“Sometimes It Protects You, Sometimes It Hurts You”: An exploration of dissociation, psychosis and trauma.

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Chapter 1

Evidence of Associations between Dissociation and Psychosis within Psychiatric Disorders: A Systematic Review and Meta-Analysis

Prepared in accordance with the author requirements for Clinical Psychology Review;

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Abstract

Dissociation and psychosis are co-occurring experiences; both are associated with trauma and observed across a variety of psychiatric disorders. Previous research suggests a strong link between dissociative experiences and hallucinations, but the clinical implications and nature of this relationship are unclear. The current paper explores the association between dissociative and psychotic symptoms by conducting a systematic review and meta-analysis. In addition, a narrative synthesis expanded on this to clarify the relationship within the context of psychiatric disorders. A systematic search of MEDLINE, Embase and PsycINFO identified 22 eligible studies comprising of a total of 3032 participants that examine the relationship between dissociative and psychotic symptoms in a clinical population. Eligible studies included standardised and validated measures of dissociative and psychotic symptoms. A narrative synthesis examined the associations between symptoms across diagnostic groups, and a random-effects meta-analysis quantified the overall associations. 22 studies, exploring 245 effect sizes, were included**.** The narrative synthesis indicated associations between dissociative symptoms, particularly depersonalisation and absorption, and hallucinations. The meta-analysis demonstrated a moderately significant association between overall dissociative and psychotic symptoms ($r = 0.42$), and a small to moderate significant association between positive psychotic symptoms and overall dissociative symptoms ($r = 0.28$). Dissociative symptoms show a consistent association with psychotic symptoms, especially in hallucinations. Limitations can restrict interpretations. However, dissociation and psychotic experiences are now being recognised as a transdiagnostic process that can aid improvement to earlier identification and support trauma-informed interventions.

Introduction

Dissociative symptoms are a disruption or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control and behaviour. (American Psychiatric Association, 2013). These symptoms can potentially disrupt every area of psychological functioning (American Psychiatric Association; APA, 2013), which makes it a key transdiagnostic process across psychiatric disorders. Psychotic symptoms refer to experiences such as delusions, hallucinations and disordered thinking, and are often associated with features of conditions such as Schizophrenia Spectrum Disorders. Both dissociative and psychotic symptoms can be impairing, highly distressing and linked to trauma. Both are observed across a range of diagnostic categories rather than one specific disorder.

Dissociative and psychotic symptoms have considerable overlap within psychiatric disorders, yet the extent of the nature of this relationship is still unknown (Longden et al., 2020). Tschoeke et al. (2021) also highlighted that the relationship was robust between dissociation and positive symptoms of psychosis, including visual and auditory hallucinations and delusions. However, the relationship with negative symptoms of psychosis, such as anhedonia and social withdrawal, remains less clear. Longden et al. (2020) conducted a meta-analysis exploring the relationship between dissociation and symptoms of psychosis and concluded that dissociative phenomena were particularly related to hallucinations and positive psychotic symptoms; however, they were less robustly associated with negative symptoms. Despite increased interest in research on dissociation, the precise nature and clinical implications of this relationship remain unclear (Dorahy et al., 2022).

Additionally, Renard et al. (2017) emphasised that there are considerable overlapping symptoms within dissociative and psychotic disorders. Dissociative symptoms, including

amnesia, absorption, depersonalisation and derealisation, share significant overlap with psychotic symptoms, including positive symptoms, negative symptoms, delusions and hallucinations, which can complicate clinical differentiation (Ross & Keyes, 2004). Research suggests that individuals who experience dissociation and trauma-related symptoms reported more psychotic symptoms than patients diagnosed with schizophrenia (Ross et al., 1990; Laddis & Dell, 2012), suggesting a complex relationship between dissociation, psychosis and trauma. Trauma-related explanations for dissociation and psychosis emphasise the role of adverse life experiences, particularly adverse childhood experiences (ACEs), as contributing factors to the symptomatology of both dissociation and psychotic experiences (Schäfer & Fisher, 2011). Despite the proposal of shared cognitive and neurobiological mechanisms (Moskowitz & Corstens, 2008; Bob & Mashour, 2011), the overlap between these symptoms is often overlooked within diagnostic systems and clinical guidelines (Read et al., 2005; van der Kolk et al., 2005). The clinical implications of this could result in ineffective treatment, misdiagnosis or delays in diagnosis (Sar et al., 2010).

However, a key gap remains in existing research. Longden et al.'s (2020) meta-analysis provided an essential synthesis linking dissociation and psychotic symptoms, which concluded that dissociative symptoms were most strongly associated with hallucinations and more generally positive symptoms than negative symptoms. However, this study had limitations. Notably, the measures of dissociation and psychosis were broad, some with limited psychometric validity and standardisation, which may have increased heterogeneity and therefore undetected more specific symptom-level patterns. The inclusion of both general and clinical samples, while offering a broad scope, may have obscured clinically specific patterns and reduced the applicability of the findings to treatment contexts. While Longden et al. (2020) explored the dissociation-psychosis association at a general level, their approach did not address

how this association differed across diagnostic groups, thereby limiting the clinical applicability and relevance of their findings. It is proposed that future research would be beneficial to explore whether the relationship between psychotic and dissociative experiences varies across different diagnostic groups.

Research question

This systematic review and meta-analysis aim to investigate and evaluate the existing evidence of the associations between dissociation and psychosis within psychiatric disorders, to provide clear guidance to enhance diagnostic accuracy, and to develop more effective interventions. The systematic review synthesised existing evidence on how dissociation relates to psychosis within specific psychiatric disorders. The meta-analysis provided a quantitative estimate of the overall strength of the association between dissociation and psychotic symptoms across studies.

Methods

Protocol and registration

This review was prospectively registered with the International Prospective Register of Systematic Reviews (PROSPERO) following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Statement Guidelines (Page et al., 2021). Modifications made to the original protocol following registration are detailed on https://www.crd.york.ac.uk/prospero/ (registration number: CRD420250627212).

Eligibility Criteria

Inclusion Criteria.

1. Published in English in a peer-reviewed journal.
2. Use of a specific validated and standardised self-report measure for:
    - Dissociation symptoms
    - Psychotic symptoms
3. Use of quantitative methods to report on the association between dissociative experiences and psychotic symptoms.
4. Participants:
    - Individuals aged 18 or older
    - Have a psychiatric diagnosis (diagnostic interview/criteria, self-report)

Exclusion Criteria

1. Qualitative research
2. Presented as a conference abstract or single-case study.
3. Did not report sufficient statistical information to estimate effect sizes.
4. Overlapping participant samples with other included studies.

5. Nonclinical population contributing to the statistical analysis

This review used the Population, Elements of Interest, Co-occurring elements and Outcome of interest (PECO) framework (Higgins et al., 2019), outlined in Table 1.

Table 1. PECO Framework

Category	Description
Population	Individuals with a diagnosed psychiatric disorder
Elements of Interest	Dissociative symptoms, assessed with a validated standardised measure (e.g. DES, CADSS)
Co-occurring elements	Psychotic symptoms measured with validated standardised measure (e.g. PANSS, PSYRATS)
Outcome of Interest	Evidence of an association between dissociative or psychotic symptoms using quantitative methodology (e.g. correlation, logistic regression)

Search Strategy

Three electronic databases were identified to conduct searches of MEDLINE, EMBASE and PsycINFO. These results were obtained from databases searched on December 2, 2024, using specific syntax criteria for each search (Appendix 2). All searches were limited to the English Language.

Study selection

Articles were exported into Rayyan.ai, a systematic review software (Ouzzani et al., 2016). Duplicates were removed. Articles were screened using a checklist (Appendix 1) based on the PECO framework, as well as the inclusion and exclusion criteria outlined above. The primary reviewer (RA) initially screened the titles and abstracts, then reviewed the full text of potentially

eligible articles. Studies which did not meet the criteria were identified, and reasons for exclusion were documented (Figure 1). A second reviewer (AS) was randomly assigned 10% (n=354) of the title/abstract papers. Thirteen discrepancies were identified, corresponding to 96.3% agreement. Cohen's Kappa indicated substantial to almost perfect agreement (Landis & Koch, 1977), where values between 0.61-0.80 represent substantial agreement and above 0.80 indicate almost perfect agreement. AS reviewed 20% (n=27) of the full-text screening, with no discrepancies (100% agreement). Any discrepancies between reviews were resolved through discussion and consensus, and a third reviewer (AF) was available to mediate if required. For the benefit of maximising search sensitivity and inclusivity, reference list searches and forward citation of studies included, following full-text screening, were completed.

Meta-analysis

Where sufficient quantitative data were available, a meta-analysis was planned to estimate the pooled strength of associations between dissociation and psychotic symptoms. Effect sizes were extracted as zero-order correlations (using the methods of Peterson & Brown, 2005, where necessary). A random-effects model (DerSimonian & Laird, 1986) was applied due to anticipated heterogeneity in sample populations, measures, and study designs. Heterogeneity was to be assessed using I^2 and Q-statistics, and publication bias was examined through funnel plots symmetry and Egger's regression test was used to provide a statistical estimate of the funnel plot asymmetry (Schmidt & Hunter, 2015). Due to an insufficient number of studies reporting data within specific psychiatric disorder groups, a meta-analysis of disorder-specific associations was not feasible. Consequently, a narrative synthesis was conducted for these aspects, following Popay et al. (2006) to summarise and interpret patterns in the literature.

Two separate meta-analyses were performed: one examining the overall association between dissociation and psychosis symptoms, and another focused specifically on positive psychotic symptoms. In instances where quantitative synthesis was not feasible, due to insufficient

reporting, heterogeneous outcome measures, or a limited number of studies within specific diagnostic groups, a structured narrative synthesis was undertaken, following the approach outlined by Popay et al. (2006). This approach enabled the thematic grouping of findings by diagnostic category and symptom domain, facilitating interpretation of the dissociation–psychosis relationship across various clinical contexts.

Narrative Synthesis

A descriptive narrative synthesis of findings was completed for this review to collate the factors addressed by the studies; they were then clustered by factors of interest and developed into a narrative account (Popay et al., 2006). The narrative synthesis followed the Popay et al. (2006) framework, which included developing a preliminary synthesis of the findings, then exploring the relationships between and within studies through clustering and coding the key concepts while building a conceptual model to explain the observed patterns. A standardised data extraction tool was developed for this review (Appendix 4). The data extracted from each study were: 1) Study design, 2) Population, 3) Number of Participants, 4) Measure of Dissociation, 5) Measure of Psychosis, 6) Quantitative Method and 7) Effect Size Information.

Quality Assessment

The methodological quality of included studies was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies (Joanna Briggs Institute, 2017; Appendix 3), a validated tool for evaluating risk of bias. Each study was independently rated on eight items using ‘Yes’, ‘No’, or ‘Unclear’ responses. The current review utilises a replicated approach to classifying quality levels to aid interpretation and comparison (Sebunya et al., 2020; Ayele & Tesfaye, 2021). A quality percentage was then calculated (yes items ÷ total applicable items), and classified as high (≥75%), medium (50–74%), or low (<50%) quality. While this threshold system has guidance in the literature, JBI

does not instruct specific cut-offs and generally advises against relying on total scores, due to checklist items not being equally weighted and individual high-risk domains can be masked by a high overall percentage (Munn et al., 2020). To address this limitation, the full appraisal for each study is provided in Table 2. All studies were independently appraised by two reviewers (RA & AS) using the JBI checklist (Appendix 3). Discrepancies were resolved through discussion, with a third reviewer (AF) consulted when necessary. In addition to the percentage-based quality scores, each study was assigned an overall rating (low, moderate or high) risk of bias, based on the pattern of "unclear" or "no" responses across JBI domains.

Results

Database searches identified a total of 5114 records, comprising 1334 from PsycINFO, 2896 from EMBASE, and 884 from MEDLINE. After removal of 1592 duplicates, 3522 records remained for title and abstract screening. Of these, 3388 were excluded, and 134 full-text articles were assessed for eligibility. 22 met the inclusion criteria and were included in the final review.

Figure 1. *PRISMA (2020) Diagram - Process from Identification to Inclusion*

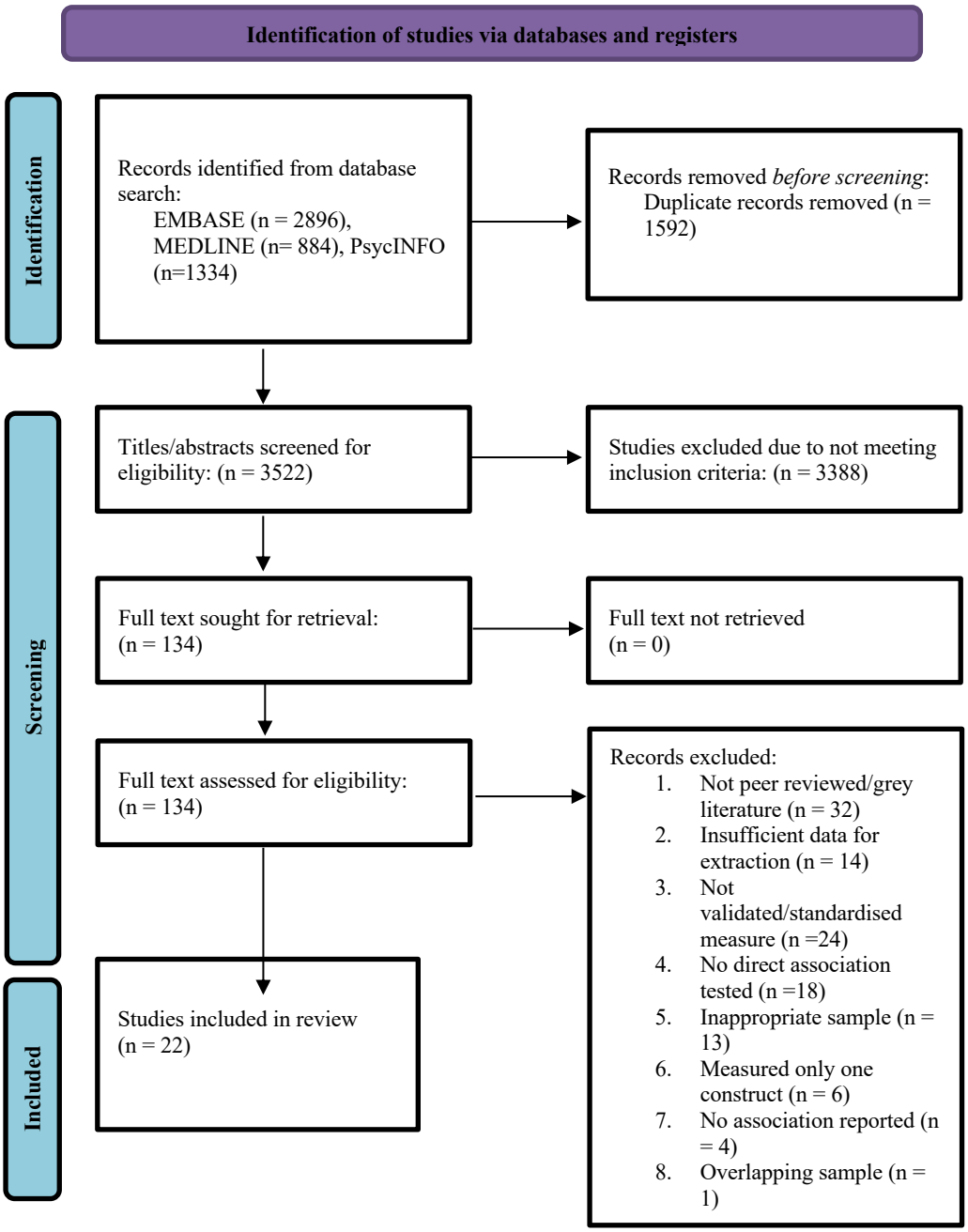

Table 2. Study Characteristics

Author	Country	Study Design	Mean age	Gender	Source	Population	Participants	Psychosis Measure	Dissociation mMeasure
Akbey et al., 2019	Turkey	Cross-sectional	P - 38 ± 10.3 C 35.3 + 10.4	Male 69 Women 37	Outpatient	SCZ = 100 (SCZp= 60, Un=25, Res=13, Des=2) C= 50	150	SAPS SANS	DES (Turkish)
Cernis et al., 2014	England	Cross-sectional	40.4	Male 33 Women 17	Psychiatric	SCZa = 3 SCZ = 37 DD = 1 Psy NOS = 8	50	PSYRATS PANSS GPTS	CDS
Cernis et al., 2022	England	Cross-sectional	41.08	Male 627 Women 269	Psychiatric	SCZ=579 SCZa = 135 DD = 11 FEP=94 PD NOS = 79	902	R-GPTS	CEFSA
Chiu et al., 2024	Taiwan	Cross-sectional	SCZ: 39.65 ± 7.04 BD: 41.37 ± 7.09 MDD: 40.169 ± 7.73 C: 32.72 ± 8.62	Male 130 Female 44	Psychiatric	MDD= 59 BD = 32 SCZ= 43 C=40	174	PANSS	CADSS
Dogan et al., 2017	Iran	Cross-sectional	Men 38.2 Women 38.7	Male 30 Women 18	Psychiatric	SCZ w/o trauma = 48	48	SAPS SANS BABS	SDQ
Escudero-Perez et al., 2016	Spain	Cross-sectional	38	Male 38 Women 17	Inpatient	SCZ= 46 SCZa= 4 PD NOS = 3 EUPD = 2	55	PSYRATS PANSS	TAS CDS-11

Grady et al., 2024	Ireland	Cross-sectional	43	Male 42 Women 29	Psychiatric	SCZ = 28 SCZa= 14 DD = 2 FEP=15 PD NS = 3 D w/ psychosis = 4 BD w/ psychosis =5	71	SAPS	DES II
Khosravi et al., 2021	Iran	Cross-sectional	44.9	FEP = Male 44 Women 26 CP = Male 46 Women 24 C= Male 44 Women 26	Psychiatric	FEP= 70 CP = 70 C= 70	210	PANSS	DES (Persian)
Kilcommons & Morrison, 2005	England	Cross-sectional	34.5	Male 25 Women 7	Psychiatric	SSD = 32	32	PANSS	DES
Li et al., 2022	Taiwan	Cross-sectional	MDD 40.7 BPD 41.38	MD = Male 17 Women 42 BPD = Male 10 Women 22	Inpatient	MDD = 59 BPD = 32	91	PANSS	CADSS
Perona-Garcelan et al., 2012	Spain	Cross-sectional	39.08	Male 54 Women 17	Outpatient	SCZp = 66 SCZ=3 DD= 1	71	PANSS	DES II
Perona-Garcelan et al., 2011a	Spain	Cross-sectional	38.36	Male 45 Women 14	Outpatient	SCZp = 57 UD SCZ = 1 DD= 1	59	PANSS	CDS

Sar et al., 2010	Turkey	Cross-sectional	38.3	Male 32 Women 38	Inpatient	SCZ = 70	70	SANS	DES
Schlesselmann., 2023	Netherlands	Cross-sectional	40.77	Male 154 Women 94	Psychiatric	SSD= 248	248	PANSS	DES
Schroeder et al., 2016	Germany	Cross-sectional	34	Male 97 Women 48	Inpatient	SSD = 145	145	PANSS	DES (German)
Schalinski et al., 2019	Netherlands	Cross-sectional	28.6	Male 77 Women 103	Inpatient	SCZ (75%) aPPD (13.3%) SCZa (11.1%) DD (0.6%)	180	PANSS	SDS
Spitzer et al., 1997	Germany	Cross-sectional,	40.93	Male 30 Women 24	Psychiatric	SCZ C	54	PANSS	DES
Sun et al., 2018	Australia	Cross-sectional	20.18	Male 28 Female 36 Transgender 2	Outpatient	SCZ= 12 SCZa= 10 PD NOS= 9 BPD= 2 SCZf= 5 DD= 2 S-I PD=6 BP 1 with PFe= 10 MDD with PFe= 1 EUPD= 5 DID= 4	66	PANSS	DES II
Varese et al., 2012	Wales	Cross-sectional	45.6	Male 65	Psychiatric	SSD C	65	LSHS	DES

Wearne et al., 2022	Australia	Comparative group design	SCZ 40.9 PTSD 40.4 SCZ + PTSD 36.4	SCZ= Male 11 Women 8 PTSD= Male 6 Women 11 SCZ+PTSD= Male 8 Women 12	Inpatient	SCZ= 19 PTSD w/ D= 17 SCZ & PTSD= 20	56	PSYRATS	CADSS
Wearne et al., 2020	Australia	Cross-sectional	PTSD 42.39 SCZ w/o trauma 40.82 SCZ & PTSD 46.59	PTSD = Male 6 Women 21 SCZ w/o trauma= Male 8 Women 10 SCZ &PTSD= Male 10 Women 16	Psychiatric	SCZ w/o Trauma = 18 PTSD = 27 SCZ &PTSD = 26	71	PSYRATS	CADSS
Zincir et al., 2014	Turkey	Cross-sectional	Psychotic 35.07 Non-psychotic 32.58	Male 60 Women 18	Inpatient	SCZ = 29 SCZa =11 BP (psychotic Mania)= 7 BP (Mixed)=4 MDD (psychotic) = 3 BPDe = 10 UD= 7 BD (mania) = 3 GAD=2, OCD=2	78	PANSS	DES (Turkish)

Note – diagnosis. SCZ = Schizophrenia; SCZa = Schizoaffective Disorder; SCZp = Paranoid Schizophrenia; SCZf = Schizophreniform Disorder; SSD = Schizophrenia Spectrum Disorder; FEP = First Episode Psychosis; DD = Delusional Disorder; PD NOS = Psychotic Disorder Not Otherwise Specified; SI-PD = Substance-Induced Psychotic Disorder; CP = Chronic Psychosis; BPD = Brief Psychotic Disorder; aPPD = Acute Polymorphic Psychotic Disorder; MDD = Major Depressive Disorder; BP = Bipolar Disorder; BPDe = Bipolar Depression; UD = Unipolar Depression; UD SCZ = Unspecified Schizophrenia; PFe = Psychotic Features; EUPD = Emotionally Unstable Personality Disorder / Borderline Personality Disorder; DID = Dissociative Identity Disorder; PTSD = Post-Traumatic Stress Disorder; GAD = Generalised Anxiety Disorder; OCD = Obsessive Compulsive Disorder; D = Depression; ED = Eating Disorder; C = Control group.

Note -Psychosis and dissociation measures. SAPS = Scale for the Assessment of Positive Symptoms; SANS = Scale for the Assessment of Negative Symptoms; PANSS = Positive and Negative Syndrome Scale; PSYRATS = Psychotic Symptom Rating Scales; GPTS = Green Paranoid Thoughts Scale; R-GPTS = Revised Green Paranoid Thoughts Scale; BABS = Brown Assessment of Beliefs Scale; LSHS = Launay-Slade Hallucination Scale; DES = Dissociative Experiences Scale; DES-II = Dissociative Experiences Scale, Version II; CADSS = Clinician-Administered Dissociative States Scale; CDS = Cambridge Depersonalization Scale; CDS-11 = Cambridge Depersonalization Scale, 11-item short form; SDQ = Somatoform Dissociation Questionnaire; SDS = Somatoform Dissociation Scale; TAS = Tellegen Absorption Scale; CEFSA = Černis Felt Sense of Anomaly Scale.

Table 3. JBI Critical Appraisal Checklist

Author	Q1- Criteria	Q2- Subjects	Q3 – Measures	Q4- Measurement	Q5- Confounding	Q6- Strategies	Q7- Outcomes	Q8- Statistical analysis	Quality (%)	Overall Bias Rating
Abkey 2019	Yes	Yes	Yes	Yes	Partial	No	Yes	Yes	75%	Low
Cernis 2014	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%	Low
Cernis 2022	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%	Low
Chiu 2024	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%	Low
Dogan 2017	Yes	Partial	Yes	Yes	No	No	Yes	Yes	62.50%	Medium
Escudero-Perez 2016	Yes	Yes	Yes	Yes	No	No	Yes	Yes	75%	Low
Grady 2024	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%	Low
Khosravi 2021	Yes	Yes	Yes	Yes	Partial	Partial	Yes	Yes	75%	Low
Kilcommons 2005	Yes	Partial	Yes	Yes	No	Partial	Yes	Yes	62.50%	Medium
Li 2022	Yes	Partial	Yes	Yes	No	Partial	Yes	Yes	62.50%	Medium
Perona-Garcelan 2012	Yes	Yes	Unclear	Partial	No	No	Yes	Yes	50%	Medium
Perona-Garcelan 2011a	Yes	Yes	Yes	Yes	No	No	Yes	Yes	75%	Low
Sar 2010	Yes	Yes	Yes	Yes	Partial	No	Yes	Yes	75%	Low
Schlesselmann 2023	Yes	Yes	Yes	Yes	Partial	Yes	Yes	Yes	87.50%	Low
Schroeder 2016	Yes	Yes	Unclear	Yes	Partial	Yes	Yes	Yes	75%	Low
Schalinski 2019	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	87.50%	Low

Spitzer 1997	Yes	Yes	Yes	Unclear	No	Yes	Yes	Yes	75%	Low
Sun 2018	Yes	Yes	Yes	Yes	Partial	No	Yes	Yes	75%	Low
Varese 2012	Yes	Yes	Yes	Yes	Partial	No	Yes	Yes	75%	Low
Wearne 2022	Yes	Yes	Partial	Yes	No	No	Yes	Yes	62.50%	Medium
Wearne 2020	Yes	Partial	Yes	Yes	Partial	No	Yes	Yes	62.50%	Medium
Zincir 2014	Yes	Yes	Yes	Yes	Partial	No	Yes	Yes	75%	Low

Note. **Quality (%) represents the proportion of JBI checklist items rated "Yes." Overall Bias Rating reflects the pattern of "Unclear" or "No" responses across checklist domains (Munn et al., 2020).**

Narrative Synthesis Results

Study characteristics

This section synthesizes findings from 22 studies across 10 countries, most commonly in Australia (n = 3), Turkey (n = 3), Spain (n = 3), and England (n = 3), with additional studies from Germany, the Netherlands, Iran, Taiwan, Ireland, and Wales, encompassing 245 quantitative associations that examined the relationship between dissociative symptoms and psychosis. Studies were grouped by diagnostic category: non-affective psychotic disorders (NAPD), post-traumatic stress disorder (PTSD), depressive disorders, and mixed diagnoses. Associations were organised by psychosis symptom domains and dissociation subdomains. Effect sizes were reported as correlation coefficients (r) or converted regression weights (β) and classified according to Cohen's (1988) thresholds as small ($r <$ 0.30), moderate (r = 0.30–0.49), or large ($r \geq 0.50$). Where findings diverged, potential explanations were considered based on the psychometric properties of measures used and differences in the sample.

Non-Affective Psychotic Disorders (NAPD)

NAPD diagnoses included schizophrenia, schizoaffective disorder, delusional disorder, psychotic disorder not otherwise specified, schizophreniform disorder, and brief psychotic disorder. Studies used a variety of diagnostic tools, interviews and self-reports to determine diagnosis. A total of 216 effect sizes were extracted from studies exploring the association between dissociation and psychotic symptoms in this group.

Total Psychosis Symptoms

Four studies evaluated the total psychosis symptoms. Two studies (Wearne et al., 2020; Wearne et al., 2022) reported associations between total psychosis symptoms and total

dissociation symptoms, ranging from small ($r = 0.29$) to moderate ($r = 0.47$). 13 effect sizes explored the associations of total psychosis and depersonalisation (Černis et al., 2014; Wearne et al., 2020). Černis et al. (2014) reported large associations (e.g., $r = 0.54$), and Wearne et al. (2020) found a small negative effect ($r = -0.03$). These inconsistencies may reflect differences in subscales or differences in samples.

The dissociative symptom, "unreality of self", reported moderate to large associations with total psychosis ($r = 0.49$ and $r = 0.53$), while temporal disintegration and numbing produced moderate effects (median $r = 0.48$). Additionally, moderate effects were seen for perceptual alterations and unreality of surroundings (median $r = 0.41$). These findings suggest that disruptions in core self-experience, rather than perceptual distortions alone, may be more linked with the overall severity of psychosis.

Associations between amnesia and total psychosis symptoms were inconsistent. One study (Wearne et al., 2020) found a small positive effect ($r = 0.10$), while another (Khosravi et al., 2021) reported a moderate negative association ($r = -0.42$). A large positive association was reported between absorption and total psychosis symptoms ($r = 0.53$; Khosravi et al., 2021), and derealisation showed a moderate association ($r = 0.42$; Wearne et al., 2020). A moderate negative association was reported for the depersonalisation/derealisation subscale ($r = -0.37$; Wearne et al., 2020).

Positive Symptoms

11 studies explored positive symptoms across 53 effect sizes. Five studies (Akbey et al., 2019; Schroeder et al., 2016; Dogan et al., 2017; Sar et al., 2010; Sun et al., 2018) examined the relationship with total dissociation (DES, CADSS, SDS), with most reporting small effects (median $r = 0.19$), except Sar et al. (2010) who reported a moderate association ($r =$

0.31). These findings suggest a general but modest relationship between dissociation and positive symptoms.

Depersonalisation reported consistent small effects (median r = 0.11; Sar et al., 2010), indicating limited associations with positive symptoms. Results for amnesia were mixed: a moderate negative association (r = -0.48; Khosravi et al., 2021) and a moderate positive effect (r = 0.33; Sun et al., 2018). Furthermore, absorption reported differing effects, negative in Sun et al. (2018; r = -0.32) and positive in Khosravi et al. (2021; r = 0.45). These inconsistencies may highlight variability across samples and measures.

Depersonalisation/derealisation showed small effects (r = -0.28 to 0.22), and DES item-level analysis (Sar et al., 2010) reported mostly small associations (median r = 0.20). A small association was also found with somatoform dissociation (r = 0.20; Dogan et al., 2017).

Delusions

Delusions were examined in six studies using 17 effect sizes. Two studies (Spitzer et al., 1997; Sar et al., 2010) reported small to moderate associations with total dissociation (r = 0.27–0.38). Three studies reported associations between delusions and depersonalisation/derealisation, with effects ranging from small (r = 0.25) to moderate (r = 0.31; Perona-Garcelan et al., 2011a). Similarly, absorption and amnesia provided small effects associated with delusions (r = 0.24–0.38 and r = 0.15–0.32)

Moderate effects were found between delusions and depersonalisation (r = 0.30; Perona-Garcelan et al., 2011a), FDS (r = 0.44; Spitzer et al., 1997), and DES-concentration (r = 0.40). In contrast, associations with beliefs and somatoform dissociation were small (r =

0.15; Dogan et al., 2017). These findings highlight the association between dissociative symptoms in delusional experiences but suggest stronger links with cognitive-perceptual disruption than with belief.

Hallucinations

Seven studies explored hallucinations. Large effects were reported in three studies (Sar et al., 2010; Spitzer et al., 1997; Varese et al., 2012) linking hallucinations and total dissociation (median $r = 0.60$). Smaller effects were found in Akbey et al. (2019) using SAPS hallucination subscales ($r = 0.19$), suggesting that the scale type may influence the magnitude of the effect.

Moderate associations were reported between hallucinations and absorption (Sar et al., 2010; Spitzer et al., 1997; Varese et al., 2012; $r = 0.41$), and amnesia showed small to moderate effects ($r = 0.28–0.52$). Depersonalisation/derealisation demonstrated large, consistent effects ($r = 0.65$; Cernis et al., 2022; Sar et al., 2010; Spitzer et al., 1997), suggesting that anomalous self-experience plays a central role in hallucinatory phenomena.

Cernis et al. (2014) and Perona-Garcelan et al. (2011a) reported small to moderate effects between hallucinations and depersonalisation ($r = 0.26$ and 0.45, respectively). CDS subscale analyses (Cernis et al., 2014) showed small effects (median $r = 0.18$), except for Unreality of Self ($r = 0.33$). A large association between hallucinations and felt sense of autonomy ($r = 0.63$; Cernis et al., 2022) supports a strong link between hallucinations and felt anomalies of self.

Paranoia and Other Symptoms

Two studies (Cernis et al., 2014; Cernis et al., 2022) examined paranoia using the GPTS and revised GPTS (R-GPTS). Temporal disintegration showed a moderate association with total GPTS (r = 0.38), and GPTS Part A (ideas of reference) generally had stronger associations with dissociation than Part B (persecution), particularly for perceptual alterations and unreality of surroundings. R-GPTS showed a large relationship with the ČEFSA (r = 0.58), indicating dissociation's relevance to early paranoid ideation.

Spitzer et al. (1997) reported additional findings across PANSS subdomains. Within grandiosity, small associations were seen across most dissociative indicators, except for amnesia, which showed a moderate effect (r = 0.47). Suspiciousness and hostility demonstrated mostly small effects, with amnesia again standing out (r = 0.42). Conceptual disorganisation was moderately associated with total dissociation, FDS, and amnesia (r = 0.35), while other subdomains showed small effects (median r = 0.25).

Negative Symptoms

Negative symptoms were assessed in six studies using 60 effect sizes. Total dissociation was found to be small to moderately associated with negative symptoms across three studies (Akbey et al., 2019; Khosravi et al., 2021; Sar et al., 2010; r = 0.24–0.31). Amnesia showed a small effect (r = 0.26), absorption a moderate negative effect (r = -0.33), and depersonalisation/derealisation a small positive effect (r = 0.27).

Analysis by subdomain revealed meaningful patterns. Blunted affect was weakly associated with dissociation, except for a moderate effect for absorption (r = 0.27). Emotional withdrawal and poor rapport were moderately associated across multiple dissociation

domains. Notably, passive social withdrawal showed the strongest and most consistent effects, with total dissociative symptoms and FDS exceeding r = -0.57 and other indicators approaching large effects (r = -0.58).

Difficulty in abstract thinking showed moderate negative associations with dissociation, particularly absorption and total dissociation (r = -0.32 and -0.36), indicating that absorption and higher levels of dissociation were associated with poorer abstract thinking abilities. In contrast, lack of spontaneity and stereotyped thinking demonstrated weaker associations. Findings from the SANS supported moderate associations between dissociation and negative symptoms, including physical anergia, diminished social activity, and impaired intimacy (r = 0.26-0.31), suggesting that dissociation is more closely linked with motivational and interpersonal deficits than with expressive flattening.

Excitement, Emotional Distress, and Disorganisation

Two studies (Sar et al., 2010; Schalinski et al., 2019) assessed excitement. Both found predominantly small effects (median r = 0.02), with one negative effect reported (r = -0.03), indicating no meaningful effect. Emotional distress was also weakly associated with dissociation (median r = 0.14; Sar et al., 2010). Disorganisation showed small effects on dissociative symptoms (median r = 0.12), suggesting a weaker or more diffuse role for dissociation in these domains.

Summary and Interpretation

Overall findings indicate that within NAPD, dissociation is most strongly associated with hallucinations, delusions, and negative symptoms involving social withdrawal. Among dissociative phenomena, depersonalisation and absorption emerged as the strongest and

most consistent correlates of psychotic symptoms. These relationships were most noticeable in NAPD and less so in symptoms such as blunted affect or disorganisation.

Measurement heterogeneity, especially across dissociation subscales (e.g., DES vs. CDS), is likely to contribute to variation in reported effect sizes. Moreover, sample differences, including clinical stage, diagnostic subtype, and symptom chronicity, may explain some of the inconsistencies observed. Nonetheless, the pattern of findings highlights dissociation as a clinically relevant transdiagnostic mechanism, particularly with altered self-experience and its impact on psychotic symptom expression.

Post-Traumatic Stress Disorder (PTSD)

Two studies (Wearne et al., 2020; Wearne et al., 2022) explored the relationship between dissociation and psychotic symptoms in individuals with PTSD. Both used the CADSS to assess dissociation and the PSYRATS to measure psychosis symptoms. Wearne et al. (2022) reported a moderate association between total CADSS scores and PSYRATS total scores ($r = 0.57$). In a larger sample, Wearne et al. (2020) reported a similar moderate association for total dissociation ($r = 0.54$), with specific subdomains showing smaller but consistent effects: amnesia ($r = 0.44$), depersonalisation ($r = 0.36$), and derealisation ($r = 0.37$). These findings suggest that dissociation, particularly amnesia, may be moderately linked to psychotic symptoms in PTSD, reinforcing the relevance of trauma-related dissociative processes in psychosis.

Depressive Disorders

Two studies examined the relationship between dissociation and positive psychotic symptoms in depressive disorders, including Major Depressive Disorder (MDD)**,** bipolar

disorder (BD), and a broader depressive disorder (DD) category. All studies used the CADSS to measure dissociation and PANSS positive symptom scores to assess psychosis.

Chiu et al., (2024) found a moderate association in MDD (β = 0.33) and a large association in BD (β = 0.68), suggesting stronger links between dissociation and psychosis in bipolar presentations. In contrast, Li et al. (2022) reported a small effect in a mixed depressive sample (β = 0.097).

Overall, dissociation appears positively associated with psychotic symptoms in depressive disorders, with stronger effects in bipolar disorder. These differences may reflect underlying diagnostic variation or symptom severity.

Mixed Diagnoses

Five studies (Escudero-Perez et al., 2016; Grady et al., 2024; Sun et al., 2018; Wearne et al., 2020; Wearne et al., 2022) examined associations between dissociation and psychotic symptoms in mixed diagnostic samples. These included individuals with combinations of schizophrenia-spectrum disorders, bipolar disorder, major depression, PTSD, and other conditions such as GAD and OCD. In a heterogeneous clinical sample (SCZ, SCZa, BD, MDD, GAD, OCD), Escudero-Perez et al. (2016) found a small association between total dissociation (DES) and psychotic symptoms (PANSS total; r = 0.075). However, more potent effects were observed in participants with dual diagnoses of PTSD and psychosis. Wearne et al. (2022) reported a significant correlation between total CADSS and psychosis severity in SCZ+PTSD participants (r = 0.65). Wearne et al. (2020) reported moderate associations with total dissociation (r = 0.37) and subscales including amnesia (r = 0.55), depersonalisation (r = 0.37), and derealisation (r = 0.24).

Findings from Sun et al. (2018) and Grady et al. (2024) explored associations using a range of dissociation measures (TAS, CDS-11, DES-II) and psychosis scales (PANSS, SAPS, PSYRATS). Effects were small to moderate, with CDS-11 and SAPS hallucinations showing the strongest links (e.g., r = 0.49 and 0.37). Trait dissociation measured by the TAS showed weak or inconsistent associations across outcomes (e.g., r = 0.10; β = –0.05).

Overall, findings suggest that the strength of the association between dissociation and psychotic symptoms varies considerably in mixed diagnostic populations, with the most robust effects observed in individuals with trauma-related comorbidity, particularly PTSD.

Meta-analysis results

Study characteristics and sample size

A total of 11 studies were included in the meta-analyses, comprising N = 1044 participants. The degree of heterogeneity was calculated using a restricted maximum-likelihood estimator. Included studies assessed a range of psychiatric diagnoses, including schizophrenia spectrum disorders, PTSD, major depressive disorder (MDD), bipolar depression, and mixed dual diagnosis groups. Dissociation was measured using validated and standardised measures such as the CADSS or DES**,** and psychosis symptoms were assessed using validated and standardised measures, including PANSS and PSYRATS**.** Details of all included effect sizes contributing to the analyses are provided in Appendix 5, and details of the rationale for all excluded data are provided in Appendix 6.

Meta-analysis 1: Overall dissociation and psychotic symptoms

The random-effects meta-analysis included 7 effects with a combined total of n = 205 participants. Sample sizes ranged from n = 17 to n = 78 per study. Some studies reported

data from independent groups within the same publication (e.g. Wearne et al., 2020 reported separate samples for PTSD, dual diagnosis, and schizophrenia). These were treated as independent samples in analyses. The effect size in all these studies ranged from $r = 0.06$ (Zincir et al., 2014) to $r = 0.57$ (Wearne et al., 2022). These results revealed a pooled correlation of $r = 0.42$, 95% CI [0.26, 0.56], $z = 4.55$, $p<0001$, representing a moderate but significant effect ($p<0.001$).

Moderate heterogeneity was observed with $\tau^2 = 0.031$, $H^2 = 2.19$, and $I^2 = 54.4\%$ indicating that approximately half of the variance in effect sizes was due to heterogeneity rather than chance. A funnel plot was visually examined and appeared approximately symmetrical. The Egger's regression-based test of funnel plot asymmetry revealed a non-significant intercept, $t(5) = 0.53$, $p = 0.62$, 95% CI [−0.89, 1.35], suggesting no statistical evidence of publication bias (Appendix 7). In this context, symmetry in the funnel plot suggests an even distribution of studies across effect sizes, whereas asymmetry could indicate publication bias, such as underrepresentation of smaller studies with non-significant results.

Table 4. Overall dissociation and psychotic symptoms meta-analysis

Study	Effect size	Standard error	Lower	Upper	p-value	weight	weight (%)
Wearne (2022)	0.57	0.18	0.22	0.92	0.00	15.78	13.20
Wearne (2020)	0.54	0.14	0.26	0.82	0.00	19.34	16.17
Zincir (2014)	0.06	0.12	-0.17	0.29	0.60	22.70	18.99

Wearne (2022)	0.65	0.14	0.38	0.92	0.00	19.83	16.59
Wearne (2020)	0.37	0.18	0.02	0.72	0.04	15.82	13.24
Wearne (2020)	0.29	0.24	-0.17	0.75	0.22	11.53	9.64
Wearne (2022)	0.40	0.47	0.09	0.85	0.02	14.55	12.17
Overall	0.42	0.09	0.24	0.60	0.00		

Meta analysis 2: Overall dissociation and positive psychotic symptoms

The random-effects meta-analysis included 10 effects with a combined total of n = 839 participants. Sample sizes ranged from n = 32 to n = 180 per study. Some studies reported data from independent groups within the same publication (e.g. Chiu et al., 2024 reported separate samples). These were treated as independent samples in the analyses. Where zero-order correlations were not reported, values were imputed using established methods (Peterson & Brown, 2005; Schmidt & Hunter, 2015). For Chiu et al. (2024), *r* was calculated from regression coefficients following Schmidt and Hunter (2015). For Li et al. (2022), r was imputed from standardised beta coefficients using the method proposed by Peterson and Brown (2005; Appendix 9). The effect sizes in these studies ranged from *r* = 0.15 (Li et al., 2022) to *r* = 0.54 (Chiu et al., 2024). These results revealed a pooled correlation of *r* = 0.28, 95% CI [0.19, 0.36], *z* = 4.55, *p*<.001 representing a small to moderate but significant effect (p<0.001).

Moderate heterogeneity was observed**,** with $\tau^2 = 0.096$, $H^2 = 1.59$, and $I^2 = 37.2\%$ suggesting that the variability was relatively consistent, but there was some variation beyond what would be expected from chance alone. A funnel plot was visually examined and appeared approximately symmetrical. The Egger's regression-based test of funnel plot asymmetry revealed a non-significant intercept, $t(8) = 0.63$, $p = 0.55$, 95% CI [−0.32, 0.55], suggesting no statistical evidence of publication bias (Appendix 8).

Table 5. Overall dissociation and psychosis positive symptoms meta-analysis

Study	Effect size	Standard error	Lower	Upper	p-value	weight	weight (%)
Dogan (2017)	0.29	0.14	0.02	0.56	0.03	40.13	7.00
Chiu (2024)	0.16	0.15	-0.14	0.46	0.30	33.34	5.81
Sar (2010)	0.23	0.11	0.09	0.53	0.00	54.14	9.44
Abkey (2019)	0.19	0.10	0.00	0.38	0.05	63.14	11.01
Schroeder (2016)	0.22	0.08	0.06	0.37	0.01	78.89	13.76
Schalinski (2019)	0.18	0.07	0.04	0.32	0.01	86.47	15.08
Grady (2024)	0.47	0.09	0.29	0.66	0.00	66.25	11.55
Li (2022)	0.15	0.10	-0.06	0.35	0.16	58.3	10.17

Chiu (2024)	0.36	0.12	0.13	0.59	0.00	50.5	8.81
Chiu (2024)	0.54	0.13	0.28	0.80	0.00	42.32	7.38
Overall	0.28	0.04	0.20	0.36	0.00		

Discussion

This systematic review and meta-analysis demonstrate consistent associations between dissociative symptoms and psychotic symptoms, strongest with positive symptoms. The narrative synthesis indicates this relationship is prominent, particularly in hallucinations. Through narrative synthesis, specific dissociative symptoms had the strongest associations with hallucinatory experiences: depersonalisation and absorption. This was frequently reported using standardised and validated instruments, including the Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986), the Clinician-Administered Dissociative States Scale (CADSS; Bremner et al., 1998), and the Cambridge Depersonalisation Scale (CDS; Sierra & Berrios, 2000).

While dissociation is more robustly associated with positive symptoms, the relationship with negative symptoms is less consistent. However, interpretation of these findings requires caution. The first meta-analysis, which produced the overall moderate effect ($r = 0.42$), was based on a smaller number of studies ($k = 7$; $n = 205$) and included psychotic symptom scores that encompassed both positive and negative symptom. Consequently, this may partially reflect associations with negative symptoms, even though these were not analysed separately. In contrast, the second meta-analysis ($k = 10$; $n = 839$), which focused specifically on positive symptoms, provides a more precise and domain-specific estimate ($r = 0.28$). The narrative synthesis findings, which indicated weaker and more inconsistent associations with negative symptoms, therefore complement rather than contradict the meta-analytic results. Taken together, these results suggest that dissociation may be linked with positive phenomena such as hallucinations, while its connections with negative symptoms appear more diffuse or indirect. This may reflect either a weaker overall relationship or more complex mediating and moderating mechanisms that are not yet fully understood. Notably, Spitzer et al. (1997)

identified a potential negative relationship between dissociation and profound social withdrawal. These findings suggest that dissociation may also interact with the negative symptom domain, albeit in more heterogeneous or context-dependent ways.

These findings also align with Longden et al., (2020), who also found large associations with positive but not negative symptoms. However, by focusing exclusively on clinical populations, this review expands these findings and shows that the association with hallucination remains robust even across diagnostic groups.

The association between dissociative and psychotic symptoms differed by diagnosis. It was strongest in PTSD and NAPD, with hallucinations and depersonalisation. However, the weaker and less consistent associations occurred in the context of depressive disorders. These differences may reflect variations in symptom experience, measurement, and the limits of categorical diagnoses. The findings support calls for dimensional and network models that better capture the shared mechanisms between dissociation and psychosis (Borsboom & Cramer, 2013). Where Longden et al., (2020) explored both clinical and non-clinical across broad measures, the present studies' restricted inclusion strengthens the confidence in the dissociation-psychosis relationship as it aligns with clinical assessment and treatment.

This review makes significant contributions to the field in several important ways. First, by including only studies that used validated, standardised measures of both dissociation and psychotic symptoms, it strengthens the reliability of the synthesised evidence. It aligns with recent calls for improved methodological rigour (Wainipitapong et al., 2025). In doing so, it provides a more reliable and trustworthy representation of the dissociation–psychosis link than earlier reviews that included studies with weaker measurement standards. Second, unlike prior work that has been closely focused on specific trauma types (Melegkovits et al., 2025a) or

specific psychological pathways (Puckett et al., 2024), this review takes a broader view, drawing together evidence across clinical populations and dissociative phenomena.

Despite the success of the meta-analyses in quantifying the overall relationship between dissociation and psychotic symptoms, meaningful associations, such as the proposed links between dissociative amnesia and delusions, or derealisation and paranoia, could not be established due to a limited number of eligible studies. Similarly, when the number of studies approached the minimum threshold for inclusion, constraints related to primary data reporting and manuscript space limited the ability to conduct additional analyses. Furthermore, many potentially relevant studies were excluded due to the use of non-validated measures or failure to report necessary statistical parameters such as effect sizes. These exclusions, while essential to ensure methodological rigour, highlight the issue of inconsistency in measurement tools and reporting standards, which create barriers to synthesising and limit the generalizability of findings.

A limitation of the evidence base is the prevalence of cross-sectional research designs, which limits the ability to conclude causal relationships. While several theoretical models place dissociation as a risk factor for the development of psychosis, the available data remain insufficient to confirm this pathway. The literature presents alternative explanations for dissociation, including dissociation being a psychological defence against distressing psychotic experiences (Longden et al., 2012; Moskowitz et al., 2008) and trauma-related vulnerabilities that construct and maintain both dissociative and psychotic symptoms and/or reflect mechanisms that require further exploration (Varese et al., 2012; Lyssenko et al., 2018). Longitudinal studies would be beneficial to determine the relationship between these associations. Additionally, the analysis of the complex symptom relationships between

dissociation and psychosis can be developed through statistical methods, including meta-regression, structural equation modelling, and network analysis.

A further limitation of this study is that it did not differentiate between trait and state dissociation, which may have distinct roles in the development and expression of psychotic symptoms (Moskowitz & Corstens, 2008). Trait dissociation, typically assessed with self-report measures such as the DES (Carlson & Putnam, 1993), reflects an established vulnerability that has been linked to early trauma and long-term susceptibility for psychotic experiences (Lyssenko et al., 2018; Varese et al., 2012). In contrast, state dissociation, measured by tools like the CADSS (Bremner et al., 1998), refers to momentary, situational disruptions in awareness that may intensify or initiate psychotic symptoms, especially while acute stress or trauma triggers (Allen et al., 1997). Without assessing both forms independently, this study cannot clarify whether dissociation reflects a prolonged vulnerability, an acute trigger, or a combination of both. Future research would benefit from designs that simultaneously measure both trait and state dissociation, ideally within longitudinal frameworks that include detailed trauma histories and symptom progression, to better understand their progressive and causal contributions to psychosis. The association between depersonalisation, absorption, and hallucinations highlights the value of recognising dissociation within services. Integrating brief, validated tools such as the DES or CADSS into assessment could help distinguish trauma-related dissociative experiences from primary psychotic symptoms. This would support more accurate formulations and guide trauma-informed care, including grounding, stabilisation, and trauma-focused interventions when appropriate. Earlier recognition of dissociative processes may also reduce misdiagnosis and improve treatment planning. To strengthen the evidence base, future research should explore these links through longitudinal designs, distinguish

between state and trait dissociation, and use modelling approaches to clarify how these processes interact across different clinical contexts.

These findings also raise questions about whether dissociation is best understood as a single construct or a set of related but distinct processes. The stronger links between depersonalisation and hallucinations, compared to other forms like amnesia, suggest that dissociation may involve separate dimensions, such as detachment and compartmentalisation, each relating differently to psychotic experiences. Recognising this complexity could help refine theories linking trauma, dissociation, and psychosis.

Finally, the current literature remains geographically narrow, with studies conducted in high-income countries, including the United Kingdom, Australia, Spain, and Turkey. Given that cultural context can significantly shape the expression, interpretation, and reporting of both dissociative and psychotic symptoms, this geographic focus limits the generalizability of findings. The expansion of dissociation–psychosis research into more varied income countries is essential for developing an inclusive and culturally responsive evidence base.

Conclusion

This review supports a consistent association between dissociative symptoms and psychotic experiences, particularly hallucinations, across diagnostic groups, with the most prominent dissociative features including depersonalization and absorption. By incorporating recent studies that utilised validated instruments such as the DES, CADSS, CDS, and PANSS, the review enhances confidence in these findings. It reflects the field's movement toward greater methodological rigour.

Limitations remain, including a small number of studies, underrepresentation of culturally diverse populations, and a reliance on cross-sectional designs. These gaps limit interpretations and generalisability. Future research should emphasise longitudinal and methodologically robust studies that use validated tools and conduct detailed symptom-level analysis, encompassing trauma-informed frameworks and advanced statistical approaches, which could be key to clarifying the mechanisms linking dissociation and psychosis.

Overall, the findings highlight dissociation as a transdiagnostic process with relevance for understanding and treating psychosis. Improving its recognition and measurement in clinical practice may support early identification and encourage more targeted, trauma-informed interventions. In doing so, this review addresses the limitations of earlier work (Longden et al., 2020) by providing a more clinically focused evidence base.

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Competing interests

The authors declare no competing interests

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Chapter 2

"Sometimes it protects you, sometimes it hurts you":

How individuals who hear voices and have a history of trauma, experience and manage dissociation: An Interpretative Phenomenological Analysis (IPA)

Prepared in accordance with the author requirements for Qualitative Research;

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MRP plain language summary

This study explored how people with a history of dissociation (feeling disconnected from the world or themselves) and those who hear voices experience and manage dissociation. Six people took part in interviews where they spoke about these experiences, what they were like and how they made sense of them.

It was found that dissociation can feel distressing and supportive, which led us to the theme "Sometimes it protects you, sometimes it hurts you". Within that, six themes were identified.

1. "I wish I could erase my memory"
2. "My brain's way of kind of looking after me"
3. "Lights on, nobody's home"
4. "It's not as sweet as it looks"
5. "I'm not completely crazy"
6. "A totally different person now"

People told us how dissociation and voice-hearing impacted their relationships with other people, who they felt they were and a lot in their day-to-day lives. They explained that these were not always just indicators of illness, but a way of coping with difficult experiences they had faced.

This study shows how mental health services need to listen to people's stories and treat their experiences with understanding and compassion. Seeing dissociation as both a helpful and difficult experience may help services provide support that feels safer and more useful for people who have lived through trauma.

Abstract

This study examined how individuals experience and manage dissociation in the context of voice-hearing and trauma, employing Interpretative Phenomenological Analysis (IPA). Semi-structured interviews following a topic guide were conducted with six participants. The analysis produced a superordinate theme “Sometimes it protects you, sometimes it hurts you”, which captures the role of dissociation from six Group Experiential Themes (GETs). The GETs identified were: “I wish I could erase my memory”, “My brain's way of kind of looking after me”,” Lights on, nobody’s home”, “It’s not as sweet as it looks” “, I’m not completely crazy” and “A totally different person now”. This study highlighted the importance of understanding dissociation as an adaptive response to trauma, rather than a symptom of pathology. This insight has the potential to inform more trauma-informed, compassionate clinical practice and guide further awareness and research to enhance our understanding of lived experiences.

Keywords: Dissociation, Voice-hearing, Trauma, Lived experience, Interpretative Phenomenological Analysis (IPA).

Introduction

Trauma and Voice hearing

Recent research has established the relationship between trauma and voice-hearing (Pilton et al., 2015). Campodonico et al. (2022) found that the relationship was more prolonged, and severe trauma was linked to an increased likelihood of voices. It is commonly reported among individuals with post-traumatic stress disorder (PTSD), with reported prevalence rates of voice hearing ranging from 20% to 58% (Clifford et al., 2018; Anketell et al., 2010). In the general population, prevalence rates between 50% to 67% have been reported (Brewin & Patel, 2010; Anketell et al., 2010). Understanding the relationship between trauma and voice hearing is essential not only theoretically but clinically (Corstens et al., 2014). People who hear voices in the context of trauma often face demoralisation, distress, and misdiagnosis by clinicians (Longden, Madill & Waterman, 2012). Although voice hearing appears as a diagnostic feature in over 50 conditions, including PTSD, major depressive disorder, and vascular dementia (American Psychiatric Association, 2013), it is still commonly perceived as a trademark of psychotic illness. This misunderstanding can affect access to treatment and treatment outcomes (Longden et al., 2012; Corstens et al., 2014; Read & Bentall, 2012).

Cognitive models of voice hearing (e.g., Luhrmann et al., 2019) propose that trauma contributes to voice hearing through three main routes. First, trauma may influence the content of voices, which often represent the original traumatic experiences (e.g., voices of the perpetrator). Second, trauma may act as a psychological, biological, or biopsychosocial trigger for the onset of voices. Third, trauma may lead to dissociation, which can contribute to the onset or maintenance of voice hearing as a way of coping with overwhelming emotional experiences. Research suggests that specific types of traumas, particularly childhood sexual abuse, are associated with voice-hearing (van Nierop et al., 2014; Berg et al., 2015; Bentall et al., 2012).

One explanation of this link is the role dissociation plays as a mediator between trauma and voice-hearing (Bloomfield et al., 2021; Piesse et al., 2017; Piesse et al., 2023; Wearne et al., 2020). This aligns with the dissociative pathway outlined in Luhrmann et al.'s (2019) model, offering a psychological alternative to traditional biogenetic or psychotic explanations.

Dissociation

Dissociation refers to disruptions in the integration of thoughts, feelings and experiences into consciousness and memory (Spiegel et al., 2011). It is frequently conceptualised as an adaptive acute stress response to traumatic experiences and is an umbrella term used to refer to compartmentalisation (suppression of emotions/ thoughts) and detachment (depersonalisation and derealisation; Choi et al., 2017). In the context of voice hearing, dissociation has been suggested to play a mediating role in how trauma leads to voice hearing. (Varese et al., 2012). It is a way for people to manage or distance themselves from overwhelming emotions of memories linked to traumatic events (Varese et al., 2012).

Research suggests that the development of dissociative experiences could be explained with attachment theory, and more specifically, how trauma disorganises the attachment system (Farina et al., 2019; Gumley & Liotti, 2018). It is hypothesised that individuals' experiences of interactions with attachment figures become internalised and develop into working models (e.g., expectations about themselves and others; Mikulincer & Shaver, 2016). Attachment theory explains that a disorganised attachment behaviour occurs when there is a conflict between one's attachment system and the fight/flight system, as often the caregiver/attachment figure becomes both the source and solution to the individual's fear when experiencing trauma. Dissociation is an automatic and adaptive mechanism to enable people to survive trauma, particularly where the trauma directly impacts the attachment system. It is proposed that these

conflicting attitudes and responses can be seen as a dissociative style of attention and information processing (Gumley & Liotti, 2018).

The role of distinct sub-types of dissociative experience (e.g., compartmentalisation and detachment) within the relationship between trauma and voice hearing is yet to be established. The literature currently proposes conflicting evidence: some areas of research suggest that there are specific associations between voice hearing within dissociation, which present as depersonalisation (Kilcommons & Morrison, 2005) or derealisation in combination with amnesia (Tshoeke et al., 2021). Other theories state that the role of dissociation within voice hearing and experiences of traumatic events does not differ in how the dissociative state occurs (Bloomfield et al., 2021). Understanding the role of lived experience within dissociative episodes would be advantageous to broaden understanding of the role it plays within the relationship between trauma and voice hearing.

Current research

Despite the growing body of quantitative research (e.g. Birchwood et al., 2018) contributing valuable data exploring the relationship between voice hearing and trauma, there is a gap in the qualitative research exploring the lived experience of dissociation. The limited qualitative research focuses on the experience of dissociation, including derealisation and depersonalisation. Although these findings remain inconsistent and have not identified which form of dissociation is most strongly connected to voice-hearing (Kilcommons & Morrison, 2005; Tshoeke et al., 2021), Quantitative research, such as that by Birchwood et al. (2018), acknowledges that quantitative research alone may not capture the full complexity of the relationship between voice hearing and trauma, highlighting the need for qualitative research.

Černis et al., (2020) explored dissociative experiences in psychosis, including those who hear voices.

Qualitative methods enable researchers to gain a deeper understanding of human experiences by addressing the "how" and "why" questions, providing a more in-depth insight into context and phenomena (Cleland, 2017). The use of phenomenology, beginning with the person's lived experience, is a crucial step toward developing more complete and nuanced understanding that can inform future studies, which is particularly important at this early stage in the development of dissociation research. Therefore, this study aims to fill the gap in the qualitative literature by deepening and expanding our understanding of individuals' experiences of dissociation, particularly among those with a history of trauma and who hear voices.

Research question

How do people with a history of trauma and voice-hearing experience and manage dissociation?

Method

Design

This study used a qualitative design involving one-to-one semi-structured interviews to explore how people with a history of trauma who hear voices, make sense and manage their dissociative experiences. This study used a qualitative design, Interpretative Phenomenological Analysis (IPA), which informed all aspects of the research. IPA is based on several critical epistemological principles, including phenomenology, which concerns the exploration of lived experience and how individuals make sense of their world; ideography, committing to exploring the detail to understand an experiential phenomenon; and hermeneutics, the interpretation of the latter (Smith et al., 2009; Smith et al., 2021). IPA involves a detailed examination of human lived experience, enabling one's perspective to be expressed in its terms rather than according to predefined category systems (Smith & Fieldsend, 2021; Alase, 2017). IPA was chosen over other qualitative approaches, including grounded theory and thematic analysis, due to the in-depth exploration of individual meaning-making processes. Trauma and dissociation can often involve non-linear, fragmented experiences. Therefore, IPA's hermeneutic-phenomenological lens enables the exploration of these complexities without imposing external influences, which could lead to misrepresentation or oversimplification of participants' experiences. This approach aimed to elicit rich, detailed, and first-person interpretations of an individual's experiences and the existing phenomena of how people who hear voices and have experienced trauma experience dissociation, aligning with the study's aims in understanding lived experiences. One-on-one interviews are often the most popular method for achieving this, as they allow the participant and researcher to have the space and flexibility to engage in real-time dialogue, where the researcher can accommodate any unexpected issues and explore topics using a tailored approach (Smith & Osborn, 2015).

Participants

Six individuals with a self-reported history of trauma who experienced and or currently hear voices and experience dissociation were recruited for this study. Participants were identified by clinicians (psychiatrists, nurses, and psychologists) within NHS Lanarkshire (NHS-L) Mental Health Services, including Community Mental Health Teams (CMHTs) and Psychological Therapies Teams (PTTs), who met the criteria below.

Inclusion criteria:

1. People with a history of trauma who hear voices and experience dissociation.
2. Over 18 years old
3. Capacity to provide informed consent.
4. Patients under the care of NHS-L mental health services.
5. Deemed to have sufficient English to engage in an in-depth interview.

Exclusion criteria:

1. Individuals in an acute mental health crisis, as reflected in an acute psychiatric admission or escalation to a crisis care team. In this event, the recruitment approach was delayed until four weeks following discharge from the escalation in care.

Eligibility was determined through a collaborative process between the participants, clinicians and research team. The sample size was chosen in accordance with IPA recommendations, which suggest using small, homogeneous samples to facilitate in-depth, idiographic analysis (Smith et al., 2009).

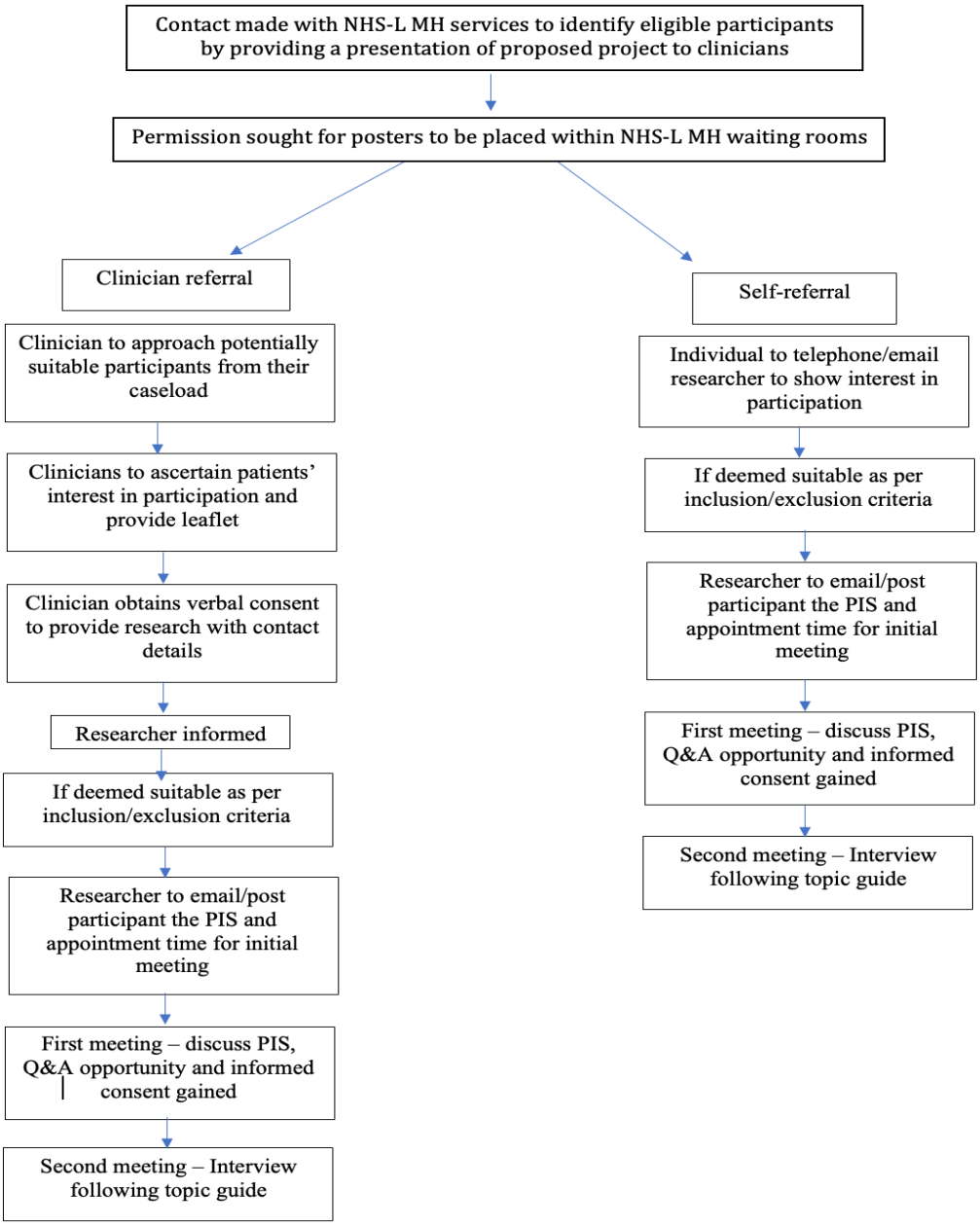

Figure 4. Recruitment procedure.

Recruitment

As shown in Figure 1, contact was made with services to identify potentially eligible participants. A presentation of the project was provided to local clinicians in mental health services. Clinicians within these services then referred participants to the research.

Referrals via Clinicians

Clinicians approached patients on their caseloads during appointments or via telephone to gauge potential participants' interest in participation and provided them with a study leaflet. If interest was expressed, clinicians then obtained their consent to pass contact information to the researcher, which was then documented by the clinician in the participant's clinical notes. The researcher then provided the individual with a Participant Information Sheet (PIS) at least 24 hours before arranging a meeting with the researcher.

Once individuals had expressed interest in the study, they were invited to attend an appointment with the researcher to ensure they had read and fully understood the PIS, had the opportunity to ask questions, and to obtain written informed consent. Following this, in all instances, participants were happy to proceed with the interview, which was conducted according to the interview protocol (Appendix 14) as recommended by IPA (Smith et al., 2009). Interviews were digitally recorded, transcribed, anonymised, and analysed.

Referrals via poster

Posters were placed in the waiting rooms of local NHS mental health services, allowing individuals to self-refer directly to the researcher via email or telephone. Eligible participants were emailed a PIS. All participants were then invited to attend two one-to-one meetings at their local NHS clinic with the researcher. The purpose of the first appointment was to discuss the PIS, ensure that potential participants had read and fully understood its contents, and provide them with the opportunity to ask questions, thereby obtaining written and informed consent. To increase access, consenting participants were offered the choice to begin the interview at this stage or to arrange a follow-up meeting. These meetings were either combined or happened on

separate occasions, depending on the participants' preferences. In the present study, these meetings could be combined.

Materials and Measures

An interview protocol and topic guide were developed with Personal and Public Involvement (PPI; Appendix 14). A digital voice recorder was used to record the interviews, and transcripts were manually created from these recordings, which were then used for data analysis. Following transcription, the recordings were erased.

Interview protocol development

One PPI member was involved in developing the interview protocol and reviewing the participant information sheet (see Appendix 12 and Appendix 14) to gain an understanding of the participants' experience of dissociation and managing dissociation. They had prior experience of dissociation and consulting on similar research and had previously expressed interest in contributing to related studies. The researcher met with them at the University of Glasgow, and they were paid £25 per hour for their time, in line with NIHR guidelines (NIHR, 2022).

The final topic guide was shaped by this input and focused on four areas: personal background, experiences of trauma, voice hearing, and how participants made sense of and managed dissociation. These changes were discussed with the supervisory team and incorporated into the final version.

Ethical Considerations

This study received ethical approval from the NHS Research Ethics Committee (REC reference**:** 24/WS/0147), and management approval (Appendix 13) was also received by NHS

Lanarkshire Research Department**.** Written informed consent was obtained from all participants before the commencement of the interview. To ensure confidentiality, all identifiable information was removed from transcripts, and anonymised data was stored securely within the University of Glasgow. Participants were informed that they had the right to withdraw at any stage without providing a reason.

Data Analysis

As part of the IPA data analysis, a six-staged process is followed to ensure deep exploration of participants' lived experiences (Smith et al., 2021)**.** This process consisted of initially repeated reading and re-reading each transcript to gain a holistic understanding of individuals' accounts. Following this, initial observations were documented, focusing on the linguistic, descriptive and conceptual features. These, in turn, guided the development of identifying the individual participants' Personal Experiential Themes (PETs). The connections between the PETs were then explored, and commonalities were identified to form the basis for the Group Experiential Themes (GETs). Data analysis was conducted manually, without the use of analysis software, to allow for a more immersive and idiographic approach to each participant's account. Both audio recordings and transcripts were stored securely on the University of Glasgow (UOG)'s password-protected database, following GDPR and UOG data protection policies.

Reflexivity

Please see appendix 15.

Results

The results yielded a superordinate theme of “Sometimes it protects you, sometimes it hurts you", which encompassed six Group Experiential Themes (GET). These themes were developed from accounts from six participants (Table 6).

Table 6. Summary demographic information for each participant

Participant ID and Pseudonyms	Participant Age range	Gender Identity
P1: Maria	30 - 40	Female
P2: Daisy	40 - 50	Female
P3: Poppy	20 – 30	Female
P4: Lucy	20 -30	Female
P5: Thomas	20 – 30	Male
P6: Tatiana	20 – 30	Female

Superordinate Theme: **"Sometimes it protects you, sometimes it hurts you"**

The superordinate theme captures the relationship across the six group experiential themes; dissociation often came across as “my brain’s way of kind of looking after me”, a protection that stepped in when emotions, memories, or situations felt too much. For some, it was “a comfort blanket” or a way of “switching off my brain” so they could keep going. This protection could make it easier to cope with trauma and the experience of voice-hearing. At the same time, people spoke about the costs of dissociation: feeling “like I am in Virtual Reality,” “trapped in,” or cut off from themselves and others. Several described the challenge of piecing together a life story when parts of it were kept behind “a barrier” or felt “not normal.” Taken together, the themes reveal how dissociation was experienced as both a

means of survival and something that could make life feel harder to connect with. The IPA analysis identified six main group experiential themes (GETs) across the interviews of six participants. These themes represent shared patterns and meaning across participants accounts on how individuals experience and manage dissociation within the context of voice-hearing and traumatic experiences.

Table 7. Group Experiential Themes (GETs), Sub-Themes (ST) and descriptions

Group Experiential Theme (GET)	Subthemes	Description
GET 1: "I wish I could erase my memory" - The lasting impact of trauma	Subtheme 1: "My brain's way of putting something between me and all those memories" - Emotional reactions and responses to trauma Subtheme 2: "A lot of stuff from my childhood wasn't normal" - Effects of early trauma	The long-term effects of traumatic experiences were evident across participant's accounts and played a role in shaping their perceptions of the world, others and themselves.
GET 2: "My brain's way of kind of looking after me" - Dissociation as protective/survival mechanism	Subtheme 1: "Comfort blanket to block out the pain" - Coping through difficult experiences Subtheme 2: "Like I am in Virtual Reality" - Disconnected and shut off	Participants viewed their dissociative experiences as a way of coping with overwhelming emotions and traumatic experiences.
GET 3: "Lights on, nobody's home" - Coping strategies	Subtheme 1: "I got sleeping down to a T, but nothing else" – Humour Sub-theme 2: "Like my pain therapy" – Function of pain Subtheme 3: "maybe talking about this stuff will be good"- Talking about the experiences	Participants reflected on both adaptive and maladaptive approaches to the management of their experiences.
GET 4: "It's not as sweet as it looks" - The role of external perceptions and misunderstanding	Subtheme 1: "Didn't feel like they were going to believe me" - Professional and societal judgement Subtheme 2: "That's when I started hearing voices"- Repercussions of being misunderstood	Within the accounts it was felt that understanding and contextualising their experiences provided them with a shift in moving towards acceptance.

GET 5: “I’m not completely crazy” - Making sense of dissociation and voice hearing	Subtheme 1: “Not the only person… not completely crazy” - Reconstruction of self-narratives Subtheme 2: "A lot less scary when I could communicate with them" - Relationship with voices	Participants frequently highlighted how others’ views and being misunderstood influenced their experiences.
GET 6:” A totally different person now” - Journey of personal growth and finding meaning through recovery	Subtheme 1: “it’s trying to protect you” - Reframing experiences and acceptance Subtheme 2: “I know some of that stuff is reversible now” - Recovery leading to identity transformation Sub-theme 3: “An army against this big thing”– Sharing advice as lived expertise	Despite the difficulties, many participants described a journey of growth, resilience and finding meaning in their experiences.

GET1: “I wish I could erase my memory”- The lasting impact of trauma

This theme brought together reflections on how dissociation is a way to cope with trauma. All participants made links between dissociation and distressing life experiences. Participants discussed traumatic experiences from their childhood, while others focused on adulthood. The accounts collectively highlighted dissociation as a response to traumatic experiences and memories, as well as dissociation being a strategy to help cope with daily living. This theme explores the challenges of managing day-to-day life while attempting to suppress painful memories.

ST 1: "My brain’s way of putting something between me and all those memories" – Emotional reactions and responses to trauma.

Participants described their dissociation as a response to traumatic experiences. Daisy linked her dissociation to traumatic experiences stemming from her adulthood,

*“The trauma that I had recently, well semi recently, when it ended *laughs* and that’s when it all started, the dissociation” (Daisy)*

Maria reflected on her experiences, and a longing to erase painful memories:

*"I wish it hadn't, I wish none of it had happened. (pause) I wish I could erase my memory, even though its bad, but obviously I mean there's been good stuff as well in my life obviously my girls, but so much bad stuff, like horrible, just people being horrible […] I wanted to kill mostly everyone who has hurt me but then, I don't want to go to jail, because *laughs* I am a good mum, and I won't leave my weans" (Maria)*

Maria expressed many times "I wish…" highlighting a desire for trauma to have not happened in her life, and intense anger towards the people who have harmed her. However, despite her anger, she was able to highlight the good in her life, particularly her care for her children. Thomas related his dissociation to his brain's way of coping:

"I think it's my brain's kind of way of making sure that I can cope with everything, that I went through 'cause if you could like remember an entire childhood or traumatic events, that's that's difficult to go about your day-to-day life" (Thomas)

He acknowledges that due to traumatic events during his life, it would be difficult to function daily, due to the possible, overwhelming feelings that he associates to the traumatic experiences.

ST 2: "A lot of stuff from my childhood wasn't normal" – Efects of early trauma

Some participants linked dissociation directly to their adverse childhood experiences, relating how their early experiences:

"a lot of stuff from my childhood wasn't normal, and it was traumatic and stuff like that, so I guess it makes me realise how traumatic it all was for me and stuff like […] that I have been able to like, not make it, but like you know what I mean like being able to do this because I was stressed"(Lucy)

Thomas discussed a similar sense of putting a barrier between his memories and emotions:

"It's just my brain's way of putting something between me and all those memories and emotions, um because I I didn't have a great childhood, I wasn't really treated by anyone

really in my life, and that's a lot to deal with, it's a lot, I'm still unpacking it and I'm still remembering things" (Thomas)

These reflections reveal participants' sense-making of their past by recognising the protective mechanism of dissociation while acknowledging its impact on their lives.

GET2: "My brain's way of kind of looking after me" – Dissociation as protective/survival mechanism

This theme captures participants describing dissociation as a protective process, a way in which their minds intervened when memories and emotions became overwhelming. All accounts positioned dissociation as something that protected them when they felt unable to cope.

ST1: "Comfort blanket to block out the pain" – coping through difficult experiences

Participants collectively experienced dissociation as an automatic, self-protective response to overwhelming situations, functioning as "my brain's way of kind of looking after me" (Thomas), an "escape" (Lucy) or a "comfort blanket" (Tatiana) when thoughts or emotions become overwhelming. Tatiana reflected on the voluntary vs involuntary nature of her experiences, with blocking out pain:

"Usually, I would use dissociation sometimes as a comfort blanket, erm sometimes it would happen naturally and other times I can easily just dissociate, erm and I used it as this comfort blanket to block out the pain." (Tatiana)

Tatiana talked about using dissociation to block out pain; she did not describe this as something she did on purpose, but rather experienced as her brain "switching off. Instead of working through her emotions, it appeared that dissociation acted as an automatic cut-off, a way her mind stepped in when things became too overwhelming. She continued to provide detail about her brain's response to being in a heightened, emotional state:

"Just more switching off my brain, I would get very, very upset, erm to the point where I would just be crying and crying and eventually I would just kind of, my mum know erm she calls it a catatonic mode I go in, [...] I would sometimes just rock myself, to soothe myself and then just kind of space out and just stare into space" (Tatiana)

The repeated use of the words "very" and "crying" highlights the intense level of distress she was experiencing. The account narrates a progressive nature to this dissociation, where there are initial attempts to rock and soothe herself. Still, due to the severity of the emotions, it appears to be a shutdown in physical and emotional functioning. Other participants offered similar accounts. Daisy framed dissociation as a way of her brain pre-empting danger:

"... it is as my brain wants me to stay zoned out [...] because it's scared, I am going to get traumatised again *laughs**" (Daisy)*

She discusses her brain as having its protective instincts, suggesting she may experience dissociation as automatic, and something she does not feel she has complete control over.

Lucy similarly spoke about dissociation as an escape from distress:

"[...] anxious of whatever, I kind of escape it for a little bit." (Lucy)

And Thomas summarised this as:

"[...] think about it all the time and to protect you…." (Thomas)

Together, these accounts highlight dissociation as a form of psychological protection to prevent participants from being overwhelmed. It is framed in a way that their minds step in because they do not feel able to cope with their current resources.

ST2: "Like I am in Virtual Reality" – Disconnected and shut off

Throughout the interviews, participants frequently expressed a sense of disconnection from reality. Poppy reflected on this fragmentation of experience:

"[…] how bad it can get, it's not just like you can't move, or sometimes disconnected"

(Poppy)

Her account acknowledges the varying intensities and manifestations of dissociation, including physical and cognitive detachment. This highlights that there is more than just a sense of feeling disconnected but may involve more of a full lack of responsiveness physically and emotionally. Daisy captures this experience by describing:

*"I just zoned out and I remember he was talking to me but I couldn't respond and I was just, I think I was driving at the time and I can still focus on driving, I don't know what it is, I guess you can say, it kind of feels like I am in Virtual reality, you know *laughs* in a driving game."* (Daisy)

Daisy's description emphasised a complex amalgamation of experiences, following a trigger, "zoning out" and the awareness her partner was talking to her. Still, she was physically unable to respond to him, as she reiterates in her reflection. She explained that she was able to focus on a task at hand, driving, but was unable to connect to her internal world and thoughts. Daisy also stated that "I don't know what it is", highlighting the confusion she experiences during dissociation. Interestingly, Daisy also used an analogy of "it feels like I am in Virtual Reality", further in the discussion, using the metaphor of:

"I feel like there's someone else controlling me" (Daisy)

This use of analogy seems to capture the complete disconnect from oneself to the extent that the individual is no longer in control of themselves. This comparison evokes a profound sense of detachment from both internal and external reality.

GET3: "Lights on, nobody's home" – coping strategies

This theme encompasses reflections from participants about helpful and unhelpful ways of managing their dissociative experiences.

ST1: "I got sleeping down to a T, but nothing else" - Humour

It was noticeable through the accounts that participants often used humour when discussing difficult experiences. Humour was used to soften the weight of the information disclosed, allowing for the discussion of highly distressing topics in a more manageable way. Maria was discussing her difficulties with an eating disorder and made a light-hearted joke about enjoying curry too much.

*"I can't be bothered with that anymore, […] I like a curry *laughs*"* (Maria)

Similarly, Daisy was discussing her dissociative experiences:

*"Lights on, nobody's home *laughs*"* (Daisy)

Lucy used quite self-deprecating humour to explain that she has managed to work on her sleeping, but no other areas of her difficulties.

*"*laughs* honestly, I've got sleeping down to a T, but nothing else*" (Lucy)

Although light-hearted, all of these remarks were made in the context of struggle. The laughter throughout singles out both closeness and distance from the difficult experiences. While participants can make fun of themselves, the humour highlighted areas of ongoing difficulty.

ST 2: "Like my pain therapy" -Function of pain

Another common theme that emerged was the function of pain. Two participants described physical pain as a grounding function that counteracts dissociation. Daisy highlighted here that she finds the use of pain grounding and helps to bring her back from the dissociative experience.

"*It's like the pain kind of brings you back from it, that's why I realised that pinching myself, I don't pinch myself hard but if I just a bit then it's like the pain… *laughs* I don't know how to describe it […] Yeah, yeah. Its grounding,"* (Daisy)

Maria also reflected on her use of pain to be able to feel. She spoke about historical self-harm, but replaced that with getting tattoos, similarly to how Daisy uses pain.

"Erm, yeah. Nothing just kind of feels like real, and I think that's why I used to self-harm as well because you know you can feel it and stuff but you know now I just, I don't self-harm, I haven't done for a years, so I just get tattoos instead, you see my skins covered in tattoos […] and you feel like that kind of helps you feel something" (Maria)

Dissociation appears to be managed by creating sensation, rather than escaping. Daisy and Maria both discuss how pain became an anchor to reality. Maria's transition from self-harm to tattoos shows the need for physical grounding remains, but has evolved into a less harmful, more socially acceptable method.

ST3: "Maybe talking about this stuff will be good" – talking about the experiences

During the interviews, participants shared their perspectives on discussing their experiences with others. For some participants, disclosure was an essential step towards their sense-making, but for others it felt uncertain or unhelpful. Daisy stated that she found value in being able to speak to others.

"I think talking about the trauma has helped more" (Daisy)

However, Poppy had more of a hesitation towards it

"*I want to get my trauma sorted and get my life together, so maybe talking about this stuff will be good you know"* (Poppy)

Poppys tentative tone, "maybe…. you know", highlighted some uncertainty. Talking to others was associated with risk. This was further reinforced when, later, she stated:

"I don't think talking about all those bad experiences helps, I think it kind of reinforces them" (Poppy)

This highlights that discussing experiences is a process; there may be times when it feels helpful, but others when revisiting painful memories may not be beneficial. This could also be

indicative of where someone is in their journey of understanding and acceptance of their experiences; discussing difficulties when someone is not ready may be emotionally challenging.

GET4: "It's not as sweet as it looks" - The role and external perceptions and misunderstanding

This theme emphasises important current contextual factors, and particularly the influence others had through their interactions with participants. This theme has two sides: participants felt their experiences were dismissed and minimised by professionals, peers and even family members, due to "looking normal". On the other hand, they felt unheard and unbelieved, which made them feel isolated. For some, this exacerbated their distress and even contributed to the onset of voices.

ST1: "Didn't feel like they were going to believe me" – professional and societal judgement

Participants also spoke about difficulties that had been misunderstood, judged and not believed by others, including family members, professionals and friends. Thomas discussed how he did not want to talk to professionals about it, as he had been dismissed and not believed.

"I didn't want to mention it to the mental health professionals I was seeing because I just didn't feel like they were going to believe me, to be honest. And a lot of them just dismiss it […] really knowing that I…I couldn't understand what was going on because no one else like believed that it was a real thing," (Thomas)

He spoke about the challenges he was having trying to understand what was going on when it was not recognised. Maria spoke about barriers she encountered even among peers with mental health difficulties, because she presented in a certain way, her experiences seemed to be minimised:

"Kind of met people who do therapy as well, and some people are really messed up and have like high psychosis and they hear lots of voices and stuff, when I try to chat with them, as I feel this is more familiar field to them than my other friends who never experienced anything like this, they even look at me weird things like "but you got everything under control, like look at you on the surface, you look like a normal person, you don't have addictions, you know you are not dying, you are not this, you pay your bills, you work" but it's not as sweet as it looks sometimes" (Maria)

From this account, it appeared that Maria was seeking a sense of community from her peers; however, Maria's words highlight the opposite. Even among her peers, her experiences were dismissed due to how she presented herself externally. This reinforces the theme of not being recognised or believed. Both Thomas and Maria emphasise challenges in understanding themselves when others did not validate their experiences.

ST 2: "That's when I started hearing voices" – Repercussions of being misunderstood

This subtheme focuses on the emotional and psychological impacts that participants experienced when they were not understood or believed by others, including professionals, family members, friends, and the broader society. It explores how lack of validation can contribute to the onset or worsening of symptoms, exacerbate distress and shape one's sense of self and coping. Tatiana highlights the emotional consequences of not being believed by her family:

"I tried to confide in my parents about what had been going on with my brothers, erm and they didn't really believe me, and that's when I also got bad, and I think that's when I started hearing voices then because I didn't have anyone to talk to about, and it was just kind of me, with all the, the memories kind of playing like a film in my head. […] And I kind of thought at

one point […]asked the priest for blessings or like continuously confess the things that weren't my fault to try and make it better" (Tatiana)

She spoke about how the lack of validation and support she received appeared to exacerbate her distress and thus contributed to the onset of voice-hearing. She described how, due to being dismissed by her family, she tried to make sense of her experiences through her religion, which then led to her internalising guilt and finding avenues to express even unwarranted guilt through confession. Thomas also spoke about the repercussions of not being understood, about his voices, too:

"I think a lot more kind of education should be done on and also like it for the sake of the voices as well, […] so it's I think it's something that professionals really need to be aware of and learn some more about." (Thomas)

Here, he expresses the need for further education and awareness within professionals, and the confusion and fear that it caused his voices/parts. Further reiterating confusion and distress worsening due to being misunderstood.

GET5: "I'm not completely crazy" – Making sense of dissociation and voice hearing

This theme brought together participants' struggles with feeling abnormal and stigmatised regarding their experiences and the relief that came with the awareness that their experiences were shared. While participants often used the word "crazy" to describe themselves, their accounts revealed a gradual shift towards connection with others and self-acceptance. This theme highlights the tension between internalised stigma and the normalising effect of finding commonality with peers.

ST1: "Not the only person… not completely crazy" - Reconstruction of self-narratives

Throughout the interviews, five out of the six participants referred to feeling "crazy" on more than one occasion. The following examples illustrate how this sense was commonly expressed:

"I just tried to explain it the best I can, even though it sounds crazy." (Maria)

"Meh I don't want to sound crazy" (Poppy)

"You are kind of crazy" (Lucy)

Several participants used the word 'crazy' when talking about their experiences, which may reflect internalised stigma around mental health and voice hearing. While this theme was particularly evident in the accounts of Maria, Daisy, Poppy, Lucy, and Thomas, who described a shift away from these feelings, expressing relief in knowing that others shared similar experiences:

"I think just knowing that I'm not the only person has experience that I'm not completely crazy" (Thomas)

Here, Thomas refers to how finding others with similar experiences helped him reduce this stigma. Similarly, Lucy discussed her struggles with feeling "unredeemable" due to her past:

"[…] I don't think there's anything specifically bad, that you can do that makes you unredeemable or anything like that. That is something I would struggle with is like morally, was I was meant to be helped or whatever, because all of the bad …stuff I've done over the years, but there's nothing bad that anybody can do that makes them unredeemable" (Lucy)

There was a strong empathy from Lucy regarding the moral dilemma that she was not deserving of help due to her life experiences. Still, by reshaping her story, she was able to find meaning and appreciate the complexities of life. Lucy also takes these reflections further in attempts to challenge the narrative behind the word "crazy"

*"I think people use crazy like I am using it like *laughs* People use it. It's like this common word, but I think that's quite like a bad idea because it … can be quite negative […] And they're thinking, "oh I am literally all that's wrong with society" almost. But they're not. It's just everybody has bad, even if even people that have never had trauma in their life" (Lucy)*

These accounts suggest a shift from participants feeling "crazy" to finding validation and connection, which helped participants reconstruct their narratives.

ST2: "A lot less scary when I could communicate with them" – Relationship with voices

Participants discussed their relationships and experiences with voice-hearing, from distress and fear to feelings of acceptance, familiarity, and even support. Some described their voices as negative and frightening, while others spoke about how their voices felt protective. Others discussed how their relationship with voices changed over time as they developed a sense of understanding towards them. For example, Maria expressed the negative experience of voice-hearing:

"I just don't want to hear voices again, it's horrible" (Maria)

Using the phrase "horrible" seems to highlight the magnitude of discomfort she felt as a response to them. Maria herself has only recently started to relabel her voices as dissociation, after recognising it through her psychology sessions. Tatiana reflected that *"When I finally found a name to give it [dissociation] then it's almost as if I had, like maybe a tiny bit more control over it than it had over me in a sense"* (Tatiana), indicating a sense of empowerment from labelling her experiences. Similarly, Thomas said:

"I think the people here obviously when they hear its voices, always assume it's always negative and …. it's not positive all the time" (Thomas)

This brings to light more of the stigma behind voice-hearing, but he also continues to discuss:

"Sometimes they would leave me notes or something, and I think they were reaching out to kind of support me when it was difficult erm and it, that made it a lot easier to communicate with them, and it was a lot less scary" (Thomas)

This dialogue highlights a switch in perception towards the voices, though being able to communicate with them. He reflected that it was "a lot less scary" when he could communicate

with them and understand what happened when he dissociated. This acknowledgement focuses on the reduction of fear towards the voices, after the relationship with them changed.

Poppy discussed her experiences with the voices she encounters:

"not actually my thoughts its most... more like [family members] […] judging you and telling you like "you are useless", "you are this", "you are that"." (Poppy)

She contrasted this with a newly developed voice:

*"These days I have got another voice *laughs*, it's me […]she says things like *voice cracks* " I love you", you "you are wanted", " you are a nice person"." (Poppy)*

Poppy describes how the voices she hears are those of her family members, relaying the critical comments they would make, and linking the voices to people in her life. She then spoke about the development of her voice, saying kind things which help the thoughts and voices stop. It was notable that she laughed after mentioning the new voice, potentially due to embarrassment, and that she became upset before expressing compassionate statements towards herself (e.g., "*you are wanted"* and *"you are a nice person").* This highlighted the pride she felt towards being able to develop her voice again.

Tatiana also spoke about developing a positive voice in her head:

*"I kind of […]a positive voice in my head, […]it's kind of like normal motivational speech, but it's not, it's my voice *laughs* and in my head so I kind of deal with it in that way." (Tatiana)*

Both Tatiana's and Poppys' accounts highlight how they have reshaped the relationship with their voices to find compassion through new internal dialogues.

GET6 "A totally different person now" – Journey of personal growth and finding meaning through recovery

This theme encompasses how participants undergo a transformative process. Their accounts shift from fear, shame and self-criticism towards compassion, redefining their sense of

identity and acceptance towards themselves. Through reframing, they appear to recognise the possibility of change and position themselves with expertise.

ST1: "It's trying to protect you" – Reframing experiences and acceptance

Throughout the participants' accounts, each person discussed their experiences as a journey, acknowledging "*I'm still working through it "(*Thomas) and "*My relationship with dissociation is kind of a day-to-day journey"* (Tatiana). Tatiana discusses her perspective of her feelings towards dissociation:

" but I think you will only view it as something that hurts you, if you can't accept that, you've got to. If you're constantly trying to push it aside and you know, give a different identity or slap another label on it, you're not going to be able to see that it's trying to protect you"

(Tatiana)

She speaks here about the importance of recognition and acceptance, which allowed her to shift into understanding her experience rather than rejecting or dismissing her symptoms. Although approached with more humour, Daisy explained how it was helpful to have a name for it, and how this also shifted her perception towards understanding, and away from being critical towards herself. Both accounts highlight a transformation to self-compassion.

*"My mental health and kind of described what I was going through and someone had said "look up depersonalization and dissociation" and I did and like "oh f*ck" that's me *laughs* but it did make me feel a bit better because I was like "oh there's actually a name for it" and I am not just losing my marbles" (Daisy)*

ST2: "I know some of that stuff is reversible now"- Recovering leading to identity transformation

This subtheme highlights the way participants reflected on changes within themselves. Their experiences of dissociation and trauma appeared to have previously shaped them by fear and

shame; however, through recovery and self-reflection, they began to challenge these beliefs and find more hope. Both Maria and Poppy reflect on the shifts in their identities. Maria here acknowledges disbelief towards how far she has come, and reflects on the negative perspective of her past self, and her behaviours:

"I can't believe I am actually speaking about me, but I am a totally different person now […] I was awful, I mean, I used to, I was carrying knives and everything and doing relationships and stuff I was doing, horrendous" (Maria)

Poppy is also discussing a change in herself in comparison to historical beliefs. She described being stuck in the life she lived before, but identified that she could rewrite the narrative, and that there is a potential for change and growth.

"I just thought I must be messed up because you know my parents were bad and that's how I am going to go through life but today, I know some of that stuff is reversible, like you know" (Poppy)

Both accounts put weight on the benefits of recovery, away from being specifically about managing symptoms, but allowing space for personal growth.

ST3: "An army against this big thing"- Sharing advice as lived experience

Towards the end of the interview, participants were invited to reflect on what was helpful for them throughout their experiences and what they would say to other people experiencing similar difficulties:

Maria gave succinct advice reflecting on the benefit of therapy:

"Just keep going with the therapy (pause) try and listen better" (Maria)

Daisy spoke about the value of safe, non-judgemental relationships, which she described with warmth and humour:

" […] I think that is the best thing though, just talking about it and having a safe person to just dump everything on, that doesn't judge you, like my boyfriend I can just talk to him for like three hours greeting, and him being like "what can I do", and I am just like "give me a cuddle" (Daisy)

Their reflection describes the benefits of finding supportive relationships. Others focused on the societal stigma and need for understanding. Poppy highlighted how being misjudged added to her difficulties:

"It would be nice if people didn't just judge you by the cover, that would be great, […] maybe if more people knew more about it, then it would be able to spot sooner, and help quicker, rather than going over and over the stuff that doesn't help" (Poppy)

Lucy also highlighted the role of support and trusting relationships, specifically in contrast to her early experiences, where she did not have safe people around her:

"Support […] that that was something I was really surprised that like how well it can actually help you, just talking to people and knowing that people are there for you and stuff like that, or they are not just going to disappear, I had people I could trust that helped quite a lot?" (Lucy)

Tatiana and Thomas described the importance of validation and professional help. Thomas reflected on the value of knowing he was not alone:

"Just wish I'd known that there are other people that have experience it and that eventually that are going to be things to help" (Thomas)

Tatiana framed her advice as a metaphor of collective strength, adding additional weight to the benefits of others' support:

"The only way you can really start to take control with dissociation is if you accept and also if you allow someone else into it and not just yourself because if its only yourself[…] if you

invite someone into it, it's kind of like you're got many army against like this big thing that's controlled your life" (Tatiana)

This subtheme highlights participants' sense-making in action. By offering advice, they are seeing their experience as a form of expertise that they want to share with others. Part of their sense-making is selecting parts of their experience that they want to share and convey to others.

Discussion

This study aimed to explore how individuals who hear voices and have a history of trauma experience and manage dissociation. IPA was used to develop six overarching GETs from participants' accounts. These reflect the complex personal journeys of the participants, highlighting the protective role dissociation can play within individuals to help manage their emotions and memories of traumatic experiences. The analysis also identified the role voices play within this relationship, often serving as an additional manifestation of traumatic experiences. Participants described dissociation as both protective and distressing, highlighting complex relationships with personal meaning-making, trauma, and voice hearing.

Participants' accounts suggested that dissociation could be viewed as a functional adaptation to traumatic experiences, aligning with current literature (Schauer & Elbert, 2015). Throughout the interviews, participants described their experiences as an "escape" and a self-protective mechanism, as a response to being emotionally overwhelmed. Metaphors including "comfort blanket", "virtual reality" and "vortex" were used to articulate their sense-making of their dissociation. Gibbs and Franks (2002) state that people may use metaphors to communicate an experience which is uncharacteristic of them. Dilkes (2024) summarises that the use of metaphors within depersonalisation and derealisation may support vital understanding and help diagnose the under-recognised experience of dissociation. This highlights the importance of understanding the individual's metaphorical language to gain valuable insight into the individual's internal world and thus enhance clinical understanding of dissociative phenomena.

When participants discussed their journeys, they often included a shift of redefining their experience, moving away from the internalised stigma of being "crazy" to a change in

perception towards acceptance, and self-understanding. It was identified that naming their experience (e.g. dissociation) resulted in a destigmatising sense of empowerment. The development of a self-compassionate internal voice, actively challenging critical and trauma-related voices, emerged as a key aspect of recovery. This process of redefining their experiences aligns well with McAdams' (2001) narrative identity reconstruction. Participants develop new narratives for their life stories, moving from shame and self-blame to acceptance and a more coherent sense of self, highlighting the importance of meaning-making in relation to lived experiences.

Participants' accounts situated dissociation as a functional adaptation (Schauer & Elbert, 2015), deeply rooted in childhood trauma, with voices emerging as potential manifestations of these unresolved experiences. In this triad of trauma, dissociation and voices, dissociation provides a protective 'escape' from trauma. It can also fragment parts of the self, which can later resurface as critical and trauma-related voices, supporting Wearne et al.'s (2020) model of dissociation as a mediating factor between trauma-voice relationships. The development of self-compassionate voices (Braehler et al., 2013) aided participants to reclaim agency, not by removing them but by recognising their function, and thereby addressing the role trauma plays as a core component of dissociation.

Participants often spoke about internal fragmentation linked to trauma and dissociation. Participants described a sense of separation when their experiences were misunderstood or rejected by others, exacerbating the internal disconnection associated with their experiences. This result led to reflections among the research team that fragmentation was also a challenge experienced at various stages of the research process, warranting the questions of the potential role of parallel process. Logistical challenges and feedback from multiple team members

unintentionally replicated the sense of disconnection participants described. Dilkes (2024) argued that such systematic complexities can perpetuate trauma-related fragmentation (Gumley & Liotti, 2018). Paradoxically, naming dissociation became an aid to reduce fragmentation in the research team, this destigmatization highlights how trauma-informed validation, both in clinical and research practice, can help counter the systemic factors contributing to dissociation.

Participants described integration emerging through processes of narrative repair and purposeful meaning-making. In reconstructing their life stories, participants replaced self-blame with narratives of resilience, a process aligning with McAdams' (2001) identity reconstruction model. This stance of empowerment can be understood as similar to post-traumatic growth (Tedeschi & Calhoun, 2004), allowing participants to reframe dissociation from a "fault" into a "protective response". Participants coping strategies reflected this duality: humour and grounding techniques providing integration, and self-harm and tattoos were described as attempts to "feel real" when dissociated, serving as a temporary passage between fragmented states. Ultimately, their journeys reflected a transformation from dissociation to something to be removed, to something to be embraced with self-compassion.

This study has numerous strengths. Using IPA allowed for an in-depth, idiographic exploration of participants lived experiences, allowing their voices and meanings to guide interpretations. The inclusion of PPI consultants in developing the interview protocol strengthened its alignment with the participants and sensitivity: regular supervision and a reflective log reduced researcher bias and supported transparency.

Limitations must be acknowledged; while the sample was small, we were able to recruit individuals from diverse backgrounds, which allowed a range of perspectives. Given the nature

of the population and difficulties clinicians often have recognising dissociation, most referrals came from psychologists. This may have introduced a sampling bias, as individuals referred by psychologists may have had more psychological awareness and language to articulate their experience, potentially limiting the range of perspectives captured. Additionally, manual data analysis was conducted, and while immersive and idiographic, it may have had limited systematic coding compared to the use of software (Woods et al., 2016).

These findings have important implications for clinical practice. Recognising dissociation as an adaptive and protective process can foster a compassionate, trauma-informed approach to treatment. Supporting individuals to understand and name their experiences, develop self-compassion for their internal voices, and integrate their experiences may reduce shame and stigma, enhance recovery and promote post-traumatic growth.

Theoretically, this study contributes to understanding the fundamental core of dissociation as relational and embedded within attachment disruptions and trauma. It also reinforces the understanding that voices emerge not solely as a psychotic symptom, but can be a manifestation of unprocessed trauma, and highlights the need for further integrative models to conceptualise dissociation within systemic, developmental and interpersonal contexts.

These findings also raise questions about whether dissociation is best understood as a single construct or as multiple, interacting dimensions. The differences between participants' experiences, such as feeling detached versus internally divided, suggest that dissociation may involve distinct processes of detachment and compartmentalisation. Recognising these subtypes may help refine theoretical models of dissociation, broaden the transdiagnostic

understanding of dissociation and improve how it is conceptualised within psychosis and trauma frameworks.

Future research could explore dissociative subtypes, particularly compartmentalisation and detachment, to refine specific relationships with voice-hearing and trauma. Understanding the subtypes can support more tailored therapeutic approaches and improve clinical practice. Secondly, amplifying marginalised perspectives through longitudinal community-focused studies with diverse populations could help clarify how trauma, culture and relational safety shape dissociation. Finally, exploring systemic drivers of harm requires further research into how fragmentation in mental health services may enhance dissociative processes within service users. These directions highlight the need for research that moves beyond individual pathology to consider the interpersonal, developmental, and systemic contexts of dissociation.

Conclusion

Overall, this study highlights dissociation as a complex and fragmented experience for individuals with histories of trauma and voice hearing. Participants accounts indicated a dual role that dissociation plays as both a protective and a distressing experience deeply intertwined with meaning-making, trauma, and interpersonal contexts. By focusing on lived experiences, these findings highlight the importance of recognising dissociation as an adaptive process rather than solely a symptom of pathology. This understanding has the potential to inform more compassionate, trauma-informed clinical practice and guide future research that positions dissociation within developmental, interpersonal and systemic frameworks.

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Appendices

Appendix 1: Systematic Review Screening and Selection Tool

Systematic Review Screening and Selection Tool

Review Question:

Evidence of Associations between Dissociation and Psychosis within Psychiatric Disorders: A Systematic Review

Screening and Selection Workflow

1. Title and Abstract Screening

Language

Is the study published in English?

Yes / No

Content

Does the title or abstract mention dissociative and psychotic symptoms?

Yes / No

Does it indicate the use of quantitative methods to report on the association between dissociative experiences and psychotic symptoms?

Yes / No

Does it specify that participants have a psychiatric diagnosis?

Yes / No

2. Full-Text Screening

Quantitative Findings

Does the full text report quantitative findings?

Yes / No

Sample

Does the study use a clinical sample?

Yes / No

Measures

Are the measures for dissociation (e.g., Dissociative Experiences Scale [DES] or equivalent) specified?

Yes / No

Are the measures for psychotic symptoms specified?

- Yes / No

Statistical Information

Does the study provide sufficient statistical information to estimate effect sizes?

- Yes / No

3. Eligibility Decision

Does the study meet all inclusion criteria and none of the exclusion criteria?

Inclusion Criteria

1. Published in English in a peer-reviewed journal.
2. Use of self-report measures for:

- Dissociation (e.g., Dissociative Experiences Scale [DES] or equivalent).
- Psychotic symptoms.

3. Use of quantitative methods to report on the association between dissociative experiences and psychotic symptoms.
4. Participants:

- Individuals aged 16 or older.
- Have a psychiatric diagnosis

Exclusion Criteria

1. Presented as a conference abstract or single-case study.
1. Did not report sufficient statistical information to estimate effect sizes.
2. Overlapping participant samples with other included studies.

Outcome

Include: ___

Exclude: ___

Reason for Exclusion: ___

Appendix 2 - Search Strategy Documentation

PsychINFO (EbscoHost)

Date of search: 02.12.24

APA PsycInfo <1806 to November 2024 Week 4>

1 exp Mental Disorders/ 1147762

2 psychiatric* disorder*.mp. 47048

3 sever* mental* disorder*.mp. 2102

4 sever* mental* ill*.mp.7875

5 ((chronic* or sever*) adj2 mental* adj2 (ill* or disorder*)).tw. 13048

6 exp Serious Mental Illness/ 7173

7 1 or 2 or 3 or 4 or 5 or 6 1159695

8 exp Psychosis/ 134527

9 psychotic.mp. 65214

10 exp hallucination/ or hallucinat*.mp. 19662

11 exp Delusions/ 6284

12 delusion*.mp. 18553

13 exp paranoia/ or parano*.mp. 19834

14 positive symptom*.mp. 9082

15 exp schizophrenia/ 103228

16 exp dissociation/ 5543

17 dissociat*.mp. 38314

18 exp Dissociative Disorders/ 6013

19 exp depersonalization/ or depersonali*.mp. 5699

20 dereali*.mp. 1027

21 dissociative symptom*.mp. 1760

22 16 or 17 or 18 or 19 or 20 or 21 43246

23 association.mp. or exp Free Association/ 317853

24 correlation.mp. 153821

25 relationship.mp. 692695

26 link.mp. 80727

27 interaction.mp. 325329

28 impact.mp. 464124

29 associat*.mp. 1078508

30 mediat*.mp. 270094

31 predict*.mp. 574934

32 correla*.mp. 474686

33 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 2641110

34 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 186472

35 7 and 22 and 33 and 34 1334

Embase (OVID)

Date of search: 02.12.24

Embase 1947-Present, updated daily

1 exp psychiatric diagnosis/ 22842

2 exp mental disease/ 3066865

3 psychiatric* disorder*.mp. 83422

4 sever* mental* disorder*.mp. 3395

5 sever* mental* ill*.mp.9568

6 ((chronic* or sever*) adj2 mental* adj2 (ill* or disorder*)).tw. 15723

7 1 or 2 or 3 or 4 or 5 or 6 3081153

8 exp psychosis/ 378636

9 psychotic.mp. 71116

10 exp hallucination/ or hallucinat*.mp. 56906

11 voices.mp. or exp auditory hallucination/ 22791

12 delusion*.mp. or exp delusion/ 44950

13 exp paranoia/ or parano*.mp. 29399

14 positive symptom*.mp. 11552

15 exp schizophrenia/ 235887

16 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 413739

17 exp dissociation/ or dissociat*.mp. or exp dissociative disorder/ 231231

18 exp depersonalization/ or depersonali*.mp. 8987

19 dereali*.mp. 1091

20 dissociative symptom*.mp. 1620

21 17 or 18 or 19 or 20 233500

22 exp association/ 46584

23 correlation.mp. 1883204

24 relationship.mp. 1891553

25 link.mp. 317283

26 interaction.mp. 2035495

27 impact.mp. 2263122

28 associat*.mp. 8976324

29 mediat*.mp. 2151055

30 predict*.mp. 3197963

31 correla*.mp. 3468591

32 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 17115138

33 7 and 16 and 21 and 32 2896

MEDLINE

Date of search: 02.12.2024

Ovid MEDLINE(R) ALL <1946 to November 25, 2024>

1 ((chronic* or sever*) adj2 mental* adj2 (ill* or disorder*)).tw. 11652

2 exp psychiatric diagnosis/ 1519639

3 exp Mental Disorders/ 1519639

4 psychiatric* disorder*.mp. 56470

5 sever* mental* disorder*.mp. 2413

6 sever* mental* ill*.mp.7154

7 1 or 2 or 3 or 4 or 5 or 6 1543727

8 exp psychosis/ 60679

9 exp hallucination/ or hallucinat*.mp. 22678

10 voices.mp. or exp auditory hallucination/23891

11 delusion*.mp. or exp delusion/ 16302

12 exp paranoia/ or parano*.mp. 16701

13 positive symptom*.mp. 7111

14 exp schizophrenia/ 118627

15 8 or 9 or 10 or 11 or 12 or 13 or 14 206087

16 exp dissociation/ or dissociat*.mp. or exp dissociative disorder/ 184974

17 exp depersonalization/ or depersonali*.mp. 5307

18 dereali*.mp. 651

19 dissociative symptom*.mp. 1188

20 16 or 17 or 18 or 19 189795

21 exp association/ 14671

22 correlation.mp. 1163631

23 relationship.mp. 2006680

24 link.mp. 249406

25 interaction.mp. 1090087

26 impact.mp. 1591479

27 associat*.mp. 6225101

28 mediat*.mp. 1735872

29 predict*.mp. 2368124

30 correla*.mp. 2449177

31 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 12762478

32 7 and 15 and 20 and 31 886

Appendix 3: JBI Critical Appraisal checklist

JBI CRITICAL APPRAISAL CHECKLIST FOR ANALYTICAL CROSS SECTIONAL STUDIES

Reviewer_____Date_____

Author_____Year_____ Record Number_____

	Yes	No	Unclear	Not applicable
1. Were the criteria for inclusion in the sample clearly defined?	☐	☐	☐	☐
2. Were the study subjects and the setting described in detail?	☐	☐	☐	☐
3. Was the exposure measured in a valid and reliable way?	☐	☐	☐	☐
4. Were objective, standard criteria used for measurement of the condition?	☐	☐	☐	☐
5. Were confounding factors identified?	☐	☐	☐	☐
6. Were strategies to deal with confounding factors stated?	☐	☐	☐	☐
7. Were the outcomes measured in a valid and reliable way?	☐	☐	☐	☐
8. Was appropriate statistical analysis used?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

_____

_____

_____

Appendix 4. A standardised data extraction tool

https://osf.io/xqjch/files/osfstorage/68aec31c69fab3fd3d7daba8

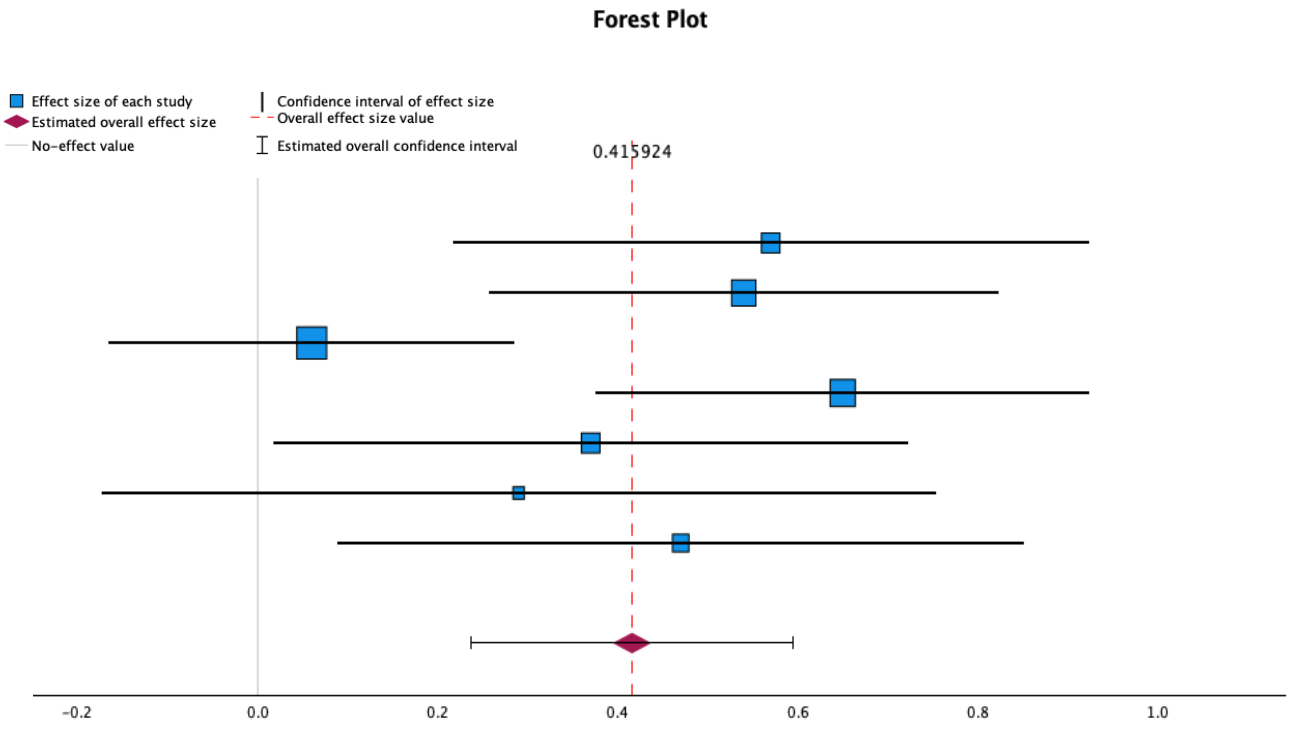
Appendix 5: Meta-analysis

		Study Design	Psychiatric I	Quantitative	Catergory	Population	Samplesize	Psychosis measure	Disscoation measure	Effect size	Converted effect size
Total PS & DS											
18	Wearne et al.	comparative group design	DSM-5	Pearson Correlation	PTSD	PTSD	17	PSYRATS	CADSS	r=0.57*	
19	Wearne et al.	Cross-sectional	DSM-5	Correlation	PTSD	PTSD	27	PSYRATS	CADSS (total)	r = 0.54	
20	Zincir et al., 2	Cross-sectional	DSM-IV	Correlation	Mixed	SCZ = 29, SCZa =11, BP (psychotic Mania)= 7, BP (Mixed)=4, MDD (psychotic) = 3, BP (dep) = 10, Uni Dep= 7, BD (mania) = 3, GAD=2, OCD=2	78	PANSS	DES	r = 0.075	
18	Wearne et al.	comparative group design	DSM-5	Pearson Correlation	Mixed	Dual Diagno	20	PSYRATS	CADSS	r=0.65*	
19	Wearne et al.	Cross-sectional	DSM-5	Correlation	Mixed	Dual Diagno	26	PSYRATS	CADSS (total)	r = 0.37	
19	Wearne et al.	Cross-sectional	DSM-5	Correlation	SCZ	SCZ	18	PSYRATS	CADSS (total)	r= 0.29	
18	Wearne et al.	comparative group design	DSM-5	Pearson Correlation	SCZ	SCZ	19	PSYRATS	CADSS	r=0.47*	
Pos ve PS & total DS											
4	Dogan et al.,	cross-sectional	DSM-V	Pearsons correlation measures with SDQ	SCZ	Schizophreri a w/o trauma	48	SAPS	SDQ	r=0.29	
3	Chui et al., 2(	cross-sectional	DSM-5	Regression C	SCZ	SCZ	43	PANSS+ve	CADSS	β = 0.135	r= 0.161
13	Sar et al., 201	Cross-sectional	DSM-IV	Pearsons Correlation	SCZ	SCZ = 70	70	SAPS	DES	r=0.31	
1	Abkey et al.,	Cross-sectional	DSM IV	Pearson Correlation Tests	SSD	SCZ = 100 (PS- 60, Un=25, Res=13, Des=2)	100	SAPS	DES	r=0.192	
14	Schroeder et	Cross-sectional	ICD-10	Pearsons Correlation	SSD	SSD	145	PANSS +ve	DES	r=.216	
15	Schalinski et	Cross-sectional	MINI	Spearmans Partial r	PRD	SCZ (75%), acute polymorph psychotic disorder (13.3%), SCZa (11.1%), and delusional disorder (0.6%)	180	PANSS +ve	SDS	r=0.18	
6	Grady et al.,	cross-sectional	DSM-V	Pearson Correlation	Psychosis-related disorder	SCZ = 28, SCZa= 14, DD = 2, FEP=15, P NS = 3, Dw/ P = 4, BD w/ p =5	71	SAPS	DES	r = 0.475**	
9	Li et al., 2022	Cross-sectional	DSM-5	Regression	DD	MDD/BP (bipolar depression)	91	PANSS +ve	CADSS	β = 0.097	r= 0.147
3	Chui et al., 2(	cross-sectional	DSM-5	Regression C	DD	MDD	59	PANSS+ve	CADSS	β = 0.329	r= 0.360
3	Chui et al., 2(	cross-sectional	DSM-5	Regression C	DD	BD	32	PANSS+ve	CADSS	β = 0.680	r= 0.539

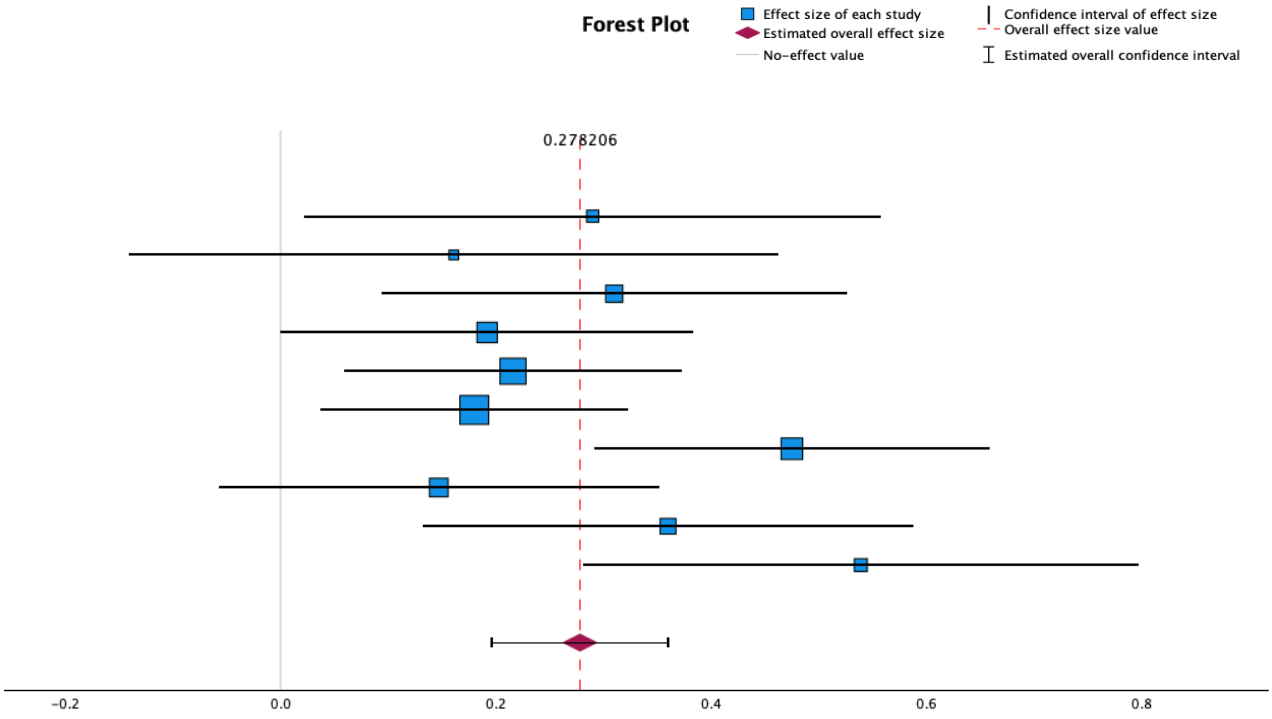
Appendix 6: Rationale for Excluded Studies meta-analysis

https://osf.io/ek7za\

Appendix 7. Forest plot of the association between dissociative symptoms and psychotic symptoms across included studies.



Appendix 8. Forest plot of the association between dissociative symptoms and positive psychotic symptoms across included studies



Appendix 9. Imputed effect sizes

Study	Population	Reported statistic	Imputed effect size (r)
Chiu (2024)	SCZ	$\beta = 0.135$	r= 0.161
Li (2022)	MDD/BP depression	β = 0.097	r = 0.147
Chiu (2024)	Bipolar disorder	β = 0.680	r = 0.539
Chiu (2024)	MDD	$\beta = 0.329$	r= 0.360

Appendix 10. PRISMA checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	11
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	12
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	13
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	15
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	16
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	17
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	104 -109
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	17-18
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	17-18
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	19
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	19
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	19
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	17
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	17
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	18-19
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	18-19

Section and Topic	Item #	Checklist item	Location where item is reported
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	18-19
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	18
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	18
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	19
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	19
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	20
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	20
Study characteristics	17	Cite each included study and present its characteristics.	21-25
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	26-27
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	21-27, 111-113
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	28,36
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	37,39, 112, 114-115
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	37-38
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	37-38
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	26-27
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	26-27
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	40-41
	23b	Discuss any limitations of the evidence included in the review.	42

Section and Topic	Item #	Checklist item	Location where item is reported
	23c	Discuss any limitations of the review processes used.	42-43
	23d	Discuss implications of the results for practice, policy, and future research.	43
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	16
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	16
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	16
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	44
Competing interests	26	Declare any competing interests of review authors.	44
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	111, 113

Appendix 11: Major Research Project Proposal

Protocol

Title: How individuals who hear voices and have a history of trauma, experience and manage dissociation: An interpretative phenomenological analysis (IPA)

Rebecca Anthony

Student ID: xxxxxxx

Version Number 5

Date: 19/11/24

Abstract

Background: There is little qualitative research exploring the lived experience of dissociation, and the first study exploring dissociative experiences in psychosis has only recently been published (Černis, Freeman & Ehlers, 2020). There is increasing evidence suggesting that dissociation plays a pivotal role in mediating the relationship between trauma and hallucinations (Bloomfield et al., 2021). Individuals with these experiences are often subject to demoralization, distress and misdiagnosis by clinicians (Longden, Madill & Waterman, 2012).

Aims: This study aims to add to the current literature to deepen and produce understandings that are more inclusive of individuals' experiences of dissociation, within those who have experienced trauma and who hear voices.

Methods: This is a qualitative study which will entail interviewing participants following a topic guide exploring the experience of and management of dissociation with individuals who hear voices and have a history of trauma using an Interpretative Phenomenological Analysis (IPA).

Applications: Providing clinicians and researchers in depth phenomenology, ideographs and hermeneutics into the first-hand lived human experience from these individuals can aid support for others to manage their distress by developing theoretical models and interventions which incorporate understanding for individuals who have experienced dissociative episodes in the context of trauma and voice hearing. The study's findings will be disseminated among participants,

personal and public involvement (PPI) members, researcher and staff working with dissociation, trauma and voice hearing.

Introduction

Recent research has established the relationship between trauma and hearing-voices (Pilton, Varese, Berry & Bucci, 2015). Campodonico, Varese & Berry (2022) found that the relationship was 'dose' dependent where more severe and prolonged trauma linked to increased likelihood of voices. It is commonly reported within combat-rated post-traumatic stress disorder (PTSD) with a prevalence rate from 20% to 58% (Clifford, Dalgleish & Hitchcock, 2018; Anketell et al., 2010; Brewin & Patel, 2010; Seedat et al., 2003). There have been less studies using civilian samples (Brewin & Patel, 2010) however, prevalence rates of between 50% to 67% have been reported (Brewin & Patel, 2010; Anketell et al., 2010). Cognitive models propose that trauma can elicit hallucinations in relation to three domains: firstly, it may influence the content of the voices as they may be reflective of elements of the original traumatic event (e.g., voices of soldiers the veteran had witness the death of). The second area links to how the trauma could serve as a psychological, biological or biopsychosocial trigger as those with hallucinations often report physical or sexual trauma before its onset and finally hallucinations may be created or maintained by trauma-related dissociation (e.g., a way of managing and processing difficult emotions; Luhrmann et al., 2019). Within general (van Nierop et al., 2014) and psychiatric populations (Berg et al., 2015) specific types of traumas including sexual and physical abuse, neglect and emotional trauma have been linked to voice hearing, with the strongest

associations being among individuals who have experienced childhood sexual abuse (Bentall et al.,2012; Shevlin, Dorahy & Adamson, 2007).

People who experience voice hearing in the context of trauma can be subject to significant demoralization, distress and misdiagnosis by clinicians (Longden, Madill & Waterman, 2012). Despite voice hearing being a potential diagnostic feature of over 50 conditions (e.g., delirium, PTSD, major depressive disorder and vascular dementia) within the Diagnostic and Statistical Manual of Mental Health (5th edition; DSM-5; American Psychiatric Association, 2013; Longden, Madill & Waterman, 2012), it often perceived as predominately a feature of a psychotic illness. It has been proposed that mechanisms underlying voice hearing would be best understood as psychological and dissociative in nature opposed to biogenetic and psychotic (Longden, Madill & Waterman, 2012). There is increasing evidence suggesting that dissociation plays a pivotal role in mediating the relationship between trauma and hallucinations (Bloomfield et al., 2021) specifically hearing voices (auditory hallucinations; Wearne et al., 2020). The theoretical underpinning have been explored in relation to numerous proposed psychological mechanisms including emotional regulation and autobiographical memory (Hardy, 2017) and neurodevelopmental changes (Read, Fosse, Moskowitz & Perry, 2014).

Dissociation has been proposed to be an adaptive acute stress response to traumatic experiences and is an umbrella term used to refer to reactions of compartmentalisation (suppression of emotions and/or thoughts) and detachment (depersonalisation and derealisation; Choi et al., 2017). Research suggests that the development of dissociative experiences could be explained in

relation to attachment theory, and more specifically how trauma disorganises the attachment system Gumley & Liotti, 2018). It is hypothesised that individuals' experiences of interactions with attachment figures become internalised and develops into how one perceives the world (e.g., expectations about themselves and others). Attachment theory explains that a disorganised attachment behaviour occurs when there is a conflict between one's attachment system and the fight/flight system as often the caregiver/attachment figure becomes the source and solution to the individual's fear when one experiences trauma. It is theorised this disorganisation then induces non-integrated, incoherent and incompatible attitudes of hostility, helplessness and compulsive caregiving which simultaneously co-exist causing contradictory and unrealistic expectations of the self and others when the attachment system is activated in response to stressful events. It is proposed that these conflicting attitudes and responses can be seen as a dissociative style of attention and information processing (Gumley & Liotti, 2018).

The role of distinct sub-types of dissociative experience (e.g., compartmentalisation and detachment) plays within the mediation of trauma and voices is yet to be established. The literature currently proposes conflicting evidence: some areas of research suggest that there are specific associations between voice hearing within dissociation that presents as depersonalisation (Kilcommons & Morrison, 2005) or derealisation in combination with amnesia (Tshoeke, Flammer,Bichescu-Buriam & Steinert, 2021). Whereas other theories state the role of dissociation within voices and trauma does not differ in relation to how the dissociative state occurs (Bloomfield et al., 2021). Understanding the

role of lived experience within dissociative episodes would be advantageous to broaden understanding of the role it plays within mediation trauma and voice hearing.

Despite the growing quantitative research within the area such as the recent Randomised Controlled Trial (RCT) on voice hearing and trauma (Birchwood et al., 2018), there is a gap in the qualitative research exploring the lived experience of dissociation. The first study exploring dissociative experiences in psychosis has only recently been published (Černis, Freeman & Ehlers, 2020). Qualitative methods allow researchers to understand human experiences further by addressing the "how" and "why" questions and enables a more in-depth insight into context and phenomena (Cleland, 2017). The use of phenomenology, beginning with the person's lived experience is a crucial step towards developing more complete and more nuanced understandings that can inform future studies. Therefore, this study aims to add to the current literature to deepen and produce understandings that are more inclusive of individuals experiences of dissociation, within those who have a history of trauma and who hear voices.

Research question

How people with a history of trauma and hear voices experience and manage dissociation?

Method

Design

This is a qualitative study, and an Interpretative Phenomenological Analysis (IPA) will be conducted to understand how people with a history of trauma who hear voices, make sense, and manage of their dissociative experiences. IPA is based on several important epistemological principles including phenomenology, thinking about the experience of what being human is like; ideographs, committing to exploring the particular detail to understand an experiential phenomenon; and hermeneutics, the interpretation of the latter (Smith, Flowers & Larkin, 2009; Smith & Fieldsend, 2021). IPA involves a detailed examination of human lived experience to enable one's perspective to be expressed in its own terms rather than according to predefined category systems (Smith & Fieldsend, 2021; Alase, 2017). IPA hopes to elicit rich, detailed and first-person interpretations of an individual's experiences and the existing phenomena of how people who hear voices and have experienced trauma experience dissociation. Therefore, one-on-one interviews are often the most popular method to achieve this, as it allows the participant and researcher to have the space and flexibility to engage in real-time dialogue where the researcher can make space for any unexpected issues and explore topics with a tailored approach (Smith & Osborn, 2015).

Participants

The proposed study will be recruiting individuals with a self-reported history of trauma who have experienced and or currently hear voices and experience dissociation. Participants will self-refer or be identified via clinicians (psychiatrists, nurses, and psychologist) within NHS Lanarkshire (NHS-L) Mental

Health Services including Community Mental Health Teams (CMHTs), Psychological Therapies Teams (PTT) and inpatient settings.

Inclusion:

1. People with a history of trauma who hear voices and experience dissociation.
2. Over 18 years old – due to service constraints.
3. Capacity to provide informed consent.
4. Patients under the care of NHS-L mental health services.
5. Deemed to have sufficient English to engage in-depth interview.

Exclusion:

3. Individuals in an acute mental health/ crisis as reflected in an acute psychiatric admission or escalation to a crisis care team. In this event approach for recruitment will be delayed until 4 weeks following discharge from escalation in care.

Recruitment

As shown in Appendix 1, contact will be made with NHS-L mental health (MH) services to identify potentially eligible participants. A presentation of the project will be provided to PTTs, Psychiatry Consultants' meeting, CMHT Multi-Disciplinary Team (MDT) meetings and in-patient psychology services. Clinicians within these teams will then be able to refer participants to the research.

Referrals via Clinicians

Clinicians will approach patients on their caseloads during their appointments or via telephone to ascertain potential participants' interest in participation and provide them with a leaflet about the study. Clinicians will then obtain their consent to pass contact information to the researcher which will be documented by the clinician in the participants clinical notes. The researcher will ask the referring clinician if they have done this when the researcher has been made aware of participant consent to be contacted. Upon expression of interest, the clinician will inform the researcher. The researcher will then provide the individual with a Participant Information Sheet (PIS) by post/email. This will be provided at least 24 hours before meeting with the researcher, for the participant to understand what the project entails and think about any questions they may have.

Referrals via posters

In addition, permission will be sought for posters will be placed within NHS-L mental health services waiting rooms for individuals to self-refer via email or telephone contact. If the participant is deemed appropriate as per the inclusion/exclusion criteria, they will be emailed/posted the PIS.

All participants will then be invited to attend two 1:1 meeting at their local NHS-Lanarkshire clinic building with the researcher. The function of the first appointment is to discuss the PIS, ensure that the potential participants have read it and understands, has the opportunity to ask questions and thus provide written and informed consent. They will then be invited back second meeting which will involve a 90-minute interview following a topic guide, as per IPA recommendations (Smith et al., 2009).

These meetings can be combined or happen at separate occasions, depending on the participants preferences.

Materials and Measures

A digital voice recorder will be used to record the interviews.

Transcripts will be created from these recordings and used for data analysis.

Topic guide to be developed with Personal and Public Involvement (PPI; Appendix 2)

Topic guide development

Four PPI members will be involved in the development of a topic guide (Appendix 2) to gain an understanding of participants experiences of dissociation and managing dissociation. These PPI members have previously engaged in research with field supervisors and academic supervisors and expressed interest in being contact for PPI consultation. They will be separately invited to a meeting within the University of Glasgow admin building meeting rooms, and they will be paid £25 per hour of their input as per National Institute for Health and Care Research (NIRH) guidelines (NIHR,2022)

Research procedures

Once individuals have self-referred to the study or have been referred by an NHS clinician. The researcher will provide the participant with a PIS. Following this, they will be invited to attend two appointments with the researcher. The first

appointment will be to make sure the participant has read and fully understands the PIS, has an opportunity to ask questions and to obtain informed consent. The second appointment will involve a 90-minute interview following a topic guide (Appendix 2) as per IPA recommendations (Smith et al., 2009). The interview will be digitally recorded in order to be transcribed, anonymised and analysed.

Ethics, Governance and Data Protection

Ethical approval will be sought following completion of the MRP proposal, from NHS and managerial approval via NHS-L research and development team.

This study contains discussions around trauma, voice hearing and dissociation which can often be difficult due to the personal and sensitive nature of information. The following ethical issues and their mitigations have been identified.

Informed consent

Informed consent will be obtained from participants after being provided with details of what the interview will entail. This will be through a detailed PIS which will be given to the participants at least 24 hours before the initial meeting, so they have enough time to read it and to ask the researcher any questions prior to consenting to the study.

Right to withdraw

Participants will be made aware of their right to withdraw before the interview and that withdrawal or decision not to take part will not impact on their current care. They will also be informed that they are able to stop at any point. The

researcher will be vigilant to any signs of distress and allow them the space to take a break and end the interview if required.

Confidentiality

All data obtained from the participants will remain confidential. Interviews will be recorded on an encrypted voice recorder and accessed via password. Interview recordings will be destroyed after transcription and anonymisation and an accuracy check. The anonymised data will be stored in University of Glasgow. Data will be archived for 10 years following submission of the thesis. All data will be stored and processed in line with NHS Lanarkshire Data Protection Policy and the Data Protection Act (2018).

Risk of distress

Due to the nature of this research, it is possible that distress (e.g., upset, anger, voice hearing or dissociation) may occur or be exacerbated when talking about these sensitive issues for both the researcher and participants. To mitigate this risk, participants will be provided with opportunities to take breaks or terminate the interview. The researcher will also ask what support would be helpful to provide participants should such distress arise. In the event of risk issues arising, these will be communicated to their clinical team

Additional considerations have been taken into account in regard to the nature of difficulties that the participants in this research may experience. Issues of mistrust, suspiciousness, anxiety and paranoia, may arise during the interview. The researcher will have clear discussions with the participants about the data,

recording procedures and purpose of the use of technology. They will also be provided with opportunities for clarification of anything they may remain unsure about, want further information about or have questions.

The researcher will also be monitoring their own personal responses to interviews through use of a reflective journal and use of clinical supervision to discuss if any issues arise or negative impact of conducting interviews.

Debriefing and follow-up

Participants will be given the option to have a check-in call after the interview has been conducted. They will also be reminded that the contact details of the researcher and research team are on the PIS to provide opportunity to withdraw their data from the study or for additional information and contact details for NHS-L support services will be provided for additional support if needed.

Analysis Plan

Recordings from the interviews will be transcribed and anonymised. It will then be analysed using IPA (Smith & Osborn, 2015). This analysis will entail taking time to explore the transcripts to then identify and create connections across experiential statements to then categorise personal experiential themes (PETs) to develop a group of experiential themes (GETs) across the interviews (Smith & Osborn, 2015; Smith & Fieldsend, 2021).

Sample Size

As per IPA recommendations a small sample size of 6-8 participants will be recruited for this study (Smith & Fieldsend, 2021). This number was seen as appropriate as it allowed for a detailed and idiographic analysis while meeting recommendations for a professional doctorate (Smith et al., 2009).

Timetable

28th April 2023: Final approval for MRP

July – October 2024: Apply for and gain ethical approval/ Systematic Review/ PPI involvement.

November 2024 –February 2025: Recruitment, Data Collection and Analysis

February – March 2025: Write up.

April 2025: Final Submission of MRP

June 2025: Viva

Health and Safety (Appendix 4)

Participants

Data collection will take place in a private and confidential NHS-L clinic space. Due to the geographical size of NHS-L and to include accessibility needs, these clinic spaces will be offered (where possible) within their local NHS-L clinic. The participant will be given an opportunity to meet the researcher before the interview, to obtain informed consent, their right to withdraw and ask any questions they may have around the study. During the interview the participant will be provided opportunities to take breaks and end the interview if any issues

arise. They will also be provided signposting support information once the interview is complete, if desired.

Researcher

The interviews will be held within NHS-L clinic spaces within working hours. The health and safety policies of NHS-L will be followed throughout data collection. The research population will all be receiving care from NHS-L MH services so there may be risks concerns around – risk to self, risk from other or risk to others. All NHS-L staff are provided with personal alarms which can be used to gain assistance if any difficulties were to occur. Lone working policies will be followed.

Equipment and Costs

Equipment: a digital voice recorder (to be loaned from University of Glasgow).

Costs: PPI payments (4 X £25) and printed materials (£30)

Practical Applications and Dissemination

Providing clinicians and researchers in depth phenomenology, ideographs and hermeneutics into the first hand lived human experience from these individuals can aid support for others to manage their distress by developing theoretical models and interventions which incorporate understanding for individuals who have experienced dissociation within the context of trauma and voice hearing. Dissemination plans will be discussed with the PPI members, to help develop a clear dissemination plan and support the research findings being summarised in a clear and accessible manner. Participants and NHS-L staff will receive information

via email, using a brief bullet pointed summary document of the findings. This approach was proposed due to the fast-paced nature of the NHS, having a brief outline will hopefully aid dissemination of the results to reach a wider population without being too time consuming. Additional dissemination plans may be established following PPI consultation which may include a blog post on NHS-L website, presentation at NHS Scotland's Annual Conference and/or leaflet to be distributed within NHS-L mental health services.

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Appendix 12: Participant Information Sheet

PARTICIPANT INFORMATION SHEET
Version 2 (06.12.24)

IRAS Project ID: 332201

How individuals who hear voices and have experienced trauma, experience and manage dissociation: An interpretative phenomenological analysis (IPA)

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

The research is being conducted by Rebecca Anthony a Psychology student at the University of Glasgow, and it is being supervised by Dr Moya Clancy and Professor Andrew Gumley, also from the University of Glasgow, School of Health & Wellbeing and by Dr Karen Livingstone in NHS Lanarkshire.

If you decide to take part in this study, you will be given a copy of this Participant Information Sheet and the signed consent form for you to keep.

What is the purpose of the study?

Dissociation (or commonly referred to as "spacing out") is a process in which a person disconnects from their thoughts, feelings, memories, behaviours, physical sensations, or sense of identity. It is suggested to be an adaptive stress response to traumatic experiences.

It is believed that people who have experienced trauma have an increased likelihood of hearing voices. There is increasing evidence suggesting that dissociation plays a key role in the relationship between voice hearing and trauma. However, there is little research exploring what it is like for the people that have these experiences.

The purpose of this study is to gain a greater understanding of the experience of dissociation among people who have experienced trauma and hear voices. We aim to do this by interviewing people who have experienced trauma, heard voices and that have dissociated. Therefore, our hopes are to gain an understanding of these experiences to better inform others of what it may be like, and what could be helpful to manage them.

Why have I been invited to participate?

You have been asked to take part in this study because you are aged 18 years or older and are under the care of NHS Lanarkshire Mental Health services because you have reported experiencing trauma, dissociation, and voice hearing. Your clinician may have approached you with a study leaflet summarising the study, or you may have seen the study poster in the clinic.

You will have been given this Participant Information sheet in one of two ways:

- *If you told your Clinician you were interested in the study:*
  Your clinician will have checked you are eligible to take part and then contacted researchers, Rebecca Anthony or Karen Livingstone who have sent you this Participant Information Sheet.

- *If you contacted the research team directly:*
  The research team will have sent you a copy of this Participant Information Sheet and will ask for your consent to contact your clinician to check you are eligible to take part. You must meet eligibility criteria to participate.

Do I have to take part?

No, it is up to you to decide whether to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form and are still free to withdraw at any time without giving a reason. If you decide not to take part in the study, it will in no way affect your current services provided by NHS Lanarkshire.

To withdraw from the study, all you have to do is inform us that you no longer wish to continue (no reason is needed). You can do this by telling us in person when you attend your one-to-one meeting, or by emailing Rebecca Anthony: Rebecca.anthony@lanarkshire.scot.nhs.uk or Karen Livingstone: karen.livingstone@lanarkshire.scot.nhs.uk

If you do decide to withdraw after the interview, this data collected up to that point will be retained and used for the remainder of the study.

This research study is independent of clinical care and your data will not be accessible by your clinical team.

What will happen to me if I take part?

If you agree to take part in the study, you will be invited to an initial meeting with the researcher, Rebecca Anthony, in a local NHS Lanarkshire Clinic. This meeting should last less than an hour. As part of this meeting, you will be provided with an opportunity to go through this information sheet in more detail, ask questions about participating in this study and then if you would like to take part, we will ask you to sign a consent form.

Please note if you have any existing transport arrangements with NHS Lanarkshire to facilitate your attendance to clinic, this will be supported.

What is involved in the study?

Following the initial meeting, a further interview will be scheduled with the researcher to meet to discuss your experiences of dissociation. You will be asked to talk in detail about your experiences of dissociation and what helps you manage this. This meeting will last for up to 90 minutes and can involve breaks if required. What you say in this meeting will be recorded using an encrypted digital recorder.

It is possible to have the initial meeting and interview scheduled for the same day, if this is more convenient.

What are the possible benefits of taking part?

Many people find it a positive opportunity to voice their experience in a safe and supportive environment. The information that is collected during this study will give us a better understanding of what it is like to experience dissociation, and this information will be distributed to clinicians and services to provide them with more insight into how best to support others with these experiences.

What are the possible disadvantages and risks of taking part?

Due to the nature of the research, it is possible that you may become distressed when discussing experiences of dissociation. The researcher is a Trainee Clinical Psychologist who is experienced in responding to and supporting people experiencing emotional distress. In the event of experiencing distress, they will support you to choose what you would like to do, for example continue with the interview, have a break, or even end the interview.

Recording

We understand that being recorded may also cause some anxieties, however the recordings are purely for the researcher to be able to listen back and create an anonymised transcription. Following this, the audio recordings will be destroyed.

Will my taking part in this study be kept confidential?

All information which is collected about you, or responses that you provide, during the course of the research will be kept strictly confidential. You will be identified by an ID number, and any information about you will have your name and address removed so that you cannot be recognised from it. Confidentiality will be strictly adhered to throughout the research.

In the event that you disclose risk of harm to yourself or others, the researcher may need to disclose this to your NHS clinician. However, we will always make efforts to discuss this with you first and support you in making any disclosures regarding risk.

What happens to my information?

The interview will be audio recorded using an encrypted digital voice recorder from the University of Glasgow. This is to make sure that everything that is said can be transcribed word for word. This is necessary for this kind of research. The discussions will be transcribed (typed up) by the researcher, Rebecca Anthony. Rebecca will show you the digital audio recording device and explain how this works before starting the interview. This data will be stored in line with NHS Lanarkshire data protection guidelines. Interview recordings will be destroyed after transcription and after the anonymous ID number has been added to it.

Your personal information (e.g. name, contact details) will be kept for 3-6 months after the end of the study so we can share the findings of the study with you, if you would like to know the results.

The research data will be the transcript of the meetings. This data will not contain your identifiable information. Instead, all the participants will be known only by an ID number which means the data is pseudonymised. This pseudonymised data will be stored at the University of Glasgow. The pseudonymised data will be archived for 10 years following submission of the thesis. All data will be stored in a safe and secure location.

The written project will include reporting common themes about peoples' experiences and fully anonymised quotes will be used to show these themes. What you say during the interview may be used, and although you may recognise this, no-one else will be able to identify you from the study. However, your NHS Lanarkshire clinician and GP will be made aware that you have taken part in the study.

General Data Protection Regulation (2018)

NHS Lanarkshire is the sponsor for this study. We will be using information from you to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. NHS Lanarkshire will keep identifiable information about you for 3-6 months after the study has finished.

Your rights to access, change or move the information we store may be limited, as we need to manage your information in specific ways for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally identifiable information possible. You can find out more about how we use your information at https://www.hra.nhs.uk/information-about-patients or by contacting NHS Lanarkshire Information Governance Department.

The University of Glasgow will be the data processor for this study. Researchers from the University of Glasgow collect, store, and process all anonymised research data in accordance with the General Data Protection Regulation (2018). The anonymised research data will be stored in archiving facilities in line with the University of Glasgow retention policy of up to 10 years.

After this period, further retention may be agreed, or your anonymised data will be securely destroyed in accordance with the relevant standard procedures.

Your data will form part of the study results that will be published in expert journals, presentations, student dissertations/theses and on the internet for other researchers to use. Your name or any identifiable information will not appear in any publication.

What will happen to the results of the research study?

All participants and NHS Lanarkshire mental health staff will receive information via email, using a brief bullet pointed summary document of the findings.

Additionally, these results may be included in an academic journal, conferences, and presentations. Anonymised direct quotes may be used within these dissemination formats.

It is also possible that you can opt in to be contacted by the research team in relation to this project and opportunities to take part in further research.

Who is organizing and funding the research?

The University of Glasgow and NHS Lanarkshire

Who has reviewed the study?

The project has been reviewed by the College of Medical, Veterinary & Life Sciences Ethics Committee including a secondary independent reviewer. It has also been reviewed and approved by NHS Research Ethics Committee (NHS REC).

What can I do if I have a problem with the study?

If you have a problem with the study or would like to make a complaint, you can contact the researcher, Rebecca Anthony, in the first instance. You can also contact Dr Karen Livingstone, who is also a member of the research team, to make a complaint. The standard NHS complaint procedure is also available to you.

You can contact Dr Karen Livingstone on: karen.livingstone@lanarkshire.scot.nhs.uk
Or call the Complaints Team on 0300 3030 243.

Sources of support

We appreciate that thinking about dissociation may cause you some distress. Whether or not you take part in the study you can access support in the following ways:

Your local Mental Health team/ CMHT.

Your registered **GP** surgery.

If GP Surgery and community services are closed: For urgent help or in a crisis, call **NHS 24** on **111**

If you just need to talk with someone, there is help available:

Samaritans: open 24 hours a day, 365 days a year. You can call them on **116 123** (freephone)

Breathing Space: offers a confidential phone line for anyone in Scotland feeling low, anxious or depressed. You can call free on **0800 83 85 87**

Contact for Further Information

If you have any questions or would like any more information about this research, please contact:

Rebecca Anthony (Trainee Clinical Psychologist): Rebecca.anthony@lanarkshire.scot.nhs.uk
Dr Karen Livingstone (Clinical Psychologist): karen.livingstone@lanarkshire.scot.nhs.uk

Thank you for taking your time to read this information.

Appendix 13: NHSL R&D Management Approval

Dr Moya Clancy
University of Glasgow
Clarice Pears Building
90 Byers Road

R&D Department
David Matthews Building
University Hospital Monklands
Monkscourt Avenue
AIRDRIE
ML6 0JS

Date 27/01/2025
Enquiries to Frances McCulloch,
Senior R&D Facilitator
Direct Line 01698 752386
Email Frances.McCulloch@lanarkshire.scot.nhs.uk

Dear Dr Clancy

Project title: How individuals who hear voices and have a history of trauma, experience and manage dissociation: An interpretative phenomenological analysis (IPA)

R&D ID: L23092

IRAS: 332201

I am writing to you as Chief Investigator of the above study to advise that R&D Management approval has been granted for the conduct of your study within NHS Lanarkshire as detailed below:

NAME	TITLE	ROLE	NHSL SITE TO WHICH APPROVAL APPLIES
Rebecca Anthony	Trainee Clinical Psychologist	Principal Investigator	NHS Lanarkshire

As you are aware, NHS Lanarkshire has agreed to be the Sponsor for your study. On its behalf, the R&D Department has a number of responsibilities; these include ensuring that you understand your own role as Chief Investigator of this study. To help with this we have outlined the responsibilities of the Chief Investigator in the attached document for you information.

All research projects within NHS Lanarkshire will be subject to annual audit via a questionnaire that we will ask you to complete. In addition, we are required to carry out formal monitoring of a proportion of projects, in particular those projects that are Sponsored by NHS Lanarkshire. In either case, you will find it helpful to maintain a well organised Site File. You may find it helpful to use the folder that we have included for that purpose.

For the study to be carried out you are subject to the following conditions:

Conditions

Appendix 14: Interview Protocol

Interview Protocol

How individuals who hear voices and have a history of trauma, experience and manage dissociation: An interpretative phenomenological analysis (IPA)

IRAS Project ID: 332201

Version: 1

26th September 2024

Aims: To add to the current literature to deepen and produce understandings that are inclusive of individuals experiences of dissociation, within those who have experienced trauma and who hear voices.

Rationale: Learning about the first hand lived experience of dissociation (*Insert participants own language* i.e. spacing out/ disappearing/ not there/ zooming out/zoning out) from individuals who hear voices and have a history of trauma can aid support available to others with similar experiences by developing theoretical models and interventions which incorporate understanding for individuals who have experienced it.

Initial meeting

As per study protocol, once the participant has expressed interest in the study, and they have received the Participant Information Sheet, they will be invited to a meeting with the lead researcher (Rebecca Anthony) to discuss the study further.

During the initial meeting:

☐ Is the clinic room safe, quiet and confidential?

☐ Does the Participant have any further question in relation to the PIS/study?

☐ Informed consent obtained

☐ Does the participant have any adjustments that need to be made for the interview to feel more comfortable for them (e.g. environment, pace of interview etc)?

☐ Does the participant have any preferences for:

- Language/terms to discuss dissociation
- Grounding /coping strategies?

Topic guide for the main interview

The topic guide will be used as a prompt for discussion but not necessarily followed. The interview will be tailored to the participants and what the participant wants to discuss and brings relating to their experiences of dissociation. The interviewer will insert the participants' language for describing dissociation. For example, if they discuss 'zooming out', the researcher will use the phase throughout the interview.

_____: participants own language for dissociation

Pre-interview checklist:

Is the Dictaphone working?

- Has the participant got any further questions?

Phase 1 – Introduction and context setting Phase

This phase is a brief phase to set the scene for the interview, and to make the participants feel comfortable and to build rapport.

Thank you for meeting with me and agreeing to take part in my research. As I have mentioned before you are welcome to stop this interview at any time. Today, I am interested in hearing about your experiences. Although I may have some knowledge of what will be talking about, I want to fully understand your own personal experiences so try to think of this as describing what it is like to have these experiences to someone who has never experienced dissociation. I am not here to judge anything you say, everything you have to share about your experience of dissociation is important. I will try to listen as much as

possible and if you have any questions for me throughout this, feel free to ask me. If you feel the need to take a break at any point, let me know and we can stop.

So firstly, could you tell me what interested you in the study?

Phase 2 – Exploration Phase

This phase focuses on the core themes and questions central to the research objectives and to probe questions for deeper insights.

The following questions are optional probe questions:

Please tell me about your experience of "dissociation/ _____"?

How has your dissociation/ _____ effected your daily living/life?

How do you feel about your "dissociation/_____?

What has helped you to manage your experiences? (Although this may be information obtained prior to the interview, it is important for this information to be explored within the interview to aid the analysis of this research.)

Is there anything that makes the dissociation/_____ worse?

Is there anything more you would hope from services moving forward to feel safe?

Provide examples if necessary

Phase 3 – Reflection Phase

This is a space for the researcher to ask any questions that help clarify any ambiguous responses from the participant and ensure that the participants perspective is fully understood

This could also be an opportunity to summarize what the participant has said to confirm understanding and provide an opportunity for anything misunderstood to be corrected.

Phase 4 – Closure Phase

This is an opportunity to allow the participants to share any additional thoughts or insights they have not yet expressed and to thank the participants for their time.

Example of prompting question:

Is there anything that we haven't discussed about "dissociation/_____" which you think could be helpful for others to know?

Thank you again for meeting with me today and trusting me enough to share your experiences with me, I appreciate how open you have been with me as I know this can be a tricky/difficult thing to talk about. I have found it very helpful to learn about your experiences. Is there anything else that you would like to talk about before we finish?

Just to remind you, if you require any further support after today there are contact details for support services within the Participant Information Sheet of where to find this, as part of this study, I will also offer you a brief check in telephone call at a time that is convenient for you in the coming days

Developed with guidance from Černis, E., Freeman, D., & Ehlers, A. (2020)

Appendix 15: Reflexivity statement

Reflexivity

The main researcher (RA) maintained reflexivity throughout the project by utilising supervision to reflect on different aspects of the process. The researcher also kept a reflective journal, where RA wrote down their thoughts and reactions as they arose.

Working in the NHS has shaped my understanding of dissociation and voice-hearing. Early in training, RA thought of dissociation as something rare or clinical. Later, RA realised how everyday it can be, like daydreaming or losing track of time. The idea of a spectrum resonated with the researcher and influenced their decision to focus on this area.

The researcher was aware that the research was approached with certain assumptions, particularly around relationships and meaning. RA was drawn to themes about attachment, validation, and how people make sense of their voices. RA remained open and discussed the data in supervision when it did not align with my expectations, but RA was aware that their own lens was always present.

Being a trainee clinical psychologist puts the researcher in a unique position, where they work within services where these experiences are often medicalised. That gave RA some sensitivity, but also blind spots. Discussing the issues with supervisors and the research team helped the researcher to identify these and revisit the data more critically.

Another factor was having seven different supervisors throughout the researcher's doctoral program. This was challenging at times, it felt like the researcher was holding too many voices at once, but it also enriched the project. Each person brought something different,

which prompted them to think more critically about their decisions and not settle for easy interpretations. In some ways, managing those voices echoed the very topic of the research.

During the analysis, the researcher occasionally felt disconnected or fragmented. That mirrored the experiences participants described and made them more aware of how difficult it can be to hold everything together. Supervision helped the researcher to ground herself and move from simply reporting what people said to offering my interpretation. This thesis is therefore a mix of participants' expertise and my sense-making.