Sheaves et al., 2023) assessed appraisals for DTVs and the full scale was used in the main regression analysis (see Appendix U). The scale consists of 28 items rated on a five-point scale from 0 (not true of me) to 5 (completely true of me) (i.e. total score ranged from 0-140). The scale has been validated on a sample of 591 clinical voice hearers aged 16+ and shows high internal consistency (α=0.91) and high test-retest validity (ICC=0.90) (Sheaves et al., 2023).

2.4.7 . Social isolation. The Lubben Social Network Scale-revised (Lubben et al., 2006) assesses the amount and quality of social relationships on a 6-point Likert scale. The scale shows good validity and reliability for populations over 55 years (Gray et al., 2016). Young people were consulted to adapt the language in the scale for adolescents (e.g., changing “seldom” to “rarely”) and the scale was adapted to 6-items by collapsing items related to family and friends. A lower score on this scale indicates social isolation.

2.5. Analysis plan

All analyses were conducted in R, version 4.3.0 (R Core Team, 2023). Participant demographics are reported. Descriptive statistics for all measures at baseline are reported for the full sample and the subsample of participants experiencing persistent voices.

To calculate regressions, all data were assessed for and met the criteria for parametric analysis. Measures were transformed into z scores to allow comparisons between

predictors. Effect sizes were calculated using standardised beta coefficients, with >.30 indicating a medium effect, and >.50 a large effect (Ferguson, 2009; Nieminen, 2022).

Simple linear regressions were used to test primary and exploratory hypotheses. The outcome variables were distress at baseline (defined as anxiety and depression total score at T0) and persistence of voice hearing (defined as the frequency of voices at T1 controlled for frequency of voice hearing at T0). For the hypotheses looking at persistence of voice hearing specifically, only the longitudinal sub-sample who experienced persistent voices were used in the analysis. Analyses for the longitudinal sample were tested in individual regression models and the effect size and confidence intervals were emphasised over significance level, due to the low sample size and the limited power.

An a priori sample size analysis was conducted to analyse the primary hypothesis (i.e., the degree of derogatory and threatening voice content predicts distress). A previous study found negative voice content in an adult population to be a strong predictor of clinical versus non-clinical voice hearers, (AUC=86.5%, converted to Cohen's f^2=0.61 (Cohen's f^2 of >.35 large effect size)) (Daalman et al., 2011). Although Daalman and colleagues (2011) used four items on the PSYRATS scale to assess voice content, they employed a stringent outcome measure compared to the present study (i.e., a clinical diagnosis of psychosis, instead of distress as a possible indicator of negative health outcomes used in the present study). Based on these differences, a conservative effect size of Cohen's f^2 of 0.30 was used, and for a power of 0.80 and alpha of 0.05, a sample size of 29 participants was required.

3. Results

3.1. Participant demographics

Thirty participants completed the baseline assessment, and 16 participants were followed-up after three months. The sample was mostly female (baseline: n=20, 66.67%; follow-up: n=12, 75%). Age ranged from 13 to 18 years (baseline: M=16.23 (SD 1.50); follow-up: M=16.44 (SD 1.55)). The majority of patients at baseline (n=21, 70%) met the clinical threshold for anxiety and depression. At T1, 13/16 (81.25%) participants experienced persistent voices.

3.2. Clinical characteristics

Clinical characteristics for the whole sample (n=30) and those experiencing persistent voices at follow-up (n=13) are presented in Table 1. Young people presented to mental health services for a variety of different reasons and a small minority received treatment for their voices. The different types of voice content heard by the full sample are depicted in Figures 1 and 2. For the purpose of the figure, grandiose content scores were multiplied by 1.5 to obtain a range of scores similar to the other voice content categories (0-24). The figures indicate that the majority of help-seeking adolescents hearing voices heard a combination of DTVs, neutral and positive voices.

Voice-related distress in this sample was high (mean scores ranging from 4.92-5.46) and comparable to voice-related distress in adults diagnosed with a psychotic disorder (e.g., M= 5.01, SD 1.83 in Daalman et al., 2011; M= 4.11, SD 2.94 in Varese et al., 2016). The impact of voices on functioning in this sample indicate severe psychopathology at baseline (mean scores >20), based on clinical cut offs of the original WSAS measure in

adults (Mundt et al., 2002). Impact on functioning was lower at follow-up, but still indicated significant functional impairment (Mundt et al., 2002).

Table 1. Clinical characteristics of whole sample (n=30) and of those hearing persistent voices (n=13)

	Whole sample		**Persistent voice hearing sample**			
	Baseline (T0) (N=30)		**Baseline (T0) (N=13)**		**Follow-up (T1) (N=13)**	
	Mean (SD)/ n(%)	Range	Mean (SD)/ n(%)	Range	Mean (SD)	Range
Presenting mental health condition *						
Anxiety/Depression	27 (90%)		11 (84.61%)			
Emotional dysregulation/self-harm	13 (43.33%)		5 (38.46%)			
Trauma/PTSD	7 (23.33%)		5 (38.46%)			
Eating disorder	2 (6.67%)		0			
Dissociative symptoms	2 (6.67%)		1 (7.69%)			
Suicide attempt	2 (6.67%)		1 (7.69%)			
OCD	2 (6.67%)		2 (15.38%)			
ASD	4 (13.33%)		3 (23.07%)			
ADHD	4 (13.33%)		2 (15.38%)			
Other	2 (6.67%)		4 (30.76%)			
Treatment *						
Anti-psychotic medication	4 (13.33%)		1 (7.69%)			

Psychotherapy for voices	2 (6.67%)		0			
Frequency of voices	6.27 (2.46)	0-12	7.31 (1.80)	0-12	5.39 (1.33)	0-12
PSYRATS-AH items						
Negative content [a]	6.4 (1.35)	0-8	6.39 (1.50)	0-8	5.31 (1.32)	0-8
Voice-related distress [b]	5.23 (1.87)	0-8	5.46 (1.76)	0-8	4.92 (2.17)	0-8
Location	2.33 (1.06)	0-4	2.62 (1.19)	0-4	2.23 (0.92)	0-4
Loudness	2.53 (0.82)	0-4	2.85 (0.90)	0-4	2.39 (0.77)	0-4
Beliefs re-origin	2.37 (1.03)	0-4	2.54 (0.88)	0-4	2.23 (0.83)	0-4
Disruption	2.07 (0.64)	0-4	2.15 (0.69)	0-4	1.92 (0.86)	0-4
Control	3.20 (0.71)	0-4	3.54 (0.52)	0-4	3.08 (0.95)	0-4
Voice content [c]						
Derogatory and threatening	12.1 (34.66)	0-24	12.54 (4.63)	0-24	11.69 (3.99)	0-24
Neutral and positive	6.63 (3.54)	0-24	7.70 (3.61)	0-24	6.31 (3.37)	0-24
Grandiose	4.37 (3.41)	0-16	2.31 (1.11)	0-16	4.77 (3.52)	0-16
Negative commands	2.0 (1.20)	0-4	2.0 (1.21)	0-4	1.77 (0.93)	0-4
Impact on functioning	20.67 (7.09)	0-40	21.15 (7.50)	0-40	15.00 (5.96)	0-40

PSYRATS-AH = Psychotic symptom rating scale – Auditory Hallucinations; * Some young people presented with more than one mental health presentation or had more than one treatment; [a] Based on the sum of two PSYRATS items about content; [b] Based on the sum of two PSYRATS items about distress; [c] Different number of items for each voice content (six items for negative content, six items for neutral and positive content, four items for grandiose content, and one item for negative command); [d] one person did not meet the threshold for the screening question for this measure possibly because they did not listen to the negative content assessed in this measure, so did not complete this scale (n=29)

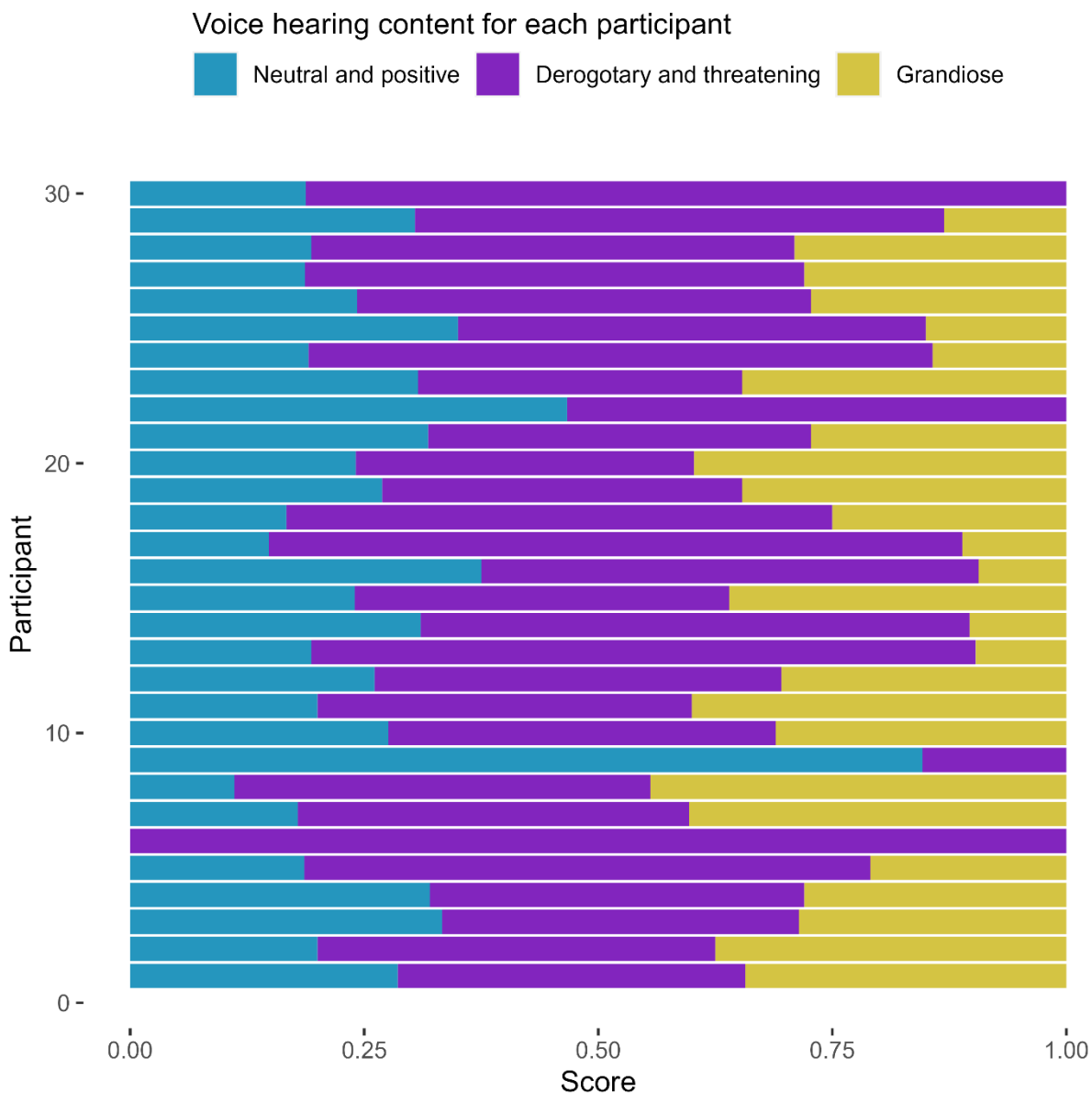


Figure 1. Relative proportion of voices endorsed by each participant at baseline (n=30)

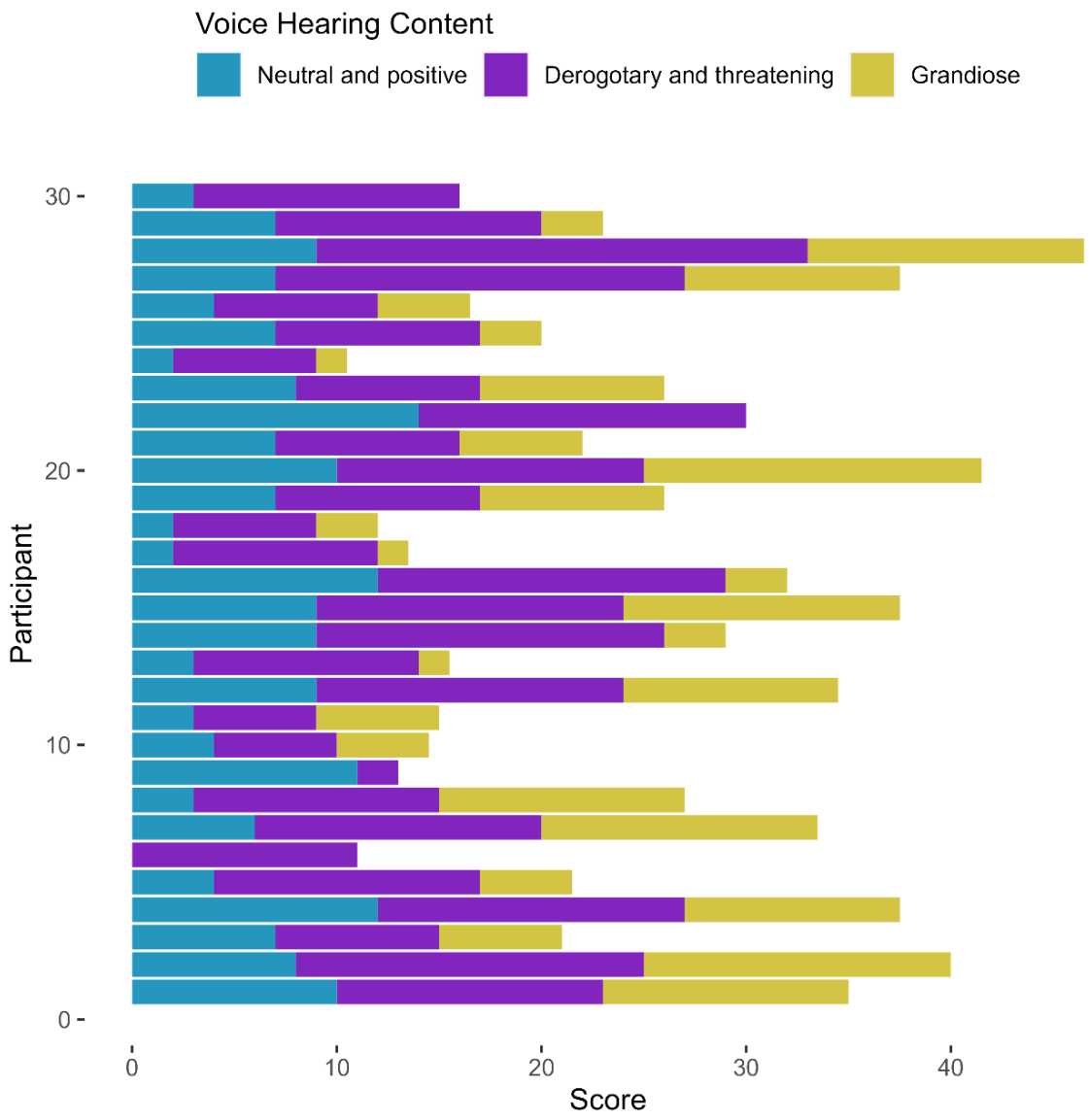


Figure 2. Frequency of total scores for different voice content by each participant at baseline (n=30)

3.3. Regression analysis

3.3.1. Primary hypothesis

1. Degree of DTV content predicts distress

A simple linear regression found that DTV content was significantly associated with distress at baseline, β=0.51, $F(1,28) = 9.78$, $p < .01$, 95% CI [2.41,11.56]. The regression indicated that DTVs predicted 26% of the variance in distress (R^2=0.26).

3.3.1. Exploratory hypotheses

2. The degree of DTV content predicts persistence of voice hearing

A simple linear regression indicated that DTV content at baseline has a small relationship with frequency of voice hearing at T1, β=0.18, 95% CI [-0.96,1.83], but the confidence intervals crossing zero indicates a large degree of uncertainty in the direction and strength of the relationship. The regression model indicated that DTV content explained 3% of variance in voice frequency at T1 (R^2=0.03). After frequency of voices at baseline was controlled for, the effect size of DTV content increased to a medium effect but there was still a degree of uncertainty in the relationship, β=0.30, 95% CI [-0.49,1.98], R^2=0.34.

3. Reasons for listening to and believing DTV content predicts distress

A simple linear regression found that endorsing more appraisals about listening to and believing DTVs was significantly associated with greater distress at baseline, β=0.58, $F(1, 27) = 13.96$, $p < .001$, 95% CI [3.64,12.51]. Reasons for listening to and believing DTVs predicted 34% of the variance in distress (R^2=0.34).

4. *Reasons for listening to and believing DTV content predicts persistence of voice hearing*

A medium effect size relationship was found between the reasons for listening to and believing DTVs at baseline and voice frequency at T1, β=0.37, 95% CI [-0.47,2.26]. The confidence intervals cross zero, hence caution is warranted in interpreting the direction and strength of the relationship. The regression model indicated that reasons for listening to and believing DTVs could explain 13% of variance in voice frequency at T1 (R^2=0.13). When frequency at baseline was controlled for, the beta coefficient reduced slightly and 95% confidence intervals still spanned zero, β=0.25, 95% CI [-0.61,2.69], R^2=0.25.

5. *Social isolation predicts persistence of voice hearing*

Less social connection (or greater social isolation) at baseline had a medium effect size relationship with voice hearing at T1, β=-0.34, 95% CI [-2.17,0.49]. However, the confidence intervals spanned zero meaning that isolation could have a positive or negative association with frequency of voices at T1. Social isolation explained 12% of the variance in voice frequency at T1 (R^2=0.12). After controlling for frequency at baseline, the effect size decreased slightly and the 95% confidence intervals still spanned zero, β=-0.24, 95% CI [-1.86,0.65], R^2=0.31.

4. Discussion

Voice hearing occurs in a significant minority of younger people, yet research in this population is limited. A strength of this longitudinal study is the inclusion of a help-seeking adolescent sample hearing voices without a diagnosed psychotic disorder, a

population overlooked in both research and clinical settings. The study investigated the voice phenomenology and factors contributing to distress and voice persistence in this population. Around 80% of help-seeking adolescents hearing voices followed up after three months reported persistent voices. Young people also reported hearing voices mostly with a derogatory and threatening content, though these often occurred alongside voices with neutral, positive, and grandiose content. Young people in this sample had high rates of voice-related distress, comparable to adults with a diagnosed psychotic disorder (Daalman et al., 2011; Varese et al., 2016), reported a severe impact on functioning due to their voices. Yet only a small minority of patients received treatment for their voices.

4.1. DTVs as predictor of distress and voice persistence

Cognitive models of voice hearing based on the adult population emphasise the role of negative voice appraisals as contributors to distress (Chadwick and Birchwood, 1994), often described as “it’s not what you hear, it’s the way you think about it” (Peters et al., 2012). The main hypothesis tested in the present study finds that derogatory and threatening voice content alone is associated with distress in younger people. Although cross-sectional and therefore difficult to infer causality, previous research finds voice content to be a strong predictor of clinical status (Daalman et al., 2011). Thus, negative voice content could be an important clinical indicator for negative outcomes in a young help-seeking sample hearing voices and early intervention targeting negative voice hearing in this population may be warranted. This is particularly important as many young people in our sample did not receive direct support for their voices.

Derogatory and threatening voice content also showed a medium effect in predicting persistent voices, though wide confidence intervals warrant caution in interpreting this

relationship. Previous studies find that negative voice appraisals and distress can predict voice-persistence in younger populations (Escher et al., 2002a; Steenkamp et al., 2021), and given the role of voice content in influencing appraisals and distress (Chadwick and Birchwood, 1994; Morrison and Renton, 2001), it seems reasonable that negative content should also predict persistence. To note, the present study had a shorter follow-up period of three months (unlike previous studies looking at voice persistence over 2-4 years (Brink et al., 2020; De Loore et al., 2011; Escher et al., 2002a; Maijer et al., 2019; Steenkamp et al., 2021)). Research looking at the influence of negative voice content on voice persistence in larger sample with a longer follow-up period may be worthwhile to increase the precision in quantifying the relationship.

4.2. Reasons for listening to and believing DTVs as predictors of distress and voice persistence

An exploratory hypothesis in the present study found that for young people appraisals related to listening to and believing DTVs were strongly associated with distress and explained more variance in distress compared to DTV content alone. It is possible that the more reasons people have to listen and believe critical and threatening voices, the more likely they are to listen to and believe the voices (Sheaves et al., 2023) which may contribute to distress. The type of treatment offered to young voice hearers should also be considered. Cognitive treatments typically target voice appraisals of malevolence and omnipotence and show medium effects in alleviating distress (Morrison and Renton, 2001; Paulik et al., 2019), but pay less attention to voice content. A promising target for psychological therapy for distressing voices in younger people could be appraisals related to specific voice content, based on the findings from the present study and the new cognitive framework of listening to and believing DTVs (Sheaves et al.,

2023). Future research could investigate whether targeting these appraisals through psychological therapy reduces distress.

Reasons for listening to and believing DTVs also showed small to medium effect on voice persistence. It is plausible that young voice hearers with more reasons to listen to the negative voices may become more biased towards listening out for the voices (Corlett et al., 2019; Powers et al., 2017), and the associated distress, as found in the present study, may itself drive voice persistence (Beck and Rector, 2003). This exploratory hypothesis is worth investigating in future research.

4.3. Social isolation as predictor of voice persistence

The study also investigated social isolation as an exploratory predictor of persistent voices and showed small to medium effect sizes, though with wide confidence intervals, indicating a predictor worth pursuing in better powered studies. Voices can be perceived as shameful and guilt inducing, and choosing not to tell others can contribute to social isolation in voice hearers (Parry et al., 2020; Sheaves et al., 2021; Watkins et al., 2020). Being isolated can further increase voice hearing (Brederoo et al., 2023) and likely play a role in voices continuing to persist. Further research with larger samples is necessary.

4.4. Theoretical and research implications

The findings of the present study have several implications for theory and research. First, cognitive models of voices should consider incorporating the direct relationship between voice content and distress. Negative voice content was found to be directly related with distress in the present study, supporting previous work in both older and younger populations (Cavelti et al., 2019; Daalman et al., 2011; de Boer et al., 2021; Laroi et al., 2019; Rammou et al., 2022). Additional research can continue to build on

this evidence base. Second, the present study found support for the new cognitive framework related to reasons for listening to and believing negative voices and its impact on distress (Sheaves et al., 2023). An area for further research is the evaluation of this theoretical model and its potential for psychological therapy for young voice hearers. Finally, based on the present study, well-powered longitudinal studies to assess the impact of negative voice content, reasons for listening to and believing negative content, and social isolation on voice persistence in the current population are worth exploring.

4.5. Clinical implications

Young people in this study experiencing voice hearing presented to mental health services for a range of reasons. Voices were experienced as mostly negative in content, were highly distressing, had a negative impact on functioning, and continued to persist for many young people. Yet, young people were not given support for their voices, similar to findings of qualitative studies (Kapur et al., 2014; Mayer et al., 2022). Both young people and parents in the present study valued receiving psychoeducation about voices. A recent study also found that providing psychoeducation workshops to parents could improve attitudes and beliefs about voices for parents and young people (Deane et al., 2023). Thus, it is important that clinicians in child and adolescent mental health services routinely ask about experiences of voice hearing and consider providing psychoeducation about voices to young people and their parents. Negative voice content and reasons for listening to and believing negative voice content should also be considered as early indicators of distress in a help-seeking adolescent population who hear voices, and in this case psychological treatment for voices should be offered.

4.6. Limitations

There are a number of limitations in the present study. First, the cross-sectional predictors of distress limit conclusions about causality. Further investigation is necessary to determine the direction of this relationship, as these factors could be a promising route to alleviate distress. Second, the longitudinal element of the study was likely underpowered (n=16) and interpretation of these findings is tentative. Only simple regressions were possible due to the limited power, and the investigated predictors may be highly related (and hence should be modelled together). Finally, it was not possible to collect ethnicity information due to missing or unclear clinical records. This makes it difficult to comment on the diversity of the sample and can impact generalisability of findings. Studies find that ethnicity can impact frequency and severity of voice hearing (Berg et al., 2014; Beavan et al., 2011; Johns et al., 2002), and ethnic status can also mediate relationships between factors such as trauma and severity of hallucinations (Berg et al., 2014). It is possible that ethnic status could have modified the relationships between predictors of distress and persistent voices in the present study. Other key demographics and measures of clinical characteristics were not collected, limiting our understanding of the sample. For example, risk of self-harm or suicide, history of trauma, and measures of dissociation are all factors that have been found to relate to voice hearing (Fujita et al., 2015; Laroi et al., 2019; Longden et al., 2012), but were not assessed. Nevertheless, the present study provides valuable routes of research for the future in younger populations.

5. Conclusion

Voice hearing has an early onset and is more prevalent in younger people compared to older population, but research with young voices hearers has been limited. The current

longitudinal study was conducted with younger voice hearers seeking help from mental health services and without a diagnosed psychotic disorder. All young voice hearers reported voices with a derogatory and threatening content, alongside other types of voice content. Young voice hearers report severe impact on functioning due to their voices, experienced voice-related distress comparable to adult population with a psychotic disorder, and 70% of patients met the clinical criteria for anxiety and depression. Voices in this population were also not transitory - around 80% of young voice hearers experienced persistent voices after three months. Derogatory and threatening voice content, and reasons for listening to and believing these negative voices, were significantly associated with distress. In the investigations of voice persistence, derogatory and threatening voice content, the reasons for listening to and believing derogatory and threatening voices, and social isolation had moderate effects. Additional better powered longitudinal studies are necessary. This study conducted novel investigations of distress and voice persistence in a younger help-seeking population hearing voices, which can offer valuable routes for research in future studies.

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Executive Summary of Theory Driven Research Project

Background

Hearing voices when no one is speaking is also known as auditory verbal hallucinations. Around 12% of young people in the general population have reported that they hear voices and hearing voices is more common in younger people than in adults. Hearing voices is not always a negative experience and for many young people voices can go away on their own. However, for some young people voices can be distressing and be persistent, both of which can result in later negative health outcomes.

There is very little research conducted with younger people who hear voices. The research that does exist usually focuses on voice hearers in a general population or those who have psychosis. Yet, many young people getting help from mental health services for lots of different conditions (such as anxiety, depression etc.) also report hearing voices. These young people are not often given direct support for their voices, even though they may be vulnerable to significant health problems if their voices cause them distress and continue to persist.

The aim of this study was to describe the voice hearing experiences of young people receiving support from mental health services but not diagnosed with a psychotic disorder. Another aim of the study was to understand what factors could predict distress and persistent voices in this population. Based on past research, we could predict that voices with a negative content (specifically voices that were derogatory and threatening), having more reasons to listen out for negative voices, and being socially isolated could influence this.

Methods

To carry out our study, we recruited young people (aged 11-18 years) with no diagnosed psychotic disorder from different Child and Adolescent Mental Health Services within two NHS sites. We carried out a longitudinal study with two time points, which means that young people took part in the study twice. A set of questionnaires which measured the different components of the voice hearing experiences, as well as measures for mood, impact on functioning, and social isolation were given to young people. They were then followed up after three months and a smaller set of questionnaires were given.

Results

Thirty young people took part in the study at the first time point and a small subsample of young people (n=16) were followed up after three months. Young people were hearing voices within the context of many different mental health presentations, but most of them did not receive any help for their voices. Out of the 16 that were followed-up, 13 young people were still experiencing voices after three months.

As predicted, voices that were derogatory and threatening, and having more reasons to listen out for these negative voices, was related to distress in young people who were hearing voices. However, it was not clear which factors could predict persistent voices in young people, likely because this was tested on only a very small subsample. Even so, factors such as negative voices, reasons to listen out for negative voices, and feeling socially isolated seemed promising and could be explored in future research with more people.

Discussion

This study shows that young people getting help from mental health services hear voices even if they are not diagnosed with psychosis. These young people mostly hear voices that are derogatory and threatening which is related to a lot of distress. Many of these young people will also continue to hear voices after a few months. Mental health services should consider giving direct support for the voices for this overlooked population of younger people.

Connecting Narrative

Having come from a research background prior to entering clinical training, I was keen to challenge myself by conducting research with new populations, topics, and using new methodologies. I was particularly interested in conducting research with populations who have usually been marginalised or socially excluded – one of the main reasons I was attracted towards a clinical psychology career. The following connecting narrative describes a reflective account of my experiences working on three very interesting and challenging projects.

Critical Review of the Literature (CRL)

The CRL was developed from my interest in understanding more about people who have experienced early trauma. I became particularly interested in the broader question about why some people who have experienced trauma go on to develop different mental health conditions whereas others do not require a need for care.

However, this was too broad of a question to tackle in one systematic review, especially within the time limits of this training course. With the help of my supervisor, I worked to narrow down the review question to focus on the role of early trauma on specific psychiatric symptoms. The expertise of my supervisor in the topic of trauma and auditory hallucinations and the research I was developing for my theory driven research project naturally led to the current systematic review.

Although I have previously conducted systematic reviews, the time intensiveness of the current review still took me by surprise. It was particularly challenging to conduct the review without dedicated time set aside and alongside the demands of the clinical training course. This made me reflect on the challenges clinicians face in attempting to

continue with research pursuits, especially as time consuming as a systematic review, whilst doing clinical work.

The findings of the current review highlighted that developmental trauma could influence the content of the voices people hear. It was surprisingly difficult to identify good quality studies with consistent measures that looked at this relationship, which made synthesis of the literature challenging. However, as with all systematic reviews, it helped to identify several avenues for further research. I felt that the systematic review had been very informative for both developing my understanding of the field and contributing to the existing research.

Service Improvement Project (SIP)

This SIP was proposed by my external supervisors who felt that it was very important for their clinical service, and I became instantly drawn to this project. With the Black Lives Matter Movement in all of our minds, and ongoing conversations that were being held about ethnic minorities in mental health services, the topic of this review gave me a chance to contribute to this dialogue in a practical way. Indeed, as an ethnic minority person in a position of power, I felt a degree of responsibility to make some difference for the marginalised members of the community seeking support from mental health services.

This SIP also gave me a chance to carry out research with an older adult population. In the course of my reading and conversations with clinicians in the service, I became acutely aware of the stigma that older adults face on account of their age. This stigma was compounded by stigma related to having a mental health condition, and being of an

ethnic minority status and sometimes experiences of migration. Speaking to service users as part of consulting on the project was very powerful and challenged some of my own misconceptions; for instance, not all ethnic minority older adults want to be matched with clinicians of their own ethnicity or felt a need to talk about their culture in therapy.

As part of the project, clinicians from across the service helpfully shared their experiences about working with older adults from ethnic minority patients. Many of them had no prior experience of working with this population, and indeed this was evident by the audit I completed which found that surprisingly few older ethnic minority patients had accessed the service in the last few years. Regardless of clinician's experience, the discussions that were held in the focus group were fruitful, rich, and powerful. I really enjoyed my first experience of conducting these focus groups and then going on to do a thematic analysis for the first time – I felt like both processes taught me so much about the topic and the value of qualitative work, which I am keen to do more of in future research.

Theory Driven Research Project (TDRP)

The TDRP emerged from several discussions with both my external and internal supervisors. I was really interested in conducting a study with populations experiencing psychotic symptoms as this was something I had very little experience of, and it felt like a great opportunity for me to learn more about this topic. Given my unfamiliarity with the topic and population, I relied a lot on the expertise of my supervisors. The insight I gained as we were developing the research question was further enhanced in my final year when I did my specialist placement in the Early Intervention in Psychosis service.

I found this research to be the most challenging out of the three, mostly due to the delays and challenges with recruitment. Anecdotal clinical experience had encouraged us to stick with our recruitment plan, as clinicians noted that many young people reported hearing voices in clinical services even without a diagnosis of a psychotic disorder. However, recruitment was difficult possibly due to the same reason that this research was novel and important – young people who heard voices in mental health services without a diagnosed psychotic disorder were often overlooked.

The challenges with recruitment and time meant that unfortunately the longitudinal aspect of the study was likely underpowered, missing out potentially important effects. Yet, as I have learnt in my research background in the past, research can throw unexpected challenges and adaptations are a normal part of the process. Given the paucity of research with younger voice hearers, I am still encouraged to see the valuable contribution the current research can have in the field.

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I would like to express my deepest and sincere gratitude to my external and internal supervisors, and to my course tutor Craig, for their guidance and support in conducting the three research projects set out here. I am grateful to have received so many learning opportunities throughout the course of the program. Thank you also to the service users and clinicians across so many clinical teams who have given up their time to support me with my research. I am also immensely grateful to the wonderful training cohort for their help, encouragement, and the lovely company! It has been a pleasure to be on this training with you all.

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Appendix A – CRL: Author guidance for Clinical Psychology Review

Aims and Scope

Clinical Psychology Review publishes substantive reviews of topics germane to clinical psychology. Papers cover diverse issues including: psychopathology, psychotherapy, behavior therapy, cognition and cognitive therapies, behavioral medicine, community mental health, assessment, and child development. Papers should be cutting edge and advance the science and/or practice of clinical psychology.

Reviews on other topics, such as psychophysiology, learning therapy, experimental psychopathology, and social psychology often appear if they have a clear relationship to research or practice in clinical psychology. Integrative literature reviews and summary reports of innovative ongoing clinical research programs are also sometimes published. Reports on individual research studies and theoretical treatises or clinical guides without an empirical base are not appropriate.

Critical Issues

Ensure manuscript is a comprehensive review article (empirical papers fall outside the scope of the journal)

Ensure that literature searches and reviews are as up to date as possible and at least to 3 months within date of submission

Manuscript has been 'spell checked' and 'grammar checked'

All references mentioned in the Reference List are cited in the text, and vice versa

Permission has been obtained for use of copyrighted material from other sources (including the Internet)

A competing interests statement is provided, even if the authors have no competing interests to declare

Journal policies detailed in this guide have been reviewed

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Ensure manuscripts do not exceed 50 pages, including references and tabular material, unless you have obtained prior approval of the Editor in Chief for an exception

Ensure Highlights do not exceed 3 to 5 bullet points with a maximum of 85 characters, including spaces, per bullet point

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For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship

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It is important that the file be saved in the native format of the word processor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the word processor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts (see also the Guide to Publishing with Elsevier). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork.

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It is authors' responsibility to ensure their reviews are comprehensive and as up to date as possible (at least to 3 months within date of submission) so the data are still current at the time of publication. Authors are referred to the PRISMA Guidelines (http://www.prisma-statement.org/) for guidance in conducting reviews and preparing manuscripts. Adherence to the Guidelines is not required, but is recommended to enhance quality of submissions and impact of published papers on the field.

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If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

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Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name, and, if available, the e-mail address of each author within the cover letter.

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Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

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A concise and factual abstract is required (not exceeding 200 words). This should be typed on a separate page following the title page. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separate from the article, so it must be able to stand alone. References should therefore be avoided, but if essential, they must be cited in full, without reference to the reference list.

Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

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Appendix B – CRL: Search terms to shortlist studies in review

Database	Search terms*
PubMed; CINAHL; PsycINFO; EMBASE; MEDLINE	"child* trauma" OR "child* advers*" OR "child* maltreat*" OR "child* abuse" OR "physical abuse" OR "development* trauma" OR "sexual abuse" OR molest* OR "child* neglect" OR "child* stressful life event*" OR separat* OR "child* loss" OR "negligent treatment" OR death OR violen* OR institution* OR exploitat* OR "authority care" OR punishment OR injur* OR divorce OR abandon OR foster OR adopt AND "Voice hear*" OR "hearing voice*" OR "auditory hallucination*" OR "verbal hallucination*" OR "auditory verbal hallucination*" OR "sensory hallucination" OR AVH AND content OR Negative OR positive OR emotional OR belief* OR tone OR derogatory OR persecute* OR abusive OR insulting OR accusat* OR intrusive OR critic* OR obscene OR threatening OR comfort* OR pleasing OR warm OR kind OR gentle OR benevolent OR loving OR helpful OR guiding OR affirming OR inspiring OR Distress OR depress* OR anxi* OR "negative emotion" OR mood

* Based on search terms used in the following reviews: (Laroi et al., 2019; McCarthy-Jones et al., 2014; Sideli et al., 2020)

Appendix C – CRL: Quality assessment of evaluated interventions

Quality assessment of evaluated interventions using the Standard Quality Assessment Criteria for quantitative studies (Kmet, Lee & Cook, 2004) (n=15)

Study (first author, year)	Overall quality rating *
Andrew, 2008	64%
Baumeister, 2021	91%
Begemann, 2022	91%
Blom, 2018	82%
Connor, 2012	86%
Daalman, 2012	91%
Daalman 2016	68%
Misiak, 2016	77%
Nesbit, 2022	81%
Offen, 2003	64%
Pilton, 2016	73%
Rosen, 2018	77%
Scott, 2020	86%
Toeschke, 2014	73%
Wearne, 2017	64%

* Studies with overall rating >80% considered to be of a high quality for the purpose of this review.

Appendix D – CRL: Study description and participant characteristics (n=15)

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
Andrew, 2008	Quasi-experimental	Clinical sample: referred by psychiatric services, UK Non-clinical sample: snowballing effect, UK	Clinical voice hearers (n=22) Non-clinical voice hearers (n=21)	Clinical voice hearers: Mean age=39.55 (SD=12.3); Gender = 13 males, 9 females; Mean length of hearing voices=12.91years (SD=10.10) Diagnosis: Unclear Non-clinical voice hearers: Mean age=50.67 (SD=11.3); Gender = 6 males, 15 females; Mean length of hearing voices=30.62 years (SD=15.77) Sig more males in clinical group ($p<.05$); sig. younger clinical group ($p<0.05$)
Baumeister, 2021	Quasi-experimental	Clinical sample: Inpatient and outpatient mental health services, UK	Clinical voice hearers (n=57) Non-clinical voice	Clinical voice hearers: Diagnosis; Schizophrenia n=35 Schizoaffective disorder=9 Psychosis not otherwise specified=4, Other affective disorder=7, Unclear=2

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
		Non-clinical sample: specialist sources, such as spiritual organisations, UK	hearers (n=45)	Mean age = 41.7years (SD= 12.5), 38.6% female, 66.7% white, 82.5% unemployed Non-clinical voice hearers: Mean age= 45.4years (SD=12.5) 73.3% female 91.1% white 37.8% unemployed Sig. more non-clinical sample white, female and employed (p<.05)
Begemann, 2022	Quasi-experimental	University sites, Netherlands and Australia	Clinical voice hearers (n=166) Non-clinical voice hearers (n= 122) Non-clinical controls (n=125)	Clinical voice hearers: Diagnosis = Schizophrenia or schizoaffective disorder Mean age = 38.65 (SD 12.05) Male = 79, Female = 87 Years of education= 12.98 (SD 3.04) Age at onset = 20.98 (SD 13.04) Total childhood trauma score: 48.94 (19.64) Non-clinical voice hearers: Mean age = 41.83 (13.64)

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				Male = 37, Female = 85 Years of education = 13.39 (2.30) Age at onset = 13.59 (14.29) Total childhood trauma score: 44.60 (15.96) Non-clinical controls Mean age: 42.88 (14.37) Male = 40, Female = 85 Years of education: 14.05 (2.31) Total childhood trauma score: 36.02 (8.43) Clinical group with voices had sig more males (p = 0.007), was sig younger (p = 0.022), had fewer years of education (p = 0.001) compared to both groups
Blom, 2018	Cross sectional	Two nursing wards, Netherlands	Clinical experiencing auditory sexual hallucination (n=5)	Clinical experiencing auditory sexual hallucination: Age range = 26-65 Gender unspecified Diagnosis = Schizophrenia (n=4). Psychotic disorder (n=1)
Connor, 2012	Cross sectional	15 community mental health teams, UK	Clinical voice hearers (n=74)	Clinical voice hearers: Diagnosis = Schizophrenia or related disorder

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				Female 30 (40.5%) Mean age = 43 years, Ethnicity White European 48 (64.9%) Afro-Caribbean 15 (20.3%) Indian Asian 5 (6.8%) Mixed heritage 3 (4.1%) British Pakistani 2 (2.7%) African 1 (1.4%) Marital status Single 41 (55.4%) Divorced 14 (18.9%) In relationship 7 (9.5%) Married/cohabitee 6 (8.1%) Separated 4 (5.4%) Widowed 2 (2.7%) Employment status Unemployed 64 (86.5%) Full/part-time 4 (5.4%) Student 3 (4.1%) Retired 2 (2.7%) Other 1 (1.4%) Length of illness 3 years or more 69 (93.2%) 1–2 years 2 (2.7%) 12 months or less 3 (4.1%)
Daalman, 2012	Quasi experimental	Clinical sample: University medical centre, Netherlands Non-clinical sample: Website called ‘Explore	Clinical voice hearers (n=100) Non-clinical voice hearers (n=127)	Clinical voice hearers Diagnosis: Psychotic disorder Male: 44 (44.0) Mean age: 38.02 (11.49) Length of education: 12.70 (2.66) (n=95)

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
		your mind', Netherlands	Non-clinical controls (n=124)	Married: 25% Divorced: 13% Lifetime depression: 75% (n=92) Non-clinical voice hearers: Male: 41 (32.3) Mean age: 42.41 (12.63) Length of education: 13.23 (2.19) – n=126 Married: 53% Divorced: 34% Lifetime depression: 44 % (n=124) Non-clinical controls: Male: 40 (32.3) Mean age: 43.06 (12.63) Length of education: 14.02 (2.32) – n=126 Married: 60% Divorced: 21% Lifetime depression: 18 % (n=120) Clinical voice hearers sig. younger (p=.009), had sig. less length of education (p<.001), sig. less married (p<.001), sig. less divorced (p<.001), and had sig. higher lifetime depression (p<.001),

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				compared to both groups
Daalman 2016	Quasi-experimental (Follow-up study)	Website called 'Explore your mind', Netherlands	Non-clinical voice hearers (n=81) Non-clinical controls (n=49)	Non-clinical voice hearers: Female: 71% Mean age: 41 (13) Non-clinical controls: Female: 70% Mean age: 48 (13) No sig difference between demographics of participants followed-up vs not followed-up
Misiak, 2016	Cross sectional	Mental health clinic, Poland	Clinical voice hearers, with childhood trauma (n=37) Clinical voice hearers without childhood trauma (n=57)	Clinical voice hearers, with childhood trauma: Diagnosis - Schizophrenia Mean age 26.38 (SD 5.33) Gender: Males 22, Females 15 Education, higher 8, Other than higher 29 Unemployment rate, 23 (62.16%) Marital status, single 30, married 7 Clinical voice hearers without childhood trauma: Diagnosis - Schizophrenia

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				Mean age 26.47 (SD 5.85) Gender: Males 32, Females 25 Education, higher 12, Other than higher 45 Unemployment rate, 32 (56.14%) Marital status, single 50, married 7 No sig difference in demographics between groups
Nesbit, 2022	Cross sectional	Inpatients and outpatients from hospitals, private practices and non-government organisations, New Zealand and Australia	Clinical voice hearers, with schizophrenia (n=49) Clinical voice hearers, with dissociative identity disorder (n=50)	Clinical voice hearers, with schizophrenia: Mean age: 45.14 (SD = 10.91) Gender: Males 4%, Females 96% Clinical voice hearers, with dissociative identity disorder: Mean age: 43.76 (SD = 10.91) Gender: Males 4%, Females 96%
Offen, 2003	Cross sectional	Community mental health services, UK	Clinical voice hearers (n=26)	Diagnosis: schizophrenia (21), psychosis (1), manic-depression (1), psychotic depression (1), and schizoid (1). One person had no formal diagnosis Mean age 34 years (range 23-67)

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				Gender: Males 19, Females 7 Status: Single 23, Married 2, Widowed 1
Pilton, 2016	Cross sectional	Mental health clinics and voluntary services, UK	Clinical voice hearers (n=55)	Diagnosis: Schizophrenia 44 (80%), Schizoaffective 6 (10.9%), Psychosis not otherwise specified 5 (9.1%) Mean age: 42.16 (11.33) Gender: Male 44 (80%), Female 11 (20%) Ethnicity: White British 46 (83.6%), Black British 3 (5.5%), Mixed race 6 (10.9%) Marital status: Single 44 (80%), Co-habiting 3 (5.5%), Married 4 (7.3%), Age at voice onset: 24.16 (10.86) Length of time hearing voices: 16.82 (11.62) Number of hospital admissions: Median 3 (0-20)
Rosen, 2018	Cross sectional	University medical centre, US	Clinical voice hearers (n=61)	Diagnosis: Schizophrenia 48, Bipolar with psychosis 13 Mean age: 47.98 (SD 11.09) Gender: 33 females Ethnicity: African American 77%, Caucasian 15%, Hispanic 8% Medication: Antipsychotic 5, Antidepressants 27
Scott, 2020	Cross	Hospital sites, specialist	Clinical voice	Diagnosis: Schizophrenia 50 (36%), Schizoaffective

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
	sectional	clinics, online and adverts, Australia	hearers (n=140)	disorder 26 (18%), Bipolar disorder 31 (22%), Major depressive disorder 33 (24%) Mean age 36.7 (12.83) 18-66 Gender: Female 80 (57%), Male 60 (43%) Age of illness onset 22.9 (9.02) 5-50 Age of voices onset 20.5 (10.12) 23-49 Estimated premorbid IQ 105 (11.62) 71-124
Toeschke, 2014	Cross sectional	Inpatient mental health ward, Germany	Clinical voice hearers with Schizophrenia (n=21) Clinical voice hearers with Borderline personality disorder (n=23)	Clinical voice hearers with Schizophrenia: Mean age: 37.1 (11.1) Gender: Female 100% Duration of inpatient admission: 94.3 days (SD 66.7) Secondary diagnosis of borderline personality disorder 3 (14%) Clinical voice hearers with borderline personality disorder: Mean age: 24.1 (7.5) Gender: Female 100% Duration of inpatient admission: 86.1 days (SD 98.1) Comorbidity of Dissociative identity disorder: 22

Study (first author name, year)	Study design	Recruitment setting	Sample size	Sample demographics
				Clinical voice hearers with schizophrenia sig. older ($p<0.001$) compared to clinical voice hearers with borderline personality disorder
Wearne, 2017	Cross sectional, cluster analysis	Hospitals and private practices, Australia	Clinical voice hearers (n=56) Cluster 1 (n=36) Cluster 2 (n=20)	Cluster 1: Diagnosis: Borderline personality disorder = 5, Schizophrenia = 10 Post traumatic stress disorder = 21 Mean age (SD) = 47.84 (13.87) Gender: Female =28, males = 8 Cluster 2: Borderline personality disorder =4 Schizophrenia = 3 Post traumatic stress disorder = 13 Mean age (SD) = 43.83 (13.71) Gender: Female =7, males = 13

Appendix E – SIP: Author guidance for Ageing and Mental Health

Aims and scope

Aging & Mental Health is an international peer-reviewed journal focused on the biological, psychological and social effects of aging on mental health.

Aging & Mental Health provides a leading international forum to investigate the relationship between the aging process and mental health with topics including, but not limited to:

Aging

Psychology

Pathological aging

Psychiatric problems

Study of aging

Gerontology

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The journal welcomes original theoretical and clinical research articles.

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Thank you for choosing to submit your paper to us. These instructions will ensure we have everything required so your paper can move through peer review, production and publication smoothly. Please take the time to read and follow them as closely as possible, as doing so will ensure your paper matches the journal's requirements.

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Preparing Your Paper

Structure

Your paper should be compiled in the following order: title page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list).

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Please include a word count for your paper.

A typical paper for this journal should be no more than 7,000 words for quantitative papers and 8,000 words for qualitative papers inclusive of figures, tables, references, tables, Appendix excluded.

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Please refer to these quick style guidelines when preparing your paper, rather than any published articles or a sample copy.

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Please use single quotation marks, except where ‘a quotation is “within” a quotation’.

Please note that long quotations should be indented without quotation marks.

All revised papers should have a clean version.

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Should contain a structured abstract of 200 words.

Objectives, Methods, Results, Conclusion.

Between 5 and 7 keywords. Read making your article more discoverable, including information on choosing a title and search engine optimization.

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Updated 19th of May 2023

Appendix F – SIP: Clinical audit and information governance approval

From: Rhodes Katie (RNU) Oxford Health <Katie.Rhodes@oxfordhealth.nhs.uk>

Sent: Monday, June 21, 2021 3:19:00 PM

To: Reen Gurpreet (RNU) Oxford Health <Gurpreet.Reen@oxfordhealth.nhs.uk>

Subject: RE: Service Evaluation project

Good afternoon Gurpreet,

Your audit has been approved.

Upon completion please provide a report. I have attached a template for your convenience.

Kind Regards,

Katie Rhodes

Senior Team Administrator

From: Underwood Mark (RNU) Oxford Health <Mark.Underwood@oxfordhealth.nhs.uk>

Sent: Thursday, July 15, 2021 3:19:25 PM

To: Reen Gurpreet (RNU) Oxford Health <Gurpreet.Reen@oxfordhealth.nhs.uk>

Subject: RE: Query about project

Dear Gurpreet,

Thank you for sending me the DPIA. Passed version attached above. I hope it goes well. Best wishes.

regards. *Mark M. Underwood.*

Mark M. Underwood

Head of Information Governance

Appendix G – SIP: Questions for older ethnic minority patients from the service

- What is your ethnic background?
- What year were you referred into the service?
- Why were you referred into the service?
- Did you experience any stigma when seeking help for your mental health? Were you worried about what your family or community would think about you seeking help for your mental health?
- How did it feel to be seen by a clinician from a different cultural background to you?
- What did you notice?
- Did you feel comfortable talking about your ethnicity and culture with them? What would have made it easier?
- What was your experience of being assessed by the service?
- Did the clinician ask you questions about your cultural background (such as religion, where you were born, when you came to the UK.)? What kind of questions did they ask? Did you find this helpful?
- Did the clinician ask you about your experiences of racism? If so, how did they do this? Could they have done this better?
- Is there anything you would have wanted your clinician to know about your way of life in your community? Did the clinician ask you about this?
- What other information do you think the clinician should have asked you about your cultural background?
- What was your experience of being treated by the service?

- Did the staff make sure the treatment was suited to your cultural background? If so, how did they do this? Did you find this helpful?
- Was there any other information about your culture that should have been included during your treatment sessions? What would have been helpful to include?
- Is there any other information that you would like to share with me that we haven't spoken about today?

Appendix H – SIP: Audit tool for patient notes

- Demographics
    - Year of birth
    - Gender
    - Marital status
    - Mental health presentation
- Ethnicity
    - Of the patient
    - Mother
    - Father
    - Partner/spouse
- Cultural background
    - Country of birth
    - Year moved to the UK
    - Country(ies) spent in childhood
    - Country(ies) lived in as adulthood
    - Religious beliefs
    - Level of religious activity
    - First language
    - Other languages
    - Is an interpreter required?
- Integrating culture into formulation
    - Was cultural background considered in formulation?

    - If yes, which cultural factors likely contributed to patient's mental health presentation: (e.g. religious identity, external spirits, inter-generational conflicts)?
    - Were there any key events that the person lived through in childhood/adulthood related to their culture or countries lived in (e.g, migration, war, historical events)?
    - How did the patient's values about family and community impact on their mental health?
- Integrating culture into treatment
    - Were cultural factors considered as protective factors in treatment (e.g., religion, community, family)? If yes, what were these?
    - How was treatment adapted for the patient's cultural background?
- Any additional information about patient's cultural background likely to be relevant to their mental health

Appendix I – SIP: Focus group questions

- Have you had experience of working with older adults from an ethnic minority background? If so, how many?
- Assessment & Formulation
    - How confident do you feel about conducting assessment and developing formulations with older adults from an ethnic minority status?
    - Would you ask them questions about their cultural background/ historical factors relevant to their culture/their way of life in the community? If so, what kind of questions would you typically ask? How would you ask these questions? How confident do you feel about asking this?
    - Would you ask them questions about any experiences of racism they may have had? If so, how would you ask this? How confident do you feel about asking this?
    - Have you/would you use any specific tools at assessment for this population group (e.g. genograms)?
    - *For those with prior experience* - What other information do you think you should have asked at assessment? What went well? What could have gone better? How did the patient respond to this?
- Treatment
    - How confident do you feel about conducting therapy with older adults from an ethnic minority status?

- How would you take account of the patient's cultural background in therapy? Would you make any amendments to therapy to suit the patient's cultural background? If so, how would you do this?
- *For those with prior experience* - What other information about the patient's culture do you think you should have included in the therapy sessions? What went well? What could have gone better? How did the patient respond to this?

Appendix J – SIP: Thematic analysis with example quotes

Theme	Sub theme	Code	Example quotes
Perception of patient's cultural factors	Language	Language differences	"There were often sort of words and phrases that that he would use that came across this sort of quite concerning to me, but actually on further discussion it was just kind of very much part of this man's culture and had a very different meaning to my understanding…"
			"…many other languages don't work so well with CBT types of question…"
			"…how people pronounce their names is important to ask about"
		Power of language	"…do I use the word arranged marriage? If I as a white person say arranged marriage, am I using the wrong stuff?"
			"…just reflecting on the power of language really and how it's you know, typically socially constructed."
	Family	Family roles and expectations	"…thinking about some someone's cultural background, where they might sit within their family, what things… might they have expectations of other people perhaps based on cultural backgrounds within their family, who is sort of supposed to be doing what… that sort of systemic thinking"
			"Is this person distressed because their children are not looking after them and they think they should, versus are they distressed because they feel guilty that they are being such a burden on their children?"

Theme	Sub theme	Code	Example quotes
	Barriers to help seeking	Stigma	"I wonder how some people would feel ashamed and whether that then impacts how much they share and maybe even whether… what they think about you thinking of them. Does this therapist think badly of me because I am here?"
			"And then when I discussed with her whether it would be possible to have an interpreter come she said, actually no, because the last person who came, she said I think she, she knew them or she thought she knew their background and so she wasn't gonna say anything with them"
	Differences due to culture	Lived experience	"…working with somebody who was an adult and talking about their relationship with their parents who were all from ethnic minority locally…them turning round and saying well, one of the problems I have in doing that is I don't speak Urdu very well and she doesn't speak very good English, and so it's actually really hard to communicate with her"
		Inter-generational differences	"…when you've got the kind of younger generations, grandchildren, great grandchildren, saying you should talk about it, you should talk about mental health, to an older generation"
			"What they described as a silence between the generations of immigrants into this country…"
		Racism and abuse	"…the concept of like a micro aggression is relatively new, in terms of understanding that and thinking about the impact that has for somebody"

Theme	Sub theme	Code	Example quotes
			"I think the idea of saying cognitive error may not appropriate if someone is having a hard time say because of racists"
		Intersectionality	"I'm thinking about some women I've worked with from, from Muslim backgrounds and they were very uncomfortable with recording what they were thinking and some of that when I unpicked it was related to sort of betrayal of other people"
	Life events	Historical events	"It was someone who I asked about their experience of being a German Jew in the country during their lives, and I think there was almost a shared or a safety in me understanding a little bit about that and being able to ask about that and feeling that I grasped that that was relevant … "
		Opportunities	"…education opportunities that may or may not have existed depending on where someone had their main schooling experiences"
		Migration	"…if people have had experiences of migration or races... That will inevitably impact on their views about themselves and their values, core beliefs, exceptions."
			"She had migrated during her teens and developed… kind of compulsive behaviours, which seemed quite clear that it was due to, to managing the stress of being… that migration, particularly being treated in a racist way"
	Beliefs and values	Sense of self	"For some people it's about balancing their own internal assertive, Humours or

Theme	Sub theme	Code	Example quotes
			censor themselves? It's about you know a challenge between good or bad, and I think we've got to be mindful of where Western therapy ideas are, are not really there."
		Religion	"you know the religious practises that I'd like to know or how an older member of the family practice…"
		Beliefs about mental health & treatment	"… she then didn't think she should have any help, which is quite interesting 'cause the son felt she should. And, and culturally that was partly around their opinion about how treatable psychosis was"
Clinician's cultural competency	Cultural humility & curiosity	Being sensitively curious	"…might ask him stupid questions about what it was like for them and other people. And… people are often more than happy to elaborate and explain in what way it might be different"
			"I might spend more time asking about what times of their lives may have been like"
		Getting support from others	"It's often reliant on having an informant who is able to provide some of that background"
			"I found it very helpful to sort of speak with family members about that, because there was clearly sort of a.. a knowledge gap from my point of view"
		Being honest & seeking permission	"…about that honesty is saying what you know or don't know when that willingness to go to the Internet sometimes and just find some of their actual facts around when uprisings took place"

Theme	Sub theme	Code	Example quotes
	Adapting therapy	Adapting therapeutic skills	"…that kind of systemic phrase of talking about the talking and talking about how to create a safer place with your client to discuss race and culture"
			"…making sure that you feel that your person has a window to talk to you openly and honestly really."
		Adapting tools	"The social graces comes to mind… I used to find that quite helpful as a bit of a guide, or prompt and the types of questions… what to think about in assessment and in therapy work"
	Purpose of cultural competency	Understanding patient's presentation	"…Because again, if people have had experiences of migration or races …that will inevitably impact on their views about themselves and their values, core beliefs, exceptions. So that has to come into the work"
		Intervention	"I say to somebody they need to look after themselves, they need to find self-compassion, and they need to not drive themselves so hard… well actually, there is a massive societal cultural internal sense that that is your point of being of being on the planet, and I think that's kind of quite hard"
	Barriers to cultural competency	Lack of experience	"I found myself in this conversation actually really having to rack my brain of all the people I've worked with, how many would I think have sort of come with a minority background"
		Challenging	"…it's much less straight forward to sort of think how I introduce even the discussion of somebody's ethnic background in the room"

Theme	Sub theme	Code	Example quotes
			"…it's really hard I think when I've used interpreters before now, I think having a lot of conversations with the interpreters…it, was really difficult actually, that was probably the most complicated."
		Discomfort	"…is there any objective way to ask about that or how do I get the right words to ask about Imams or.. you stutter then because of your ignorance"
			"…there is that sort of slightly uncomfortable bit"
		Inflexible system	"…recognizing just how inflexible things are in terms of everything from the food to the nature of the bedroom and how people sleep or wash"
	Clinician's position	Reflection of social graces of staff	"I think having sort of cultural intelligence means really understanding your own culture first and actually, like what are my beliefs… what impressions have I got from the way I grew up and things"
		Developing cultural competency skills	"I'm thinking about my experience and where I've been on placements and where I've been working"
			"I remember working with someone, where I think I did actually integrate it a little bit better"

Appendix K – SIP: Strengths of the guidance based on clinician feedback

Strengths of the guidance and recommendations:

- “Ties in with the teaching provided on cultural competency. This guidance gives practical steps on what to do and where to go next after learning about the topic”
- “Very useful… have not seen something like this before”
- “Tangible”
- “Brings it all together into one place”
- “It is not enough to reflect on diversity.. need to think about actions and what to do next, which this guidance does”
- “Helpful length” and “bitesize”
- “Comprehensive”
- “Readable format”, “Helpful to split into some sections that can be looked at overtime”, “Useful to have subheadings”
- “The tool was helpful and interactive”
- “Helpful to know that time of assessment/intervention does not need to be increased”
- “Example questions and prompts really helpful”
- “Familiar with Laidlaw model and found it useful to integrate”

Appendix L – SIP: Suggested improvements to the guidance and recommendations

Section of the guidance/ recommendation	Suggested improvements
Introduction	• It is important to state why this guidance is important, as improving older ethnic minority patient's experience can help to improve access for future patients • Breaking the introductions into bullet points to further improve readability • Improving definition of acculturation • Providing additional examples when defining ethnic minority and stating why this was chosen
Initial contact	• Check NHS policy about interpreters and amend guidance accordingly
Assessment/formulation	• Add more example questions for psychologists • Add more information about communicating with family members about treatment/mental health, and issues of confidentiality when sharing information with families • Being aware that patients may not identify with a specific culture necessarily or how much they identify with a culture can vary. State the nuances around this • Consider the use of disease-specific models for formulation • With regards to gaps in timelines, not relying on the internet as the only source. Continue checking with supervisor and going back to the patient with what you have learnt – do not just stop at information gathering • Add more questions about acculturation • Consider the cultural differences that older adults may have with younger generation in a patient's family. Not assuming linear acculturation (i.e. increased acculturation for younger generation) • Reference timelines that are used in narrative therapy

Section of the guidance/ recommendation	Suggested improvements
Cultural Competency Assessment (CCA) as a tool	• Clinicians found this hard to fill out because not enough access to ethnic minority patient groups. State this disclaimer with the tool • Add a description about the tool, such as asking clinicians to think about an example when completing the tool. Otherwise, clinicians felt that it seemed easy to agree with the items • Add more information about how to score the tool, what the scores mean and how should the tool be used. • It was noted that it would not be possible to bring the whole tool in supervision. Perhaps bringing the areas that clinicians were scoring less on. Also state whether the tool was the responsibility of the supervisors or patients.
Supervision	• Stating that 'poor cultural competency' should be normalised in supervision
Recommendations for the service	• State that the service should improve access for ethnic minority patients • Allocating staff to the recommendations to ensure these would be carried through • Develop an audit checklist for the service, to allow the service to monitor how they know cultural competency has been improved • Being clear about what is meant by 'accurate' note keeping
General comments	• Add examples from actual cases in the guidance • Include a visual element which could be displayed • State how to work indirectly with teams on the ward for ethnic minority patients • State the gaps for future that the service can address, as well as the next steps • Add resources recommended by the team

Appendix M – SIP: Final version of the guidance and recommendations

15/07/2022

Guidance for working with older adult ethnic minority patients

FOR CLINICIANS WORKING IN BUCKINGHAMSHIRE COMMUNITY OLDER ADULT PSYCHOLOGICAL SERVICES

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Introduction

Who is this guidance for?

This guidance has been developed to increase the cultural competency of clinicians in the Buckinghamshire community older adult psychological service. This will be a live document which will continually be updated with input from the service.

How has this guidance been developed?

This guidance has been developed by Gurpreet Reen as part of her Service Improvement Project for the Clinical Psychology Doctorate at the University of Oxford. The project was closely supervised by Alasdair Churchard, Rebecca Dow and Reena Vohora.

The guidance was produced by synthesising the findings from an audit of the service (A), consultations with three ethnic minority patients (P), focus groups with clinicians in the service and across Oxford Health NHS Foundation Trust (F), and by looking at research such as academic journals and relevant reports (e.g., the IAPT Positive Practice Guide; *see 'potential resources' section below*) (R).

Why has the guidance been developed?

Culture plays a key role in an individual's mental health. Culture contributes to the development of mental illness, to an individual's perception and expression of their symptoms, when and how they seek help, as well as their expectations of treatment (*see Hwang et al., 2008 in further reading*).

If culture is not integrated in care for older ethnic minority patients, they can feel isolated, have a negative experience of mental health, and are less likely to access

mental health services in the future. Yet, there is a lack of research and policy about how to integrate culture in older adult psychology services for ethnic minority patients.

This guidance will aim to support clinicians and the service to improve their cultural competency skills when working with older ethnic minority patients.

How should the guidance be used?

This guidance is intended to help clinicians be proactive about addressing cultural issues in sessions. It is NOT expected that the time spent on assessment and intervention with an older ethnic minority patient should be significantly increased. However, the guidance should be used as prompts to cover some of the issues that may be more relevant to this patient group.

It is important to keep in mind that some individuals may not find the discussion about culture as relevant to their mental health presentation and patient's willingness to discuss culture could change at different points in therapy. Be prepared to emphasise or de-emphasise cultural issues within sessions according to the patient in front of you.

When should the guidance be used?

The guidance should be used at all stages of a patient's journey through the service (*see Figure 1*). Each section in the guidance maps onto these stages. Each section also has a 'Quick View' diagram at the end. You can also refer to 'case examples' at the end of the document to learn from other people's experience (these have been collated from speaking with clinicians).

The guidance should also be used by clinicians for self-reflection and self-supervision, as well as in supervision by both the supervisor and supervisee. Recommendations for the broader service also accompany this guidance.

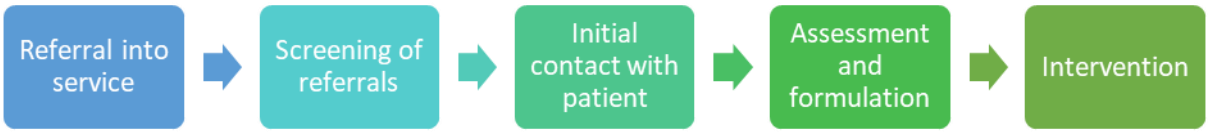


Figure 1: Flow diagram of patient's journey through service

Definitions

Race and ethnicity:

'Race' is generally defined as a category of grouping people based on ancestral origin and shared physical characteristics (usually refers to skin colour). 'Ethnicity' refers to a person's cultural identity, and this can include their national and regional identity, the language they speak, and religious beliefs. It should be noted that ethnicity (or cultural identity) can be subjective and unique to an individual, and can be described differently depending on the context in which this is discussed, and can also be based on an individual's lived experience (e.g., older adults living in the UK for many years may describe their ethnicity differently to older adults who have immigrated in the UK in recent years, even if they fall in the same ethnic group more broadly).

For the purpose of this guidance, we have used the most commonly used ethnic group categories as defined by the UK Government (2021). These include "all ethnic groups except the White British group", which includes people from Black ethnic groups, Asian ethnic groups, Mixed ethnic background, Irish travellers, and Roma group (referring to migrants from Central and Eastern Europe). Based on these groupings and

the definition of race and ethnicity described above, it is important to consider not only the patient's origin, but the origin of an individual's parents and grandparents.

Culture:

Culture in this document is defined as " … a set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioural conventions that are shared by a group of people, and that influence (but do not determine) each member's behaviour and his/her interpretations of the 'meaning' of other people's behaviour" (*see page 2, Spencer-Oatey, 2012 in 'further reading' section*). Culture is therefore an umbrella term which encompasses the customs, values, and behaviour of a group (for the purpose of this guidance, we refer to cultural factors of racial and ethnic minoritised groups)

Culture can encompass many different factors (*see figure 2*).



Figure 2: Factors that can form part of culture

Intersectionality:

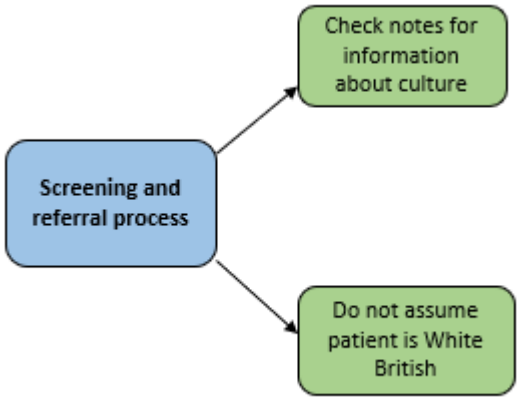
Intersectionality is a theoretical framework which is used to describe how multiple social identities, such as race, age, gender, socioeconomic status, and disability, can intersect at the individual level (i.e., at the micro level), and how experiences at those intersections can be influenced by larger social-structural systems (i.e. at the macro level) of oppression and privilege (e.g., racism, sexism, classism). The intersectionality framework states that one unique identity (e.g., race) does not always explain the unequal outcomes that people experience without the intersection of other identity or identities (e.g., gender) (*see Bowleg, 2012 in 'further reading' section).*

In relation to mental health, research shows that the intersection between being from a minoritised racial and ethnic background and factors such as social marginalisation, tenuous social circumstances (e.g., housing, employment, financial), low English language literacy, and limited support networks, can all contribute to inequalities in mental health care for this population (*see the report by the Commission on Race and Ethnic Disparities, 2021 in 'further reading' section*).

Screening and referral of older racial and ethnic minoritised patients

- Check notes to find out more information about a patient's culture at referral and screening, if possible (A, F)

- Do not assume that a patient is White-British based on the name (A, F)
    - *Be prepared to check cultural history when beginning work with the patient*



Quick View*:* Screening and referral of older adult racial and ethnic minority service

Initial contact with older racial and ethnic minoritised patients

- Check how to pronounce patient's name. Consider how they would like to be referred in sessions (F, R)
    - *Some older adults from racial and ethnic minoritised groups may prefer prefixes for respect*

- Find out about patient's spoken and written language (which may differ). Ask about specific dialects, if relevant. (F, R)
    - *Older multilingual adults may lose their secondary language skills as they age (such as English). Be mindful of difficulties and offer an interpreter or translated materials even if the person can speak English*

- When an interpreter is needed, check whether patient has any concerns about having an interpreter (F, R, P)
    - *Some patients may worry about talking to people from their own racial and ethnic communities as interpreters. If this happens, check the NHS policy, and speak to your supervisor.*
    - *If family members must be used as interpreters, continue being curious about what is being translated. Involve more than one family member for thorough/accurate assessment if needed. Consider confidentiality.*
        - *See '**Resources'** section below for tips on working with interpreters*

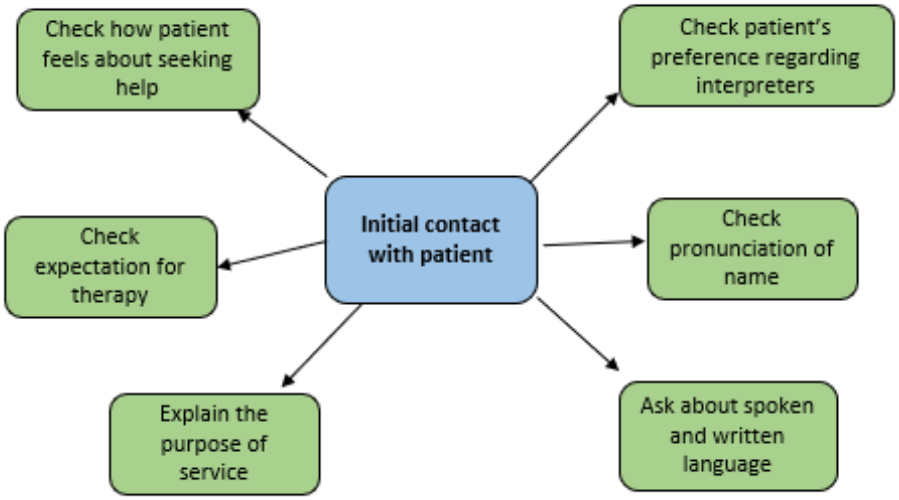
- Explain clearly what the service does and what may happen in therapy sessions (F)
    - *Many racial and ethnic minority older adults may not be aware of what to expect from mental health services*

- *Find out patient's cultural beliefs about therapy as these may influence their understanding.*
- *You may consider informing them at this stage that "in the service, we sometimes might ask around people's and personal experiences or childhood experiences, faith, religion, culture, and so maybe we need to have a think about how we're going to do that together in a way that feels safe and respectful".*

- Be aware of patient's expectations of therapy, and whether they have been influenced by others to seek help (e.g., younger family members) (F)

- Be mindful of patient's beliefs about seeking help, and the level of stigma they may feel (ageing, mental health, and shame from community) (R, P, F)
  - *Consider their past experiences of seeking mental health support*
  - *Be flexible in how therapy sessions are offered.*

- Be aware that some families may expect more information about your sessions with the patient or may choose to sit in the session in some cases (F)
  - *Check with the patient about what they will like shared with the family, and which members they would like to share with. Be aware that the patient may not have a choice.*
  - *Talk to your supervisor if it is not possible to talk to the patient alone or if you are worried about breaching confidentiality.*



Quick View*:* Initial contact with older racial and ethnic minoritised patients

Assessment and formulation with older racial and ethnic minoritised patients

- Be 'sensitively curious' throughout sessions and show cultural humility. (P, F)
    - *Create a safe non-judgmental space and build trust so that patients are willing to share their beliefs and values.*
    - *Be honest and humble when you don't know about patient's cultural factors. Do NOT make assumptions.*
    - *Do not be afraid to ask patients to explain cultural references/historical events/ values and beliefs that you may not understand. If needed, check with family members or find relevant resources with their permission.*

- Check which cultural beliefs/values a patient identifies with. Do NOT assume they identify with a specific ethnic group. Use their language. Be aware that there may be many differences in culture, even within the same racial and ethnic subcategories. (F, R)

- Use tools such as timelines and genograms to learn more about patient's cultural history and background (F, A)
    - *Consider migration history and key historical events that the person may have lived through. If from a different country, understand the regional differences. Consider how this may have shaped their beliefs.*
    - *Be aware that patients may not be willing to share historical events that they may find traumatic/shameful or because they assume it is common knowledge. Look for any possible gaps in timeline. Check with family or find out from resources on the internet*.

- *If you find out information from external resources, do NOT assume that this is correct. Check with the patient again or speak to your supervisor about what you have found.*

- Find out patient's lived experience of being in the UK (F, R, P)
  - *Consider: who they commonly interact with (e.g., their friends, community)? Do they belong to any groups (religious/social)? What media do they normally consume (such as TV shows/movies/music)? What language do they speak with their family and friends? What food do they eat with their family and friends?*
  - *Do NOT make people feel different when their experiences in all aspects of life are similar to that of White British groups*

- Be curious about the differences in values and beliefs between patient's family members, such as parents, partner, or children (A, P, R)
  - *Consider how differences in values and beliefs may impact on the patient, communication with their family, and their mental health presentation*
  - *Do NOT assume that younger generation will share more common values with people from White British groups*

- Be curious about the cultural background between patient's family members, such as parents, partner, or children (A, P, R)
  - *Consider how possible cultural differences within family members may have an impact on the patient and their mental health presentation.*

- Check patient's religious beliefs and religious practices (R, A, F)
  - *Consider how this has changed as they have aged.*

- Check patient's beliefs about what caused their mental health condition (e.g., a spirit, their physical health etc.) (R, F)

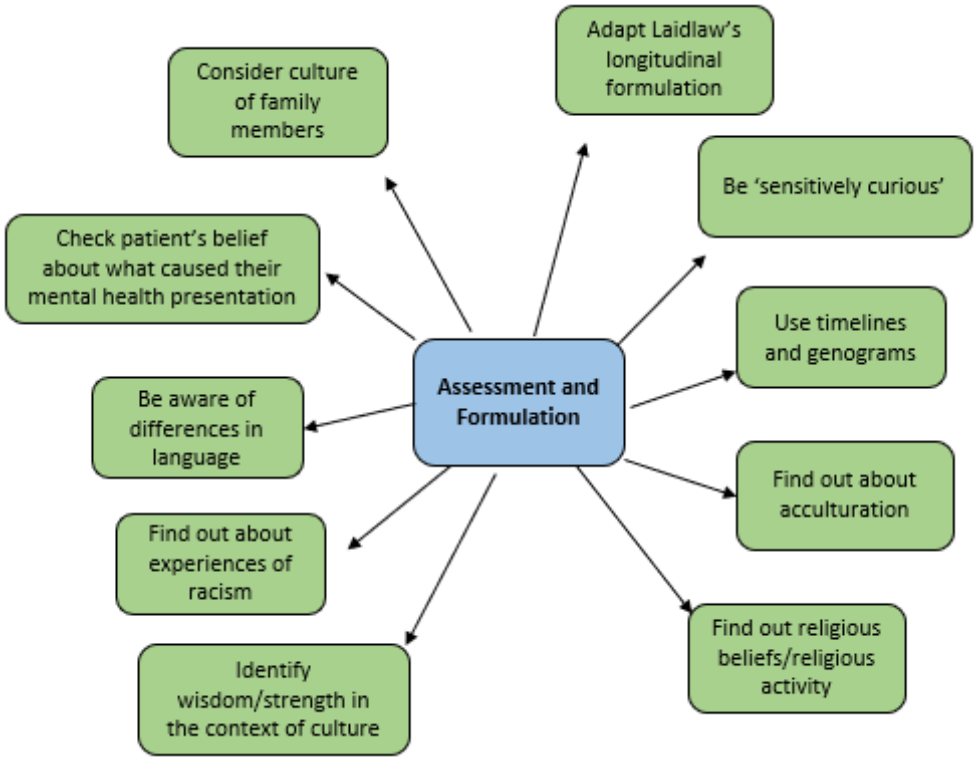
- Be aware that patients may use different forms of language to describe their mental health (R, F)
    - *Allow patients to express their feelings in different ways e.g., visually, through the help of family and friends, through cultural references (such as movies or music)*
    - *Check understanding when explaining a concept to a patient*
    - *Be curious about particular words that patients may use*

- Consider patient's prior experience of racism and discrimination (R, F, P)
    - *Consider how this may have impacted their values, beliefs and mental health presentation*
    - See Beck 2019; Williams, Faber, & Duniya, 2022 in 'further reading' for more information

- Consider Laidlaw's concept of 'Wisdom enhancement' to understand how older adults from racial and ethnic minoritised backgrounds have learnt skills to manage challenges within the context of culture (R, F, P)
    - *Reflect on how older adults have dealt with discrimination, hardship, migration, learning about a new culture, acculturation, and help-seeking for their mental health despite stigma.*
    - *See page 77 of Laidlaw, Kishita and Chellingsworth, 2016* in '***further reading'*** *for more information*

- Adapt Laidlaw's longitudinal formulation to consider how cultural background may influence current presentation. See Laidlaw's model in '***resources'*** section (R, F, P)
    - How are Cohort Beliefs shaped by culture?
        - *Consider where the patient grew up (childhood, adulthood). Did they live through any key historical events (e.g., war, migration)? What were their experiences like at the time? How may this be different due to their cultural background? Did gender, socioeconomic status, family values interact with culture? What are their cultural beliefs about mental illness and seeking help?*
    - How are Role Investments shaped by culture?
        - *Consider how culture has influenced this patient's personal activities and interests. How may the roles be different for this person due to their culture? Consider intersectionality of culture with other characteristics such as gender (e.g., the role of caring for one's husband and children etc.)*
    - How are Intergenerational Linkages shaped by culture?
        - *Consider whether the patient feels connected with the younger generation based on their cultural beliefs. What are their personal values about familial roles according to their culture? Is this shared by their family in different generations? What are their perceptions about the preceding generation, and how is this influenced by their culture?*
    - How is the Sociocultural context around ageing shaped by their culture?
        - *Consider the patient's cultural beliefs about ageing? How may this be different to the beliefs about ageing of the majority culture?*
    - How are beliefs about Physical Health shaped by their culture?

- *Consider patient's cultural beliefs about physical health conditions they may have or about any limitations due to their physical health.*



Quick View*:* Assessment and formulation with older racial and ethnic minoritised patients

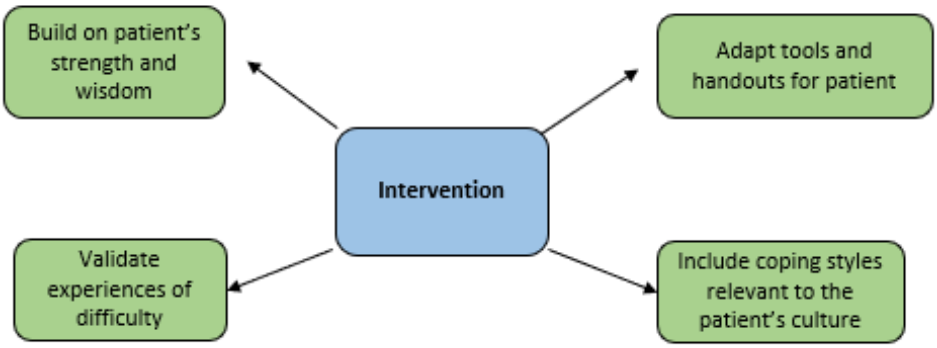
Intervention with older racial and ethnic minoritised patients:

- Be willing to adapt monitoring tools, outcome measures and homework exercises based on patient's culture (F, R)
    - *For example, number of visits to a place of worship may be a better indicator of progress for someone for whom religious activity is important.*
    - *Some patients may feel uncomfortable in writing down their thoughts and feelings*
    - *Behavioural activation tasks should be meaningful to the patient*

- Incorporate culturally relevant coping styles and protective factors into treatment (R, F)
    - *For instance, religious prayer and spirituality, or the importance of family cohesiveness.*

- Build on patient's strength and wisdom within the context of culture during treatment (R, F, P)
    - *Refer to the challenges they have faced and how they have dealt with this in the past*

- Validate patient's difficult experience (R, P)
    - *Do not assume that change methods (such as cognitive restructuring) may be appropriate if patient has experienced challenges such as racism. Validate these experiences rather than focusing on changing patient's interpretations.*



Quick View*:* Intervention with older adult racial and ethnic minoritised patients

Supervision and Reflection

- Reflect on your own culture and social graces in relation to the patient's culture (F, R)
    - *Are there any assumptions or implicit biases that may influence your relationship?*
    - *Would the patient interact with you differently if you were from a different culture, gender, age etc.?*
    - *Would you interact with the patient differently if they were from a different culture, gender, age etc.?*

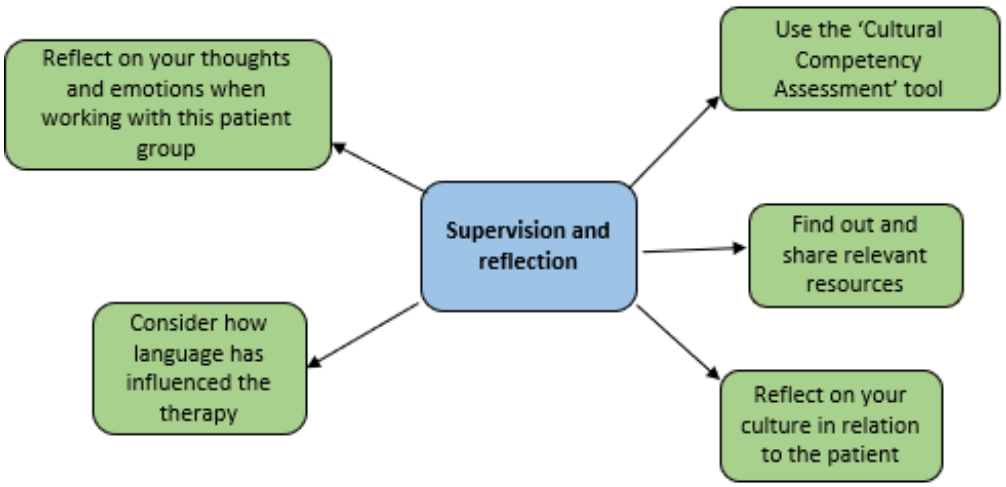
- Consider what thoughts and emotions working with this population brings up in you.
    - *Recognise that this is a sensitive and challenging topic which can have personal implications.*
    - *Consider how this impacts you and other clinicians in the service.*
    - *Reflect on your own position around culture.*
    - *Consider how supervision can be made safer to have honest and open discussions about this topic.*

- Consider how language influenced the therapy that was provided (F)
    - *Were complex/abstract concepts explained well and understood correctly? How may therapy conducted in another language may have been different?*
    - *Use/bring recordings into supervision for reflection*

- Consider what resources would support your work with an older racial and ethnic minoritised groups. Ask your supervisor or other clinicians for resources. Share resources you have found with others (F)
    - *Also see the **resources and further reading** section at the end of the guidance*

- Share your experiences of working with racial and ethnic minoritised population with your colleagues. Listen to their experiences (F)

- Use the 'Cultural Competence Assessment' as a tool to monitor your own cultural competency (R)
    - *Use this tool to guide supervision, to discuss with other clinicians, and to reflect on your skills and development*



Quick View*:* Supervision and reflection

Cultural Competence Assessment (CCA) tool for reflection and supervision

Where is this tool from?

This is a validated outcome measure that has been used in research studies to measure cultural competency of healthcare professionals (see Dorrenbos et al., 2005) in '***further reading'***.

The tool has been included here to support reflection and discussions about developing cultural competency skills.

How can this tool be used?

This tool should be used to guide your own reflection. You do not need to have a final score for this, but rather focus on items where you are scoring differently than you would like to. You can also bring items to supervision that you are scoring well on OR items that you would like more support with (you do not need to bring the whole tool).

There are three ways you can use this tool:

1. If you have previously worked with racial and ethnic minoritised patients, then bring to mind a case example when completing the tool. Notice any items where you do not feel confident. Reflect on this. What will help you to change how you score on these items next time?
2. If you are currently working with a racial and ethnic minoritised patient, then complete this at least once while working with this person. Notice any items

where you do not feel confident, feel stuck on, or need more support. Bring these items with you for discussion in supervision. Reflect on these items.

3. If you do NOT yet have any experience of working with racial and ethnic minoritised population, then complete this tool based on your views right now. Notice any areas for improvement. You may keep this to yourself or discuss with a supervisor if needed.

Who is responsible for using the tool?

It should be the responsibility of the supervisor/the service to recommend this tool to clinicians. Clinicians should complete this tool for their own reflection or as stated above. Clinicians may bring items from the tool for discussion to supervision when needed.

It is not expected that clinician's should be 'perfect' when scoring each item on the tool. Instead, it is expected that there will be many areas for improvement and cultural competency will improve over time as we become familiar with these areas.

Cultural Competence Assessment (CCA) tool

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1	I include cultural assessment when I do client or family evaluations					
2	I seek information on cultural needs when I identify new clients and families in my practice.					
3	I have resource books and other materials available to help me learn about clients and families from different cultures.					
4	I use a variety of sources to learn about the cultural heritage of other people.					
5	I ask clients and families to tell me about their own explanations of health and illness.					
6	I ask clients and families to tell me about their expectations for care.					
7	I avoid using generalizations to stereotype groups of people					
8	I recognize potential barriers to service that might be encountered by different people.					

9	I act to remove obstacles for people of different cultures when I identify such obstacles.					
10	I act to remove obstacles for people of different cultures when clients and families identify such obstacles to me.					
11	I welcome feedback from clients about how I relate to others with different cultures.					
12	I welcome feedback from co-workers about how I relate to others with different cultures.					
		Strongly agree	**Agree**	**Neither agree nor disagree**	**Disagree**	**Strongly disagree**
13	I find ways to adapt my services to client and family cultural preferences.					
14	I document cultural assessments.					
15	I document the adaptations I make with clients and families.					
16	I learn from my co-workers about people with different cultural heritages.					
17	Race is the most important factor in determining a person's culture.					
18	People with a common cultural background think and act alike.					

19	Many aspects of culture influence health and healthcare.					
20	Aspects of cultural diversity need to be assessed for each individual, group, and organization.					
21	If I know about a person's culture, I do not need to assess their personal preferences for health services					
22	Spirituality and religious beliefs are important aspects of many cultural groups.					
23	Individuals may identify with more than one cultural group.					
24	Language barriers are the only difficulties for recent immigrants to the United Kingdom.					
25	I understand that people from different cultures may define the concept of ''healthcare" in different ways.					
26	I think that knowing about different cultural groups helps direct my work with individuals, families, groups, and organizations.					
27	I enjoy working with people who are culturally different from me.					
28	I find ways to adapt my services to client and family cultural preferences.					

Resources

- Behavioural activation with Muslim service users, including translated materials (not specific to older adults)
    - Includes manual for clinicians, and translated self-help written and audio tools for patients written in Arabic and Urdu
    - https://medicinehealth.leeds.ac.uk/downloads/download/131/results_and_resources_for_addressing_depression_in_muslim_communities

- Working with interpreters
    - BPS guidelines - https://www.bps.org.uk/sites/www.bps.org.uk/files/Policy/Policy%20-%20Files/Working%20with%20interpreters%20-%20guidelines%20for%20psychologists.pdfhttps://www.bps.org.uk/sites/www.bps.org.uk/files/Policy/Policy%20-%20Files/Working%20with%20interpreters%20-%20guidelines%20for%20psychologists.pdf
    - Free course on working with interpreters - https://www.pasaloproject.org/multilingualism-mental-health-and-psychological-therapy---course-content.html

- IAPT Black, Asian and minority ethnic service user positive practice guide
    - https://lewishamtalkingtherapies.nhs.uk/wp-content/uploads/2021/10/IAPT-BAME-PPG-2019.pdf

- Laidlaw's longitudinal formulation (Laidlaw, Thompson & Gallagher-Thompson, 2004)

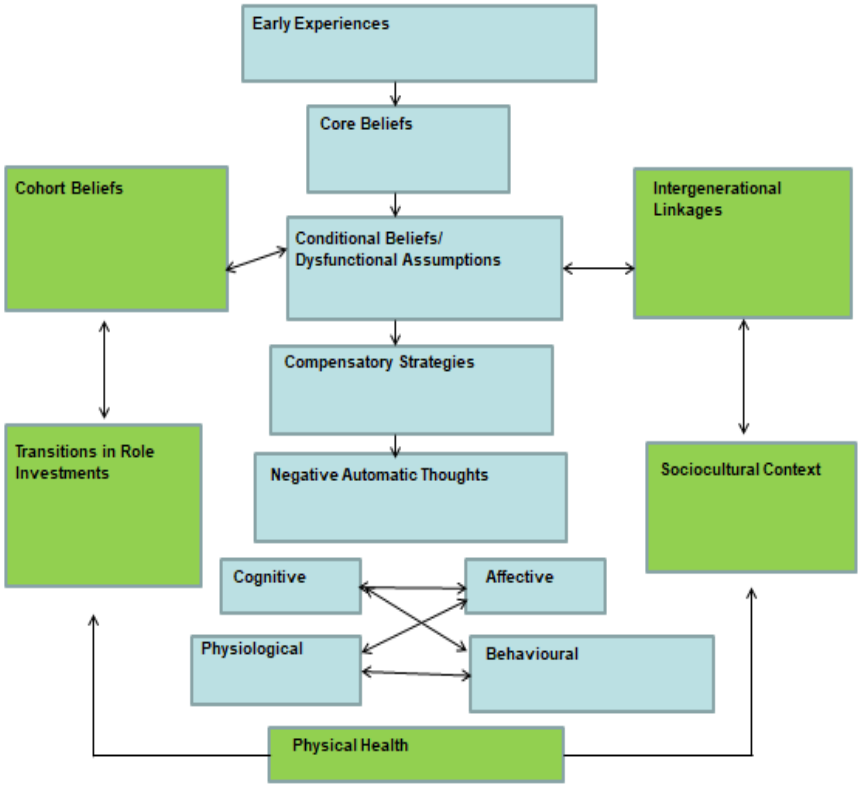


***Figure 4*:** Laidlaw's longitudinal formulation for older adults

Case examples

- Case example 1

An ethnic minority patient believed that summaries and circular questions used in therapy meant that the clinician did not understand him. The patient did not understand why the clinician was doing this until the clinician explored this with the patient.

- Case example 2

To find out more information about an ethnic minority patient's background, a clinician spoke to her older children. The clinician noticed that the patient's son and daughter both said different things about what their mum's background before they were born.

To understand these differences, the clinician had to keep in mind the ages of the children and their position in the family. The clinician also checked with the patient for clarification.

- Case example 3

A clinician noticed that one ethnic minority patient was using words and phrases in session that seemed concerning. The clinician became curious and asked the patient to elaborate on this further.

Upon discussion, the clinician found out that the words and phrases were commonly used in the patient's culture. Having this discussion led to the clinician understanding more about the patient's culture and building a stronger therapeutic relationship with the patient.

- Case example 4

A clinician worked with an ethnic minority patient with paranoid beliefs about their family. After exploring patient's cultural beliefs about family roles, the clinician was

able to tease apart the actual experiences of the patient (which initially the clinician assumed were beliefs) and their present paranoid beliefs. The clinician also helped validate the negative experiences that the patient had experienced and had contributed to their paranoid beliefs.

- ❖ Case example 5

A clinician was trying to understand the mental health presentation of an ethnic minority patient. The patient did not seem aware of how their background influenced their mental health. However, having the patient's husband in the same room, the clinician was able to get a different perspective. The husband noticed how the patient's stress of migration in her teens contributed to her symptoms.

The clinician found that having another voice in the room was very helpful to understand the patient's history.

- ❖ Case example 6

A clinician was speaking to a patient's children to understand their relationship with their mother. One of the difficulties the children stated was they found it difficult to communicate with their mother as the children didn't speak their mother's first language very well, and the mother did not speak very good English.

Being aware of these inter-generational differences helped the clinician to understand the role of family on the patient's mental health presentation.

- ❖ Case example 7

A clinician found that a patient was resistant to behavioural activation tasks, such as a regular coffee meet up with charitable groups. On further exploring, this was because the behavioural activation tasks that the clinician suggested were not culturally appropriate or meaningful for the patient and the activity did not motivate the patient to

leave their house. This led to more collaboration on what activities would be the most appropriate for the patient.

- Case example 8

A clinician reflected on how it was pathologised that a patient they worked with had chosen to spend their life at home within their own culture, not go out much in the UK, or not learn English. The clinician instead asked the patient openly and in a ‘sensitively curious’ way about what was helpful about choosing to do this.

Further Reading

- Bowleg, L. (2012). The problem with the phrase women and minorities: intersectionality—an important theoretical framework for public health. American journal of public health, 102(7), 1267-1273.

- Burnham, J. (2018). Developments in Social GRRRAAACCEEESSS: visible–invisible and voiced–unvoiced 1. In *Culture and reflexivity in systemic psychotherapy* (pp. 139-160). Routledge.

- Commission on Race and Ethnic Disparities. (2021). Commission on Race and Ethnic Disparities: The Report.

- Doorenbos, A. Z., Schim, S. M., Benkert, R., & Borse, N. N. (2005). Psychometric evaluation of the cultural competence assessment instrument among healthcare providers. Nursing Research, 54(5), 324–331.
    - https://pubmed.ncbi.nlm.nih.gov/16224318/

- Graham, J. R., Sorenson, S., & Hayes-Skelton, S. A. (2013). Enhancing the cultural sensitivity of cognitive behavioral interventions for anxiety in diverse populations. *The Behavior Therapist/AABT*, *36*(5), 101.
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    - https://pubmed.ncbi.nlm.nih.gov/17587473/

- Laidlaw, K., Kishita, N., & Chellingsworth, M. (2016). *A clinician's guide to CBT with older people*.

- Laidlaw, K., Thompson, L. W., & Gallagher-Thompson, D. (2004). Comprehensive conceptualization of cognitive behaviour therapy for late life depression. Bhevaioural and Cognitive Psychotherapy, 32, 389–399.

- Spencer-Oatey, H., & Franklin, P. (2012). What is culture. *A compilation of quotations. GlobalPAD Core Concepts*, *1*, 22.

Recommendations to improve cultural competency

The following recommendations have been developed by Gurpreet Reen as part of her Service Improvement Project for the Clinical Psychology Doctorate at the University of Oxford. The project was closely supervised by Alasdair Churchard, Rebecca Dow and Reena Vohora.

These recommendations are accompanied by a 'guidance for working with older ethnic minority patients' for clinicians.

To embed these recommendations and guidance into routine practice, the service may consider doing the following:

- Organise a team meeting to review the guidelines and recommendations
- Make a plan on how these will be stored and used
- The team complete the CCA tool for their own personal reflection
- Use the 'audit for the service to improve cultural competency' in this document to plan next steps

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Audit to assess ethnic minority patients accessing the service, using patient notes 5

Recommendations for the service

- Record ethnicity on referral spreadsheet
    - *To support future audit and to understand the population group being referred into the service*
    - *Allocate task to: Service leads*

- Accurate note-keeping about patient's cultural background on Carenotes
    - *For instance, consider how ethnicity, migration history, religious beliefs and religious activities should be recorded*
    - *Allocate task to: The team*

- Use the audit tool for patient notes (see below), in order to find out more information about the ethnic minority patients that are accessing the service
    - *Allocate task to: Assistant psychologists*

- Do not assume that racial and ethnic minoritised patients should be matched with racial and ethnic minoritised clinicians, unless requested
    - *Patients from an ethnic minority background may be concerned about stigma from members of their community, which may include healthcare professionals*
    - *If using interpreters, check that they are not known to the patient or their family*

- Form connections/ collect contact details of local community healers, spiritual leaders, faith groups and culturally relevant services, that are appropriate for older adults (R, P, F)
    - *Help build connections between patients and community leaders/groups, if relevant for the patient*
    - *Allocate task to: Team*

- Consider having translations of materials/questionnaires in local languages
    - *This includes an explanation of the service, psychoeducation of mental health conditions, monitoring tools (e.g., thought record sheets) and questionnaires*
    - *Offer to give translated leaflets and documents to patients if they speak/read/write more than one language, even if they can speak English*
    - *Allocate task to: Assistant psychologists or Trainee psychologists*

- Help clinicians access resources/training on working with interpreters
    - *Allocate task to: Service leads*

- Support patients in being able to give feedback about the service
    - *Allocate task to: Assistant psychologists or Trainee psychologists*

- Meet regularly as a service to share learning about working with older ethnic minority adults (e.g., regular team meetings)
    - *Share and reflect on assessment, formulation, and intervention with this patient group in order to embed learning*
    - *Allocate task to: Service leads*

- Form a plan on how to increase access of older ethnic minority patients in the service
    - *This may be a possible service improvement project*
    - *Allocate task to: Team and trainee psychologists*

Recommendations for the guidance for clinicians

- Decide where the guidance should be stored and how this should be shared with clinicians in the service
    - *Allocate task to: Service leads*

- Assemble resources to support clinicians working with older adults from ethnic minority background
    - *Have a central repository (e.g., a spreadsheet) of resources that can be shared with clinicians in service*
    - *Update resources regularly.*
    - *Allocate task to: Assistant psychologist*

- Collate and add more real case examples of working with older ethnic minority patients
    - *Allocate task to: Team*

- Make an easy-to-view visual diagram of the guidance to put on the noticeboard for easy access
    - *Allocate task to: Assistant psychologist*

- There are still gaps in the guidance. The next step would be to update the guidance using a systematic approach (i.e., research and/or service improvement project). The gaps that need to be addressed include:
    - *Working indirectly with older adults from racial and ethnic minoritised backgrounds*
    - *Support for racial and ethnic minoritised clinicians working with patients*
    - *Allocate task to: Team and Trainee Psychologists*

Audit for the service to assess cultural competency

The service should regularly assess whether they see improvements in cultural competency (for example, every year). The service may use the below checklist to guide their cultural competency assessment:

Indicators of cultural competency	**Next steps**	**Task allocated to**	**Planned completion date**
Updating the 'guidance for clinicians', with new examples, resources & learning			
Meeting recommendations for the service or guidance, as listed above			
Develop a central repository of resources for working with ethnic minority patients (Once available, update the central repository regularly)			
Accurately recording cultural information for ethnic minority patients on Carenotes (Can also do an audit of patient notes, if needed, using the tool below)			
Improve links with local ethnic communities			
Obtaining feedback from ethnic minority patients (what did they find useful and what could be improved)			
Improving access to the service for ethnic minority patients			
Routinely discussing cultural competency in supervision, perhaps with the aid of the Cultural Competency Assessment tool			
Regular 'team meetings' to share learning about working with older ethnic minority patients			

Audit to assess racial and ethnic minoritised patients accessing the service, using patient notes

This audit can be conducted to find out more information about racial and ethnic minoritised patients accessing the service and whether cultural information is being considered or being recorded during assessment/therapy. Use a spreadsheet to record the following information:

- Demographics
    - Year of birth
    - Gender
    - Marital status
    - Mental health presentation
- Ethnicity
    - Of the patient
    - Mother
    - Father
    - Partner/spouse
- Cultural background
    - Country of birth
    - Year moved to the UK
    - Country(ies) spent in childhood
    - Country(ies) lived in as adulthood
    - Religious beliefs
    - Level of religious activity
    - First language
    - Other languages

- Is an interpreter required?

- Integrating culture into formulation
  - Was cultural background considered in formulation?
  - If yes, which cultural factors likely contributed to patient's mental health presentation: (e.g. religious identity, external spirits, inter-generational conflicts)?
  - Were there any key events that the person lived through in childhood/adulthood related to their culture or countries lived in (e.g, migration, war, historical events)?
  - How did the patient's values about family and community impact on their mental health?
- Integrating culture into treatment
  - Were cultural factors considered as protective factors in treatment (e.g., religion, community, family)? If yes, what were these?
  - How was treatment adapted for the patient's cultural background?
- Any additional information about patient's cultural background likely to be relevant to their mental health

Appendix N – TDRP: Author guidance for Psychiatry Research

Aims and scope

This journal provides rapid publication of complete **research reports** and **reviews** in the field of **psychiatry**.

The scope of the journal encompasses:

1. **Biochemical, physiological, neuroanatomic, genetic, neurocognitive, and psychosocial determinants of psychiatric disorders.**
2. Diagnostic assessments of psychiatric disorders.
3. Evaluations that pursue hypotheses about the cause or causes of psychiatric diseases.
4. Evaluations of pharmacologic and non-pharmacologic psychiatric treatments.
5. Basic neuroscience studies related to animal or neurochemical models for psychiatric disorders.
6. Methodological advances, such as instrumentation, clinical scales, and assays directly applicable to psychiatric research. These will be considered only if the scales and assays are included as an appendix to the manuscript in English. If they are too long, the way to obtain them without cost to the reader must be carefully stated in the methods section of the manuscript.
7. Reviews of timely topics in psychiatric research
8. Letters to the editor will be considered for case reports, comments about previously published papers, or secondary data analyses.

Rapid publication is a priority; hence, authors are requested to pay close attention to the following instructions for the submission of manuscripts to the journal Psychiatry Research.

Preparation of manuscripts

Title page. The Title page should include the author byline, with names of authors on the same line(s). Superscript letters (a, b, c), not numerals, should be used to key institutional affiliation (if all authors are in the same department, the superscript letter should be omitted); an asterisk should be entered to designate the corresponding author. Underneath the byline, institutional affiliations should be listed (department, institution, city, state or province (if applicable) and country. Funding information should not be included on the title page but should instead be given following the Discussion section.In an asterisked Corresponding Author footnote at the bottom of the title page, telephone/fax numbers and e-mail address of the corresponding author should be provided; e-mail addresses, if desired, may also be provided for the co-authors (or co-corresponding author, if applicable).

Abstract. The Abstract should be 150-200 words for full-length articles and 100 words for short communications (formally known as Brief Communications), summarizing the aims of the study, the methods used, the results and the major conclusions. Do not include a summary at the end of the article. Note that Psychiatry Research does not use the structured abstract style; do not include bold-faced headings within the abstract. The Abstract should be a single paragraph. Do not include detailed statistics or p-values in the abstract; simply say “significant “or “non-significant” .

The abstract should be followed by up to seven key words which accord with the indexing conventions of Index Medicus. Note that the keywords should not duplicate words used in the title of the article, which will be automatically indexed.

Text. Although exceptions will be considered, manuscripts should not exceed 5000 words, and shorter manuscripts (e.g., 3000 words) are preferred. Each article should contain the following major headings: Introduction (preceded by arabic number 1.), Methods (preceded by number 2.), Results (preceded by number 3.), Discussion (preceded by number 4.), Acknowledgment (optional section following the discussion, which should not be preceded by a numeral), and References (should not be preceded by a numeral).

Subheadings should follow the numbering system used in the major heading; for example, the subheading "Subjects" within the Methods section should be flush left on a separate line and designated 2.1., the subheading "Procedures" should be designated 2.2., etc.

Lower level headings, if required, should also be numbered (e.g., "2.1.1. Patients." as a lower order heading under "2.1. Subjects."). Only the first letter of the first word of each heading should be capitalized.

The use of abbreviations within the text should be minimized, and each abbreviation, when introduced, must be defined and used consistently thereafter. Systeme International measurements should be used. For products or instruments (do not

abbreviate) used in the research reported, provide the name, city and country of the supplier in parentheses. All tables and figures must be referred to in the text.

Manuscript categories

Research Articles. Although exceptions will be considered, manuscripts should not exceed 5000 words, and shorter manuscripts (e.g., 3000 words) are preferred. Each article should contain the following major headings: Introduction (preceded by arabic number 1.), Methods (preceded by number 2.), Results (preceded by number 3.), Discussion (preceded by number 4.), Acknowledgment (optional section following the discussion, which should not be preceded by a numeral), and References (should not be preceded by a numeral). Subheadings should follow the numbering system used in the major heading; for example, the subheading "Subjects" within the Methods section should be flush left on a separate line and designated 2.1., the subheading "Procedures" should be designated 2.2., etc. Lower level headings, if required, should also be numbered (e.g., "2.1.1. Patients." as a lower order heading under "2.1.Subjects."). Only the first letter of the first word of each heading should be capitalized.

Short communications. Short communications (formally called Brief reports) should not exceed 1500 words, including a 100-word abstract, 3 keywords, text, and references plus 1 table or 1 figure.

Case reports. Case reports will only be considered as Correspondence (see following instructions.)

CorrespondenceCorrespondence items (formally Letters to the Editor) should be 750-1000 words or less. It should not include a title page, abstract or key words. Authors' names and affiliations should be listed at the end of the letter, along with the corresponding author's email address. There should be no more than 5 references, and no tables or figures.

Manuscript categories

Conflict of interest. All authors are requested to disclose any actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three (3) years of beginning the work submitted that could inappropriately influence, or be perceived to influence, their work. Examples of potential conflicts of interest that should be disclosed include employment, consultancies, stock ownership (except for personal investment purposes equal to the lesser of one percent (1%) or USD 5000), honoraria, paid expert testimony, patent applications, registrations, and grants. If there are no conflicts of interest, authors should state that there are none.

Abbreviations. Define abbreviations at their first occurrence in the article. Abbreviations should be defined when they first occur in the abstract, in the text, and also in tables and figure legends. Once an abbreviation has been introduced in the main body of the text, it should be used throughout.

Statistical reporting. Statistical reporting should be complete, including at a minimum name of statistical test, test value, degrees of freedom where appropriate, and p-value. Italic font should be used for n (sample size) and statistical terms, e.g., t, r, F, U, p.

Submission of manuscripts

Psychiatry Research proceeds totally online via an electronic submission system. In case you do not have an Internet connection, please contact the Managing Editor for alternative instructions. By accessing the online submission at https://www.editorialmanager.com/psy/default.aspx you will be guided stepwise through the creation and uploading of the various files. Authors will be requested to direct the manuscripts to the most appropriate Section/Category of research to assist in editor assignment.

Submission checklist

You can use this list to carry out a final check of your submission before you send it to the journal for review. Please check the relevant section in this Guide for Authors for more details.

Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

• E-mail address

• Full postal address

All necessary files have been uploaded:

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• Include keywords

• All figures (include relevant captions)

• All tables (including titles, description, footnotes)

• Ensure all figure and table citations in the text match the files provided

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Graphical Abstracts / Highlights files (where applicable)

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• Manuscript has been 'spell checked' and 'grammar checked'

• All references mentioned in the Reference List are cited in the text, and vice versa

• Permission has been obtained for use of copyrighted material from other sources (including the Internet)

• A competing interests statement is provided, even if the authors have no competing interests to declare

• Journal policies detailed in this guide have been reviewed

• Referee suggestions and contact details provided, based on journal requirements

For further information, visit our Support Center.

Studies in humans and animals

If the work involves the use of human subjects, the author should ensure that the work described has been carried out in accordance with The Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving humans. The manuscript should be in line with the Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals and aim for the inclusion of representative human populations (sex, age and ethnicity) as per those recommendations. The terms sex and gender should be used correctly.

Authors should include a statement in the manuscript that informed consent was obtained for experimentation with human subjects. The privacy rights of human subjects must always be observed.

All animal experiments should comply with the ARRIVE guidelines and should be carried out in accordance with the U.K. Animals (Scientific Procedures) Act, 1986 and associated guidelines, EU Directive 2010/63/EU for animal experiments, or the National Research Council's Guide for the Care and Use of Laboratory Animals and the authors should clearly indicate in the manuscript that such guidelines have been followed. The sex of animals must be indicated, and where appropriate, the influence (or association) of sex on the results of the study.

Use of inclusive language

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. Content should make no assumptions about the beliefs or commitments of any reader; contain nothing which might imply that one individual is superior to another on the grounds of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and use inclusive language throughout. Authors should ensure that writing is free from bias, stereotypes, slang, reference to dominant culture and/or cultural assumptions. We advise to seek gender neutrality by using plural nouns ("clinicians, patients/clients") as default/wherever possible to avoid using "he, she," or "he/she." We recommend avoiding the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability or health condition unless they are relevant and valid. When coding terminology is used, we recommend to avoid offensive or exclusionary terms such as "master", "slave", "blacklist" and "whitelist". We suggest using alternatives that are more appropriate and (self-) explanatory such as "primary", "secondary", "blocklist" and "allowlist". These guidelines are meant as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

Reporting sex- and gender-based analyses

Reporting guidance

For research involving or pertaining to humans, animals or eukaryotic cells, investigators should integrate sex and gender-based analyses (SGBA) into their research design according to funder/sponsor requirements and best practices within a field. Authors should address the sex and/or gender dimensions of their research in their article. In cases where they cannot, they should discuss this as a limitation to their

research's generalizability. Importantly, authors should explicitly state what definitions of sex and/or gender they are applying to enhance the precision, rigor and reproducibility of their research and to avoid ambiguity or conflation of terms and the constructs to which they refer (see Definitions section below). Authors can refer to the Sex and Gender Equity in Research (SAGER) guidelines and the SAGER guidelines checklist. These offer systematic approaches to the use and editorial review of sex and gender information in study design, data analysis, outcome reporting and research interpretation - however, please note there is no single, universally agreed-upon set of guidelines for defining sex and gender.

Definitions

Sex generally refers to a set of biological attributes that are associated with physical and physiological features (e.g., chromosomal genotype, hormonal levels, internal and external anatomy). A binary sex categorization (male/female) is usually designated at birth ("sex assigned at birth"), most often based solely on the visible external anatomy of a newborn. Gender generally refers to socially constructed roles, behaviors, and identities of women, men and gender-diverse people that occur in a historical and cultural context and may vary across societies and over time. Gender influences how people view themselves and each other, how they behave and interact and how power is distributed in society. Sex and gender are often incorrectly portrayed as binary (female/male or woman/man) and unchanging whereas these constructs actually exist along a spectrum and include additional sex categorizations and gender identities such as people who are intersex/have differences of sex development (DSD) or identify as non-binary. Moreover, the terms "sex" and "gender" can be ambiguous—thus it is important for authors to define the manner in which they are used. In addition to this

definition guidance and the SAGER guidelines, the resources on this page offer further insight around sex and gender in research studies.

Author contributions

For transparency, we encourage authors to submit an author statement file outlining their individual contributions to the paper using the relevant CRediT roles: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Roles/Writing - original draft; Writing - review & editing. Authorship statements should be formatted with the names of authors first and CRediT role(s) following. More details and an example.

Changes to authorship

Authors are expected to consider carefully the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion or rearrangement of author names in the authorship list should be made only before the manuscript has been accepted and only if approved by the journal Editor. To request such a change, the Editor must receive the following from the corresponding author: (a) the reason for the change in author list and (b) written confirmation (e-mail, letter) from all authors that they agree with the addition, removal or rearrangement. In the case of addition or removal of authors, this includes confirmation from the author being added or removed.

Only in exceptional circumstances will the Editor consider the addition, deletion or rearrangement of authors after the manuscript has been accepted. While the Editor

considers the request, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any requests approved by the Editor will result in a corrigendum.

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This journal uses the Elsevier Article Transfer Service to find the best home for your manuscript. This means that if an editor feels your manuscript is more suitable for an alternative journal, you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation, or a combination. If you agree, your manuscript will be transferred, though you will have the opportunity to make changes to the manuscript before the submission is complete. Please note that your manuscript will be independently reviewed by the new journal. More information.

Article structure

Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

Essential title page information

• Title. Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.

• Author names and affiliations. Please clearly indicate the given name(s) and family name(s) of each author and check that all names are accurately spelled. You can add your name between parentheses in your own script behind the English transliteration. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.

• Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. This responsibility includes answering any future queries about Methodology and Materials. Ensure that the e-mail address is given and that contact details are kept up to date by the corresponding author.

• Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

Highlights

Highlights are mandatory for this journal as they help increase the discoverability of your article via search engines. They consist of a short collection of bullet points that capture the novel results of your research as well as new methods that were used during the study (if any). Please have a look at the examples here: example Highlights.

Highlights should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point).

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself.

Keywords

Immediately after the abstract, provide a maximum of 20 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Do not repeat words found in the title of the manuscript. Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

Abbreviations

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

In the abstract, define all abbreviations so that electronic searches for commonly used abbreviations or the full name can be successful. Avoid abbreviations unique to the current article so as to widen the circle of readers. We recognize that many abbreviations or acronyms may be more familiar to the reader than the full name. However abbreviations and acronyms used by relatively few other published reports or abbreviations with several alternatate meanings in data base searches should always be spelled out throughout the report.

Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

Formatting of funding sources

List funding sources in this standard way to facilitate compliance to funder's requirements:

Funding: This work was supported by the National Institutes of Health [grant numbers xxxx, yyyy]; the Bill & Melinda Gates Foundation, Seattle, WA [grant number zzzz]; and the United States Institutes of Peace [grant number aaaa].

It is not necessary to include detailed descriptions on the program or type of grants and awards. When funding is from a block grant or other resources available to a university,

college, or other research institution, submit the name of the institute or organization that provided the funding.

If no funding has been provided for the research, it is recommended to include the following sentence:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Footnotes

Footnotes should be used sparingly. Number them consecutively throughout the article. Many word processors can build footnotes into the text, and this feature may be used. Otherwise, please indicate the position of footnotes in the text and list the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list.

Artwork

Electronic artwork

General points

• Make sure you use uniform lettering and sizing of your original artwork.

• Embed the used fonts if the application provides that option.

• Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.

• Number the illustrations according to their sequence in the text.

• Use a logical naming convention for your artwork files.

• Provide captions to illustrations separately.

• Size the illustrations close to the desired dimensions of the published version.

• Submit each illustration as a separate file.

• Ensure that color images are accessible to all, including those with impaired color vision.

A detailed guide on electronic artwork is available.

You are urged to visit this site; some excerpts from the detailed information are given here.

Formats

If your electronic artwork is created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native document format.

Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

EPS (or PDF): Vector drawings, embed all used fonts.

TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.

TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.

TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Please do not:

• Supply files that are optimized for screen use (e.g., GIF, BMP, PICT, WPG); these typically have a low number of pixels and limited set of colors;

• Supply files that are too low in resolution;

• Submit graphics that are disproportionately large for the content.

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Please submit tables as editable text and not as images. Tables can be placed either next to the relevant text in the article, or on separate page(s) at the end. Number tables consecutively in accordance with their appearance in the text and place any table notes below the table body. Be sparing in the use of tables and ensure that the data presented in them do not duplicate results described elsewhere in the article. Please avoid using vertical rules and shading in table cells.

References

Reference links

Increased discoverability of research and high quality peer review are ensured by online links to the sources cited. In order to allow us to create links to abstracting and indexing services, such as Scopus, Crossref and PubMed, please ensure that data provided in the references are correct. Please note that incorrect surnames, journal/book titles, publication year and pagination may prevent link creation. When copying references, please be careful as they may already contain errors. Use of the DOI is highly encouraged.

A DOI is guaranteed never to change, so you can use it as a permanent link to any electronic article. An example of a citation using DOI for an article not yet in an issue

is: VanDecar J.C., Russo R.M., James D.E., Ambeh W.B., Franke M. (2003). Aseismic continuation of the Lesser Antilles slab beneath northeastern Venezuela. Journal of Geophysical Research, https://doi.org/10.1029/2001JB000884. Please note the format of such citations should be in the same style as all other references in the paper.

Web references

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

Data references

This journal encourages you to cite underlying or relevant datasets in your manuscript by citing them in your text and including a data reference in your Reference List. Data references should include the following elements: author name(s), dataset title, data repository, version (where available), year, and global persistent identifier. Add [dataset] immediately before the reference so we can properly identify it as a data reference. The [dataset] identifier will not appear in your published article.

Preprint references

Where a preprint has subsequently become available as a peer-reviewed publication, the formal publication should be used as the reference. If there are preprints that are central to your work or that cover crucial developments in the topic, but are not yet formally published, these may be referenced. Preprints should be clearly marked as such, for

example by including the word preprint, or the name of the preprint server, as part of the reference. The preprint DOI should also be provided.

Reference management software

Most Elsevier journals have their reference template available in many of the most popular reference management software products. These include all products that support Citation Style Language styles, such as Mendeley. Using citation plug-ins from these products, authors only need to select the appropriate journal template when preparing their article, after which citations and bibliographies will be automatically formatted in the journal's style. If no template is yet available for this journal, please follow the format of the sample references and citations as shown in this Guide. If you use reference management software, please ensure that you remove all field codes before submitting the electronic manuscript. More information on how to remove field codes from different reference management software.

Reference style

Text: All citations in the text should refer to:

1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication;

2. Two authors: both authors' names and the year of publication;

3. Three or more authors: first author's name followed by 'et al.' and the year of publication.

Citations may be made directly (or parenthetically). Groups of references can be listed either first alphabetically, then chronologically, or vice versa.

Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999)…. Or, as demonstrated (Jones, 1999; Allan, 2000)… Kramer et al. (2010) have recently shown …'

List: References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

Examples:

Reference to a journal publication:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. J. Sci. Commun. 163, 51–59. https://doi.org/10.1016/j.Sc.2010.00372.

Reference to a journal publication with an article number:

Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2018. The art of writing a scientific article. Heliyon. 19, e00205. https://doi.org/10.1016/j.heliyon.2018.e00205.

Reference to a book:

Strunk Jr., W., White, E.B., 2000. The Elements of Style, fourth ed. Longman, New York.

Reference to a chapter in an edited book:

Mettam, G.R., Adams, L.B., 2009. How to prepare an electronic version of your article, in: Jones, B.S., Smith , R.Z. (Eds.), Introduction to the Electronic Age. E-Publishing Inc., New York, pp. 281–304.

Reference to a website:

Cancer Research UK, 1975. Cancer statistics reports for the UK. http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/ (accessed 13 March 2003).

Reference to a dataset:

[dataset] Oguro, M., Imahiro, S., Saito, S., Nakashizuka, T., 2015. Mortality data for Japanese oak wilt disease and surrounding forest compositions. Mendeley Data, v1. https://doi.org/10.17632/xwj98nb39r.1.

Reference to software:

Coon, E., Berndt, M., Jan, A., Svyatsky, D., Atchley, A., Kikinzon, E., Harp, D., Manzini, G., Shelef, E., Lipnikov, K., Garimella, R., Xu, C., Moulton, D., Karra, S., Painter, S., Jafarov, E., & Molins, S., 2020. Advanced Terrestrial Simulator (ATS) v0.88 (Version 0.88). Zenodo. https://doi.org/10.5281/zenodo.3727209.

Video

Elsevier accepts video material and animation sequences to support and enhance your scientific research. Authors who have video or animation files that they wish to submit with their article are strongly encouraged to include links to these within the body of the article. This can be done in the same way as a figure or table by referring to the video or animation content and noting in the body text where it should be placed. All submitted files should be properly labeled so that they directly relate to the video file's content. In order to ensure that your video or animation material is directly usable, please provide the file in one of our recommended file formats with a preferred maximum size of 150 MB per file, 1 GB in total. Video and animation files supplied will be published online in the electronic version of your article in Elsevier Web products, including ScienceDirect. Please supply 'stills' with your files: you can choose any frame from the video or animation or make a separate image. These will be used instead of standard icons and will personalize the link to your video data. For more detailed instructions please visit our video instruction pages. Note: since video and animation cannot be

embedded in the print version of the journal, please provide text for both the electronic and the print version for the portions of the article that refer to this content.

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Include interactive data visualizations in your publication and let your readers interact and engage more closely with your research. Follow the instructions here to find out about available data visualization options and how to include them with your article.

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Supplementary material such as applications, images and sound clips, can be published with your article to enhance it. Submitted supplementary items are published exactly as they are received (Excel or PowerPoint files will appear as such online). Please submit your material together with the article and supply a concise, descriptive caption for each supplementary file. If you wish to make changes to supplementary material during any stage of the process, please make sure to provide an updated file. Do not annotate any corrections on a previous version. Please switch off the 'Track Changes' option in Microsoft Office files as these will appear in the published version.

Appendix O – TDRP: Oxford Health NHS Foundation Trust Sponsorship Approval

Oxford Health
NHS Foundation Trust

Teresa Delgado-Goñi
Research Coordinator
Research and Development Department
Warneford Hospital
Warneford Lane
Oxford
OX3 7JX
Email: research@oxfordhealth.nhs.uk

01/07/2022

Confirmation of Sponsorship

Re: The persistence of voice hearing in an adolescent help-seeking population
Research and Development Reference: 16107

Dear Gurpreet,

On behalf of Oxford Health NHS Foundation Trust, I am pleased to confirm Oxford Health NHS Foundation Trust will act as a sponsor for the above research as outlined in the application received.

Protocol Version 2.0 dated 26/04/2022 is recognised as the most current to date.

Conditions of Approval
The following conditions apply to this approval:

a) The study sponsorship is confirmed subject to formal approval from HRA and any other relevant approving body.
b) Should you plan to leave your position in OHFT, you will notify R&D immediately of your plans, to enable discussions around the future of study conduct.
c) The Trust expects the named Principal Investigator to allocate regular support time to the study; this must be agreed with the research team prior to the study commencing. This may be reviewed by R&D at any time.
d) All relevant documents will be maintained and will be sent to research@oxfordhealth.nhs.uk, to facilitate compliance checks, formal audits and regulatory inspections.
e) You will notify R&D via the email above of any amendments.
f) You will promptly inform R&D via the email above of the end of the study.

I wish you every success with the study.

Yours sincerely,

Teresa Delgado Goñi
Digitally signed by Teresa Delgado Goñi
Date: 2022.07.01 11:37:45 +01'00'

Teresa Delgado-Goñi
Research Coordinator

Appendix P – TDRP: Letter of Favourable Opinion by East Midlands – Nottingham 1 Research Ethics Committee

Health Research Authority

East Midlands - Nottingham 1 Research Ethics Committee
The Old Chapel
Royal Standard Place
Nottingham
NG1 6FS

Telephone: 0207 104 8115

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

22 September 2022

Dr Gurpreet Reen
Trainee Clinical Psychologist
University of Oxford
The Oxford Institute for Clinical Psychology Training and Research
The Isis Education Centre
Warneford Hospital, Oxford
OX3 7JX

Dear Dr Reen

Study title:	**The persistence of voice hearing in an adolescent help-seeking population**
REC reference:	**22/EM/0171**
Protocol number:	**16107**
IRAS project ID:	**306623**

Thank you for your letter of 18 September 2022, responding to the Research Ethics Committee's (REC) request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair and one other member.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Good practice principles and responsibilities

The UK Policy Framework for Health and Social Care Research sets out principles of good practice in the management and conduct of health and social care research. It also outlines the responsibilities of individuals and organisations, including those related to the four elements of research transparency:

1. registering research studies
2. reporting results
3. informing participants
4. sharing study data and tissue

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or NHS management permission (in Scotland) should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for HRA and HCRW Approval (England and Wales)/ NHS permission for research is available in the Integrated Research Application System.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations

Registration of Clinical Trials

All research should be registered in a publicly accessible database and we expect all researchers, research sponsors and others to meet this fundamental best practice standard.

It is a condition of the REC favourable opinion that **all clinical trials are registered** on a publicly accessible database within six weeks of recruiting the first research participant. For this purpose, 'clinical trials' are defined as:

- clinical trial of an investigational medicinal product
- clinical investigation or other study of a medical device
- combined trial of an investigational medicinal product and an investigational medical device
- other clinical trial to study a novel intervention or randomised clinical trial to compare interventions in clinical practice.

Failure to register a clinical trial is a breach of these approval conditions, unless a deferral has been agreed by the HRA (for more information on registration and requesting a deferral see: Research registration and research project identifiers).

If you have not already included registration details in your IRAS application form you should notify the REC of the registration details as soon as possible.

Publication of Your Research Summary

We will publish your research summary for the above study on the research summaries section of our website, together with your contact details, no earlier than three months from the date of this favourable opinion letter.

Should you wish to provide a substitute contact point, make a request to defer, or require further information, please visit:
https://www.hra.nhs.uk/planning-and-improving-research/application-summaries/research-summaries/

N.B. If your study is related to COVID-19 we will aim to publish your research summary within 3 days rather than three months.

During this public health emergency, it is vital that everyone can promptly identify all relevant research related to COVID-19 that is taking place globally. If you haven't already done so, please register your study on a public registry as soon as possible and provide the REC with the registration detail, which will be posted alongside other information relating to your project. We are also asking sponsors not to request deferral of publication of research summary for any projects relating to COVID-19. In addition, to facilitate finding and extracting studies related to COVID-19 from public databases, please enter the WHO official acronym for the coronavirus disease (COVID-19) in the full title of your study. Approved COVID-19 studies can be found at:
https://www.hra.nhs.uk/covid-19-research/approved-covid-19-research/

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

After ethical review: Reporting requirements

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study, including early termination of the study
- Final report
- Reporting results

The latest guidance on these topics can be found at
https://www.hra.nhs.uk/approvals-amendments/managing-your-approval/.

Ethical review of research sites

NHS/HSC sites

The favourable opinion applies to all NHS/HSC sites taking part in the study, subject to confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or management permission (in Scotland) being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS/HSC sites

I am pleased to confirm that the favourable opinion applies to any non-NHS/HSC sites listed in the application, subject to site management permission being obtained prior to the start of the study at the site.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Confirmation of any other Regulatory Approvals (e.g. CAG) and all correspondence [DPIA approval]	V6	28 April 2022
Copies of materials calling attention of potential participants to the research [Poster for participants]	V3	16 September 2022
GP/consultant information sheets or letters [Letter to GP]	V1	24 January 2022
IRAS Application Form [IRAS_Form_06072022]		06 July 2022
Letter from sponsor [Sponsorship approval letter]	V1	01 July 2022
Non-validated questionnaire [Demographics - young person or EHR]	V1	24 January 2022
Non-validated questionnaire [Demographics - from clinical team]	V1	24 January 2022
Non-validated questionnaire [Questionnaire non-validated - Time 1]	V2	26 April 2022
Non-validated questionnaire [Questionnaire non-validated - Time 2]	V2	26 April 2022
Other [Leaflet about voices for end of study - young person]	V1	24 January 2022
Other [Leaflet about voices for end of study - parents]	V1	24 January 2022
Other [Support sheet at end of study - young person]	V3	16 September 2022
Other [Support sheet at end of study - parents]	V3	16 September 2022
Other [Support sheet at end of Time 1 - young person]	V1	16 September 2022
Other [Support sheet at end of Time 1 - parents]	V1	16 September 2022
Other [Study summary]	V1	16 September 2022
Other [Responses to provisional opinion]	V1	16 September 2022
Participant consent form [Assent form - 11-15 years]	V2	16 September 2022
Participant consent form [Consent form - 16-18 years]	V3	16 September 2022
Participant consent form [Consent form - parents]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - 11-15 years]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - 16-18 years]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - parents]	V3	16 September 2022

Referee's report or other scientific critique report [University proposal approval]	V1	15 July 2021
Research protocol or project proposal [Protocol]	V2	26 April 2022
Summary CV for Chief Investigator (CI) [CV - GR chief investigator & student]	V1	24 January 2022
Summary CV for student [CV - GR chief investigator & student]	V1	24 January 2022
Summary CV for supervisor (student research) [CV - BS supervisor]	V1	24 January 2022
Summary CV for supervisor (student research) [CV - LJ supervisor]	V1	24 January 2022
Validated questionnaire [Questionnaire validated - Time 1]	V2	26 April 2022
Validated questionnaire [Questionnaire validated - Time 2]	V2	26 April 2022

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website:
http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

HRA Learning

We are pleased to welcome researchers and research staff to our HRA Learning Events and online learning opportunities– see details at:
https://www.hra.nhs.uk/planning-and-improving-research/learning/

IRAS project ID: 306623 Please quote this number on all correspondence

With the Committee's best wishes for the success of this project.

Yours sincerely

pp

Mr Paul Hamilton
Chair
Email:Nottingham1.rec@hra.nhs.uk

Enclosures: After ethical review guidance for sponsors and investigators – Non CTIMP Standard Conditions of Approval]

Copy to: Ms Natalia JastrzÄ™bska, Oxford Health NHS Foundation Trust
Lead Nation England: approvals@hra.nhs.uk

Appendix Q – TDRP: Letter of Favourable Opinion by Health Research Authority and Health and Care Research Wales

Ymchwil Iechyd a Gofal Cymru
Health and Care Research Wales

NHS
Health Research Authority

Dr Gurpreet Reen
Trainee Clinical Psychologist
University of Oxford
The Oxford Institute for Clinical Psychology Training and Research
The Isis Education Centre
Warneford Hospital, Oxford
OX3 7JX

Email: approvals@hra.nhs.uk
HCRW.approvals@wales.nhs.uk

26 September 2022

Dear Dr Reen

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**The persistence of voice hearing in an adolescent help-seeking population**
IRAS project ID:	**306623**
Protocol number:	**16107**
REC reference:	**22/EM/0171**
Sponsor	**Oxford Health NHS Foundation Trust**

I am pleased to confirm that **HRA and Health and Care Research Wales (HCRW) Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

Please now work with participating NHS organisations to confirm capacity and capability, in line with the instructions provided in the "Information to support study set up" section towards the end of this letter.

How should I work with participating NHS/HSC organisations in Northern Ireland and Scotland?
HRA and HCRW Approval does not apply to NHS/HSC organisations within Northern Ireland and Scotland.

If you indicated in your IRAS form that you do have participating organisations in either of these devolved administrations, the final document set and the study wide governance report

(including this letter) have been sent to the coordinating centre of each participating nation. The relevant national coordinating function/s will contact you as appropriate.

Please see IRAS Help for information on working with NHS/HSC organisations in Northern Ireland and Scotland.

How should I work with participating non-NHS organisations?
HRA and HCRW Approval does not apply to non-NHS organisations. You should work with your non-NHS organisations to obtain local agreement in accordance with their procedures.

What are my notification responsibilities during the study?

The standard conditions document "*After Ethical Review – guidance for sponsors and investigators*", issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

The HRA website also provides guidance on these topics, and is updated in the light of changes in reporting expectations or procedures.

Who should I contact for further information?
Please do not hesitate to contact me for assistance with this application. My contact details are below.

Your IRAS project ID is **306623**. Please quote this on all correspondence.

Yours sincerely,



Helen Poole
Approvals Specialist
Email: approvals@hra.nhs.uk

Copy to: *Ms Natalia JastrzÄ™bska, Oxford Health NHS Foundation Trust*

List of Documents

The final document set assessed and approved by HRA and HCRW Approval is listed below.

Document	*Version*	*Date*
Confirmation of any other Regulatory Approvals (e.g. CAG) and all correspondence [DPIA approval]	V6	28 April 2022
Copies of materials calling attention of potential participants to the research [Poster for participants]	V3	16 September 2022
GP/consultant information sheets or letters [Letter to GP]	V1	24 January 2022
IRAS Application Form [IRAS_Form_06072022]		06 July 2022
Letter from sponsor [Sponsorship approval letter]	V1	01 July 2022
Non-validated questionnaire [Demographics - young person or EHR]	V1	24 January 2022
Non-validated questionnaire [Demographics - from clinical team]	V1	24 January 2022
Non-validated questionnaire [Questionnaire non-validated - Time 1]	V2	26 April 2022
Non-validated questionnaire [Questionnaire non-validated - Time 2]	V2	26 April 2022
Other [Leaflet about voices for end of study - young person]	V1	24 January 2022
Other [Leaflet about voices for end of study - parents]	V1	24 January 2022
Other [Support sheet at end of study - young person]	V3	16 September 2022
Other [Support sheet at end of study - parents]	V3	16 September 2022
Other [Support sheet at end of Time 1 - young person]	V1	16 September 2022
Other [Support sheet at end of Time 1 - parents]	V1	16 September 2022
Other [Study summary]	V1	16 September 2022
Other [Responses to provisional opinion]	V1	16 September 2022
Participant consent form [Assent form - 11-15 years]	V2	16 September 2022
Participant consent form [Consent form - 16-18 years]	V3	16 September 2022
Participant consent form [Consent form - parents]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - 11-15 years]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - 16-18 years]	V3	16 September 2022
Participant information sheet (PIS) [Participant information sheet - parents]	V3	16 September 2022
Referee's report or other scientific critique report [University proposal approval]	V1	15 July 2021
Research protocol or project proposal [Protocol]	V2	26 April 2022
Summary CV for Chief Investigator (CI) [CV - GR chief investigator & student]	V1	24 January 2022
Summary CV for student [CV - GR chief investigator & student]	V1	24 January 2022
Summary CV for supervisor (student research) [CV - BS supervisor]	V1	24 January 2022
Summary CV for supervisor (student research) [CV - LJ supervisor]	V1	24 January 2022
Validated questionnaire [Questionnaire validated - Time 1]	V2	26 April 2022
Validated questionnaire [Questionnaire validated - Time 2]	V2	26 April 2022

IRAS project ID	306623

Information to support study set up

The below provides all parties with information to support the arranging and confirming of capacity and capability with participating NHS organisations in England and Wales. This is intended to be an accurate reflection of the study at the time of issue of this letter.

Types of participating NHS organisation	Expectations related to confirmation of capacity and capability	Agreement to be used	Funding arrangements	Oversight expectations	HR Good Practice Resource Pack expectations
This is a single site study sponsored by the participating NHS organisation therefore there is only one site type. South London and Maudsley (SLaM) Trust is acting as a Participant Identification Centre only.	The single participating NHS organisation of this type is also sponsoring the research. You should work with your sponsor R&D office to make arrangements to set up the study. The sponsor R&D office will confirm to you when the study can start following issue of HRA and HCRW Approval.	This is a single site study sponsored by the participating NHS organisation therefore no agreements are expected. For the one site acting as a Participant Identification Centre the sponsor has confirmed it intends to put an appropriate PIC agreement in place.	No application for external funding has been made.	In line with HRA/HCRW expectations a Principal Investigator should be appointed at participating NHS organisations of this type. Neither a Principal Investigator nor a Local Collaborator is required at Participant Identification Centres.	Where an external individual will be conducting any of the research activities that will be undertaken at this site type then they would be expected to hold a Letter of Access. This should be issued be on the basis of a Research Passport (if university employed) or an NHS to NHS confirmation of pre-engagement checks letter (if NHS employed). These should confirm Occupational Health Clearance. These should confirm standard DBS checks. For sites acting as Participant Identification Centres local staff in participating organisations in England who have a contractual relationship with the organisation will undertake the expected activities. Therefore no honorary research contracts or letters of access are expected for this study.

Other information to aid study set-up and delivery

This details any other information that may be helpful to sponsors and participating NHS organisations in England and Wales in study set-up.
The applicant has indicated that they do not intend to apply for inclusion on the NIHR CRN Portfolio.

Appendix R – TDRP: Measure of Frequency and Duration of Voice Hearing

1. On average over the past week, how often have you heard voices?

- o Voices occur less than once per week
- o Voices occur at least once per week
- o Voices occur several days per week
- o Voices occur at least once per day
- o Voices occur several times per day
- o Voices only stop for a few seconds or minutes
- o Voices occur all the time

2. On average over the past week, how long did the voices last?

- o I haven't heard voices this week
- o Voices last for a few seconds
- o Voices last for several minutes
- o Voices last for at least an hour
- o Voices last for hours at a time
- o Voices last all day
- o Voices last all day and night

Appendix S – TDRP: Measure of Voice Content

What do your voices currently say?

		Never (0)	Rarely (1)	Sometimes (2)	Most of the time (3)	All of the time (3)
1	How often do the voices tell you what to do?					
1a.	Do the voices tell you to do things which are helpful to you?					
1b.	Do the voices tell you to do things which are risky or harmful to you?					
2.	How often do the voices provide a running commentary (e.g. like a football commentary?					
3.	How often do the voices give you helpful ideas or inspiration?					
4.	How often do the voices give you religious messages?					
5.	How often do the voices say nice things about you?					
6.	How often do the voices tell you they are going to harm you? (e.g. physically or emotionally hurt you)					
7.	How often do the voices tell you they are going to harm					

	people you know, such as your parents or your friends?					
8.	How often do the voices tell you that other people are going to harm you?					
9.	How often do the voices complain about you or the way you do things?					
10.	How often do the voices tell you that other people think bad things about you?					
		Never (0)	**Rarely (1)**	**Sometimes (2)**	**Most of the time (3)**	**All of the time (3)**
11.	How often do the voices accuse you of things you haven't done?					
12.	How often do the voices tell you facts that interest you?					
13.	How often do the voices tell you that you have special talents or powers (e.g. you can walk on water or you can read people's minds)?					
14.	How often do the voices tell you that you are an amazing or a very special person?					
15.	How often do the voices tell you that you have a special identity (e.g. that you are related to God or you are a					

	spy)?					
16.	How often do the voices tell you that you have an important goal (e.g. to save the world)?					
17.	How often do the voices talk nonsense?					
18.	How often do the voices say individual words (not full sentences)?					

Appendix T – TDRP: Measure of Listening to and Believing Voices

Listening to and believing voices

Below are a range of statements about listening to and believing the voices that you hear.

Please rate the degree to which you agree with each statement, based on your experience over the **past week**.

		Never (0)	A bit of the time (1)	Most of the time (2)	All the time (3)
1	I want to keep listening to what the voices have to say.				
2	I believe what the voices say.				
3	When the voices start, it's very hard to ignore what they say				
4	I want to hear what the voices are saying when they start.				
5	I listen hard to the voices to make sure I've heard what they are saying.				
6	The voices are right in what they say.				
7	There's nothing I can do but listen to what the voices say.				
8	I take in every word the voices say.				
9	I listen out for the voices.				
10	I get sucked into the world of the voices.				

11	I’m certain what the voices say is true				
12	I have a feeling in my stomach that what the voices are saying is true.				

Appendix U – TDRP: Measure of Reasons for Listening to and Believing Negative Voices

Screening question

Do your voices say any of the following nasty things?

- They tell you they are going to harm *you*.
- They tell you they are going to harm *people you know*.
- They tell you that *other people* are going to harm you.
- They criticise you, or the way you do things.
- They tell you other people are judging you negatively.

If YES to any of the statements, complete scale below

Below are a range of statements about why people listen and believe nasty voices (voices which threaten you or put you down). It's important that you *do not* consider positive voices, or neutral voices when completing this questionnaire, only those that are threatening or put you down.

Please rate the extent to which each statement describes your experience of hearing these voices over the **past week**.

I pay attention to what the nasty voices say because…	**Not true for me (0)**	**A bit true for me (1)**	**Somewhat true for me (2)**	**Mostly true for me (3)**	**Totally true for me (4)**
I'm trying to figure out why this is happening.					
It might help me work out who the voices are.					
It might help me work out what they could do to me.					
I want to be ready to deal with them.					
I don't want to let them win, so I					

listen to fight them.					
I don't have the confidence to ignore the nasty voices.					
I pay attention to what the nasty voices say because…	**Not true for me (0)**	**A bit true for me (1)**	**Somewhat true for me (2)**	**Mostly true for me(3)**	**Totally true for me (4)**
I don't have the confidence to trust my own mind.					
They've worn me down, so I have to listen.					
Listening to the voice will help me to learn about myself.					
The voice knows more than I do so I might learn something.					
Listening will make me smart, because the voices are smart.					
Listening to voices is important to my religion or culture.					
I pay attention to what the nasty voices say because…	**Not true for me (0)**	**A bit true for me (1)**	**Somewhat true for me (2)**	**Mostly true for me (3)**	**Totally true for me (4)**
Because I feel beaten down by them					
I'm so scared that I can't do anything but listen.					
I don't have the energy to do anything but listen to them.					
I spend time by myself so there's nothing else to listen to.					
I spend time by myself so there are no distractions from what they say.					

I spend time by myself so I have time to listen to them.					
They are putting on a show for me					
I pay attention to what the nasty voices say because…	**Not true for me (0)**	**A bit true for me (1)**	**Somewhat true for me (2)**	**Mostly true for me (3)**	**Totally true for me (4)**
They are whispering (or very quiet) so I have to listen harder to hear what they are saying.					
They make me feel safe by saying nice things, so I start to trust them and listen to what they say					
They're intelligent and trick me into listening.					
They tell a convincing story that sucks you in to their world.					
They are just like real people.					
They sound so real.					
They're unpredictable and come out of nowhere.					
I hear the voice of someone I know, and I want to work out why they are saying horrible things when they are usually nice.					
I hear the voice of someone I know, and I usually believe that person so I'm more likely to be persuaded by what they say					

Appendix V – TDRP: R code for Regression Analyses

```
install.packages("car");
install.packages ("QuantPsyc")
install.packages("pastecs");
install.packages (“dplyr”)
 install.packages("psych")
library ("boot"); library("car");  library("pastecs")
library("dplyr"); library("psych"); library ("QuantPsyc")

# import data #
getwd()
setwd ()
Regression_analysis <- read.csv()

# convert to z scores #
Regression_analysis <- dplyr::mutate_at(Regression_analysis,
c("APPRAISALS_LISTENING_BELIEVING",
                                          "SOCIAL_SUM",
                                        "DTV_CONTENT"), list(Z=scale))
head(Regression_analysis)

# conduct regression analysis for primary hypotheses #
# DTVs predicts distress #
distressReg.1 <- lm(ANX_DEP_RAW  ~ DTV_CONTENT_Z,
data=Regression_analysis)
summary (distressReg.1)
confint(distressReg.1)
lm.beta(distressReg.1)

# appraisals listening to and believing DTVs with distress #
Appraisalsreg.2 <- lm(Regression_analysis$ANX_DEP_RAW  ~
Regression_analysis$APPRAISALS_LISTENING_BELIEVING_Z)
```

```
summary (Appraisalsreg.2)
confint (Appraisalsreg.2)
lm.beta(Appraisalsreg.2)

#  Exploratory investigations of predictors of voice persistence #
# Open dataset #
Regression_analysisT2 <- read.csv()
# convert to z scores #
Regression_analysisT2 <- dplyr::mutate_at(Regression_analysisT2,
c("APPRAISALS_LISTENING_BELIEVING",
                                          "SOCIAL_SUM",
                                          "DTV_CONTENT",
"FREQUENCY_SUMMED"), list(Z=scale))
head(Regression_analysisT2)

# DTVs predicts persistence #
persistenceReg.2 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$DTV_CONTENT_Z)
summary (persistenceReg.2)
confint (persistenceReg.2)
lm.beta(persistenceReg.2)
# frequency at time 1 as control #
persistenceReg.3 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$DTV_CONTENT_Z +
Regression_analysisT2$FREQUENCY_SUMMED_Z)
summary (persistenceReg.3)
confint (persistenceReg.3)
lm.beta (persistenceReg.3)

# appraisals about listening to and believing DTVs predicts persistence #
Appraisalsreg.4 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$APPRAISALS_LISTENING_BELIEVING_Z)
summary (Appraisalsreg.4)
confint(Appraisalsreg.4)
```

```
lm.beta(Appraisalsreg.4)
# frequency at time 1 as control #
Appraisalsreg.5 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$APPRAISALS_LISTENING_BELIEVING_Z +
Regression_analysisT2$FREQUENCY_SUMMED_Z)
summary (Appraisalsreg.5)
confint (Appraisalsreg.5)
lm.beta(Appraisalsreg.5)

# social isolation predicts persistence #
persistenceReg.4 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$SOCIAL_SUM_Z)
summary (persistenceReg.4)
confint (persistenceReg.4)
lm.beta(persistenceReg.4)
# frequency at time 1 as control #
persistenceReg.5 <- lm(Regression_analysisT2$FREQUENCY_SUMMED_T2 ~
Regression_analysisT2$SOCIAL_SUM_Z +
Regression_analysisT2$FREQUENCY_SUMMED_Z)
summary (persistenceReg.5)
confint (persistenceReg.5)
lm.beta(persistenceReg.5)
```