Title

Investigating the Prevalence of Dissociative Disorders and Severe Dissociative Symptoms in First Episode Psychosis

Running Title

Dissociative Symptoms & Disorders in FEP

Authors and Affiliations

Pamela Sun[a], Mario Alvarez-Jimenez[b,c], Katherine Lawrence[a], Katrina Simpson[a], Natalie Peach[d], and Sarah Bendall[b,c]

[a] School of Psychological Sciences, Monash University, Wellington Road, Clayton, 3800, Victoria, Australia

[b] Orygen, The National Centre of Excellence in Youth Mental Health, 35 Poplar Road, Parkville, 3052, Victoria, Australia

[c] The Centre for Youth Mental Health, The University of Melbourne, 35 Poplar Road, Parkville, 3052, Victoria, Australia

[d] School of Psychological Sciences, The University of Melbourne, Grattan Street, Parkville, 3010, Victoria, Australia

Corresponding Author

Dr Sarah Bendall

Orygen, The National Centre of Excellence in Youth Mental Health

35 Poplar Road (Locked Bag 10), Parkville, 3052, Victoria, Australia

Email: Sarah.Bendall@orygen.org.au, Phone: +61 3 9342 2986

Abstract

Aim. Increasing evidence suggests childhood trauma and dissociation are associated with psychotic symptoms and disorders. Significant rates of dissociative disorders and clinical levels of dissociative symptoms are found in chronic schizophrenia. To date, no studies have examined the prevalence of these in a first episode psychosis (FEP) group. This study aimed to investigate the prevalence of dissociative disorders and symptoms in a FEP sample as well as the prevalence of severe dissociative symptoms in those with or without experiences of childhood trauma.

Methods. Sixty-six young people with FEP completed a research interview which included the Structured Clinical Interview for DSM-IV Axis I Disorders, Childhood Trauma Questionnaire and the Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised.

Results. Dissociative symptoms at clinical levels were found in 36.4% of the sample. Furthermore, 13.6% of the sample met diagnostic criteria for a lifetime dissociative disorder. Significant differences in the frequency of clinical dissociative symptoms between those with or without childhood trauma were also found.

Conclusions. Dissociative symptoms should be routinely assessed for in early intervention settings, especially in cases where childhood trauma is disclosed or suspected. Where present, dissociative symptoms should also be incorporated into subsequent case formulation and treatment planning.

Keywords

Dissociative Disorders, Early Intervention, Prevalence, Psychotic Disorder, Schizophrenia

Introduction

Traumatic experiences in childhood are now an acknowledged risk factor for psychotic symptoms and disorders (Bailey, Alvarez-Jimenez, Garcia-Sanchez, Hulbert, Barlow & Bendall, 2018; Varese, Smeets, et al., 2012). In those with a psychotic disorder, associations between dissociative experiences and childhood adversity is a common finding (Braehler et al., 2013; Ross & Keyes, 2004; Sun, Alvarez-Jimenez, Simpson, Lawrence, Peach & Bendall, 2018). Those with psychosis and a history of childhood trauma experienced significantly more severe dissociative symptoms on a self-report measure of dissociation than those without a trauma history (Perona-Garcelán et al., 2010). In research and clinical settings, dissociation has been operationalised as a disruption in the normally integrated functions of consciousness, memory, identity, cognition or perception (American Psychiatric Association (APA), 2000). Several studies have reported associations between psychotic symptoms and dissociation – particularly positive symptoms (Lysaker & LaRocco, 2008; Perona-Garcelán et al., 2012; Perona-Garcelán et al., 2010; Schäfer et al., 2012). However, the rates of severe dissociative symptoms and diagnosable dissociative disorders in those with psychosis, particularly early psychosis are less well-documented. Improving our understanding of the prevalence of dissociative symptoms and disorders in groups with psychosis has potential implications for how dissociation is assessed and managed in clinical settings.

A number of authors have suggested an overlap between groups with psychotic and

dissociative disorders (Ross, 2009; Gainer, 1994). In several early studies of those with dissociative identity disorder (DID), between 16% and 50% of patients had a prior diagnosis of a schizophrenia spectrum disorder based on case notes by treating clinicians (Putnam et al., 1986; Ross et al., 1989; Ross et al., 1990; Boon & Draijer, 1993). When using the Structured Clinical Interview for DSM-III-R, one study found that approximately 74% of the DID sample met diagnostic criteria for a psychotic disorder (Ellason et al., 1996). Patients with DID were shown to experience more Schneiderian first-rank symptoms such as voices arguing or commenting, thought insertion, withdrawal or broadcasting, delusional perceptions, made actions and somatic passivity than those with schizophrenia (Ellason & Ross, 1995; Laddis & Dell, 2012; Ross et al., 1990). Furthermore, Dorahy and colleagues (2009) compared the phenomenological characteristics of hallucinations between groups with DID, schizophrenia with a history of trauma and schizophrenia with no trauma history. When compared to either group with schizophrenia, those with DID were more likely to report voices that started before the age of 18, more than two voices, both child and adult voices and more visual, tactile and olfactory hallucinations (Dorahy et al., 2009). Overall, these findings suggest that there is a significant co-occurrence between dissociative and psychotic symptoms and disorders.

Fewer studies have examined the rates of dissociative disorders in those with schizophrenia. When utilising a clinician-administered tool of dissociation such as the Dissociative Disorders Interview Schedule (DDIS) or the Structured Clinical Interview for DSM-IV Dissociative Disorders (SCID-D), the prevalence of dissociative disorders in outpatients with schizophrenia spectrum disorder, range from 9% to 50% (Haugen &

Castillo, 1999; Moise & Leichner, 1996; Ross & Keyes, 2004; Steinberg, Cicchetti, Buchanan, Rakfeldt & Rounsaville 1994). Many outpatients with psychosis experience clinical levels of dissociative symptoms on the SCID-D such as amnesia (34% to 57%), depersonalisation (48% to 57%), derealisation (22% to 43%), identity confusion (46%), identity alteration (32% to 56%) (Haugen & Castillo, 1999; Steinberg et al., 1994). A similar prevalence of dissociative disorders (15%) was found in adult inpatients with schizophrenia when utilising the DDIS (Yu et al., 2010). For many individuals, these dissociative symptoms and disorders were unrecognised prior to the study (Haugen & Castillo, 1999; Yu et al., 2010).

The majority of these prevalence studies have examined adults with chronic schizophrenia. To our knowledge, no studies have investigated the rates of dissociative disorders and clinically significant dissociative symptoms in first-episode psychosis (FEP) using a clinician-rated measure. In the one study which compared FEP with chronic schizophrenia, the chronic group reported significantly higher levels of dissociation as measured on the Dissociative Experiences Scale (DES) than FEP (Braehler et al., 2013). Therefore, the prevalence of dissociative disorders in groups with chronic schizophrenia may also be higher than FEP. However, due to the use of the DES, which is designed as a screening tool for dissociative experiences and provides limited information for diagnosing dissociative disorders and clinical symptoms (Draijer & Boon, 1993) diagnostic rates were not reported in Braehler and colleagues (2013) study. Gaps in knowledge regarding the prevalence of dissociative symptomatology in FEP means there may be a subgroup of those with early psychosis who have unmet mental health needs.

The primary aim of the study was to investigate the prevalence of dissociative disorders and clinical levels of dissociative symptoms utilising a semi-structured, clinician-administered measure of dissociation in a FEP group. The secondary aim was to compare the prevalence of clinical dissociative symptoms in groups with or without a history of childhood trauma. Symptoms rated as moderate/severe on the SCID-D-R represent 'high symptomatology' and dissociation that is recurrent and persistent (Steinberg et al., 1994). It was hypothesised that a group with childhood trauma will have a significantly greater prevalence of dissociative symptoms rated as moderate to severe on the SCID-D-R than a group with no trauma.

Method

Participants

Seventy participants were recruited, however, four participants completed less than 50% of the assessment and were excluded from the analysis, final sample size ($n = 66$). The average age of the participants was 20.18 ($SD = 2.69$) years.

The participants were recruited from the Early Psychosis Prevention and Intervention Centre (EPPIC) at ORYGEN Youth Health (OYH) and were referred by their case managers. OYH is a public mental health service for young people aged 15 to 25 years living in the Western and North Western regions of Melbourne, Australia. EPPIC is a clinical program providing ongoing case management, psychotherapeutic and medical care to eligible FEP clients.

The inclusion criteria were having a Diagnostic and Statistical Manual of Mental Disorders (4th ed. text revised; DSM-IV-TR; APA, 2000) diagnosis of a psychotic disorder or an affective disorder with psychotic features, fluency in English, the ability to provide informed consent or parental/guardian consent for participants under the age of 18 years. Those with significant intellectual disability or who showed evidence of organic brain disease were excluded. The socio-demographic and diagnostic characteristics of the sample are presented in Table 1.

[Table 1 About Here]

Measures

Structured Clinical Interview for DSM-IV Axis I Disorders - Patient Edition (SCID-I)

The SCID-I is a semi-structured interview measure used to diagnose the presence of DSM-IV axis I disorders (First et al., 1996). The SCID-I has demonstrated good inter-rater and test-retest reliability (Lobbestael et al., 2011). The SCID-I was used to establish primary diagnosis for the participants in the study.

Childhood Trauma Questionnaire- Short Form (CTQ)

The degree of childhood trauma was measured by the CTQ (Bernstein et al., 2003), which is a 28-item, self-report questionnaire that measures an individual's experience of

abuse (physical, sexual and emotional) and neglect (physical and emotional) while growing up. The scale has demonstrated good criterion validity as well as measurement invariance across different sample groups (Bernstein et al., 2003). Participants whose scores on any CTQ subscale fell in the moderate to severe range were considered to be present for trauma.

Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised (SCID-D-R)

The SCID-D-R (Steinberg, 1995) is a clinician-administered, semi-structured diagnostic interview that systematically assesses the severity of five core dissociative symptoms (amnesia, depersonalisation, derealisation, identity confusion, and identity alteration). The character, frequency and severity of dissociative experiences are assessed with open-ended and individualised follow-up questions. Diagnosis for dissociative disorders is based on criteria outlined in the DSM-IV. Numerous studies across several countries have reported good-to-excellent inter-rater and test-retest reliability (Steinberg et al., 1990). Where dissociative symptoms were associated with substance use only, scores on the relevant symptom subscale was recoded as 'absent'. The SCID-D-R was used to diagnose dissociative disorders in this study. Participants were counted as having clinical levels of dissociation if their score on any subscale was in the moderate or severe range. The symptom severity ratings were based on lifetime experiences.

Procedure

The Human Research and Ethics Committees associated with Melbourne Health, Monash University and The University of Melbourne granted ethical approval for this study. The current study formed part of a broader study which examined childhood trauma and trauma-related symptoms such as dissociation, posttraumatic intrusions and avoidance in the context of FEP.

At the time of the study, the interviewers Ms Pamela Sun and Dr Natalie Peach were doctoral candidates completing combined research and training degrees in clinical psychology. Before the commencement of the study, the interviewers were trained by supervisor Dr Sarah Bendall to administer the semi-structured interviews (i.e., SCID-I and SCID-D-R). Through training, the interviewers were taught how to recognise and assess psychotic and dissociative symptoms and how to make informed diagnoses. Dr Bendall is an experienced clinical psychologist and researcher with over 20 years of experience. Her work over the last 15 years has focused on trauma assessment and treatment of young people with early psychosis who experience co-occurring posttraumatic stress and dissociative symptoms and disorders. For each semi-structured instrument, the interviewers initially rated case studies and discussed their scoring, ensuring that there was overall consensus in how case presentations were rated. Furthermore, both interviewers received ongoing supervision with Dr Bendall to discuss complex cases and how these should be diagnosed and rated on the semi-structured measures (e.g., the SCID-D-R).

Prior to assessment, each participant received a plain language statement about the study and provided written consent to participate. Participants were reimbursed $40 to cover expenses associated with participation.

Participants completed the research assessment which included the clinician administered interviews (SCID-I, SCID-D-R), self-report questionnaires (CTQ) and answering basic demographic questions. The measures were rated and scored post-interview.

Data Analyses

All data was analysed using Statistical Package for the Social Sciences version 24. The prevalence of dissociative disorders and symptoms were calculated through frequency counts and expressed as numbers and percentages. Statistical hypothesis testing was conducted using chi-square and two-tailed significance testing was employed with alpha set at 0.05.

Results

Prevalence of dissociative disorders

Overall 13.6% of the sample met criteria for either a past or present diagnosis of a dissociative disorder. Dissociative disorder not otherwise specified (DDNOS) was the most commonly diagnosed current disorder (6%). No diagnosis of dissociative fugue or DID were made. A full list of dissociative disorders found in the sample is presented in Table 2.

The primary diagnosis most commonly found in those with a dissociative disorder was schizoaffective disorder (55.6%) followed by schizophrenia (33.3%), and psychotic disorder NOS (11.1%).

[Table 2 About Here]

Prevalence of dissociative symptoms

In the current sample, (n = 24, 36.4%) of participants had at least one dissociative symptom at moderate to severe levels on the SCID-D-R in their lifetime. Amnesia was the symptom most frequently reported at moderate to severe levels. The rates of elevated dissociative symptoms are presented in Table 3.

[Table 3 About Here]

Childhood trauma history in dissociative disorders

The difference in the prevalence of clinical dissociative symptoms (any SCID-D-R subscale rated as moderate or severe) in those with or without childhood trauma was significant ($\chi^2(1)$ = 17.99, p < .0001). A cross tabulation of dissociative symptoms by childhood trauma is presented in Table 4.

[Table 4 About Here]

Discussion

The main findings of our study were that there was a subgroup within FEP who had a diagnosable dissociative disorder and experienced dissociative symptoms at moderate to severe levels. Our hypothesis that clinical levels of dissociation occur more frequently in groups with childhood trauma compared with no trauma was also supported. In studies that used the SCID-D to provide diagnoses, the average lifetime prevalence rates for dissociative disorders found in outpatients with schizophrenia spectrum disorder was 20% (Haugen & Castillo, 1999; Moise, 1996; Steinberg et al., 1994). A prevalence of approximately 15% has also been reported in inpatients diagnosed with schizophrenia when utilising the DDIS (Yu et al., 2010). The lifetime prevalence of dissociative disorders in our sample although lower (13.6%) is comparable to previous research.

Our finding of differences in clinical dissociation between groups with or without a history of trauma is consistent with previous research which found significantly more dissociative experiences in those with psychosis and a history of trauma compared with no trauma (Greenfield, Strakowski, Tohen, Batson, & Kolbrener, 1994; Perona-Garcelán et al., 2010). Furthermore, it lends support to the theory that dissociation is as a potentially protective reaction to early traumatic events, which can then become generalised, problematic and ingrained (Terr, 1991).

In studies of outpatient groups with schizophrenia spectrum, average rates of dissociative symptoms reported at moderate to severe levels on the SCID-D-R were 46% for amnesia, 53% for depersonalisation, 33% for derealisation, 46% for identity confusion and 44% for identity alteration (Haugen & Castillo, 1999; Steinberg et al., 1994). These rates are generally higher than those reported in the current study (amnesia, 26%; depersonalisation,

21%; derealisation, 9%; identity confusion, 11% and identity alteration, 5%) with the largest differences found for identity related symptoms and disorders. These discrepancies could be due to differences in the clinical characteristics between FEP and chronic schizophrenia. For example, those with chronic schizophrenia are more likely to have experienced additional trauma and this may contribute to increased levels of dissociation (Braehler et al., 2013). Alternatively, due to the relatively small sample sizes of this ($n = 66$) and other comparable studies of outpatients with psychotic disorders, ($n = 50$; Haugen & Castillo, 1999) and ($n = 28$; Steinberg et al., 1994) the differences in the prevalence of dissociative symptoms could be due to sampling variability.

Approximately 36% of our sample experienced at least one dissociative symptom at clinical levels. Over a quarter of the sample had moderate to severe levels of amnesia. These episodes of psychogenic amnesia were mostly described as having 'blank spaces' or 'gaps' in memory, not being able to recall periods of time from hours to years, and no recollection of activities and movements throughout the day. In some severe cases, a participant reported that their 'brain' blocked memories from them because it would be too painful if they ever 'cracked' it open and revealed the 'whole'. Another participant stated that they could not trust or believe in themselves and who they were because of missing memories. In most cases, descriptions of amnesia were able to be separated from the acute psychotic phase of the illness. However, some young people were unable to clearly recall whether their memory loss occurred in conjunction with or separately from acute psychosis.

Around 30% experienced one or both of depersonalisation and derealisation at moderate to severe levels. The most commonly reported experiences of depersonalisation

included, watching the self from a point outside the body, going through the motions of living with the real self far away, being two separate people one going through the motions and one 'observing quietly' and feeling out of control, like a 'puppet'. For derealisation, the most frequently reported experiences were perceptual alterations in the external environment such as feeling like familiar surroundings, family and friends were strange or unreal. In the majority of cases young people were able to separate experiences of depersonalisation/derealisation from their psychotic symptoms such as delusional thinking or hallucinations. Many also reported that symptoms of depersonalisation/derealisation occurred outside of the acute psychotic phase.

Moderate to severe identity-related dissociative symptoms (i.e., identity confusion and identity alteration) were reported by approximately 15% of our FEP cohort. Commonly reported experiences included being told by others that the participant 'seemed like a completely different person', 'acting or feeling like a child' and the presence of an internal 'struggle' between various aspects of their personality and who they really were. While participants identified different aspects of their personality and described 'tensions' amongst these, none of these identity states were particularly enduring or took over control of the person's actions.

This study had a number of limitations, firstly in a minority of cases, participants appeared to have difficulty recalling or describing incidences of dissociation and differentiating these from their psychosis. The semi-structured nature the SCID-D-R better allowed for these symptoms to be differentiated. Where dissociative symptoms are suspected

but not adequately recalled or observed in the initial interview, additional assessment sessions may also be beneficial.

Secondly, the prevalence of dissociative disorders recorded in our study was lower than other studies. This is especially the case for DID as none of our sample met the DSM-IV-TR diagnostic criteria for the disorder. We cannot rule out the possibility of false negatives in our sample. The interviewers were both doctoral students who had completed several practicum placements at the time of the study. However, while they received training and ongoing supervision in rating the SCID-D-R from their supervisor who is a clinical psychologist with extensive experience in assessing and treating dissociative and other trauma-related symptoms in FEP; the relative inexperience of the interviewers may have meant that some cases of dissociative disorder were missed. Additionally, as part of the inclusion criteria, participants in our study were clinically 'stablised'. There is some suggestion that the severity of dissociation might vary depending on the phase of psychosis, with higher levels associated with the acute phase of psychosis compared to stablisation (Schäfer et al., 2012). Therefore, our inclusion criteria may have screened out potential participants with co-occurring dissociative symptoms and disorders leading to a lower prevalence rate.

Another limitation is the relatively small sample size. Future studies should recruit larger samples of FEP for a more representative view of the prevalence of dissociative disorders and dissociative symptoms. The inclusion of a healthy and/or clinical control group for comparison might also be useful in future studies. Recruiting appropriate control groups can shed further light on whether the rates of dissociative disorders and symptoms are higher

in groups with psychosis when compared with other diagnostic groups. This is especially important to establish given that some researchers question the categorical distinction between psychotic (i.e., schizophrenia) and dissociative disorders (i.e., DID) (Moskowitz, 2011; Ross, 2009).

The substantial prevalence of moderate to severe dissociative symptoms suggests that such symptoms should be routinely assessed in early psychosis services especially in cases where childhood trauma is suspected or known (Bendall et al, 2018; Tong et al, 2017). Clinicians should receive support to undertake these assessments as research indicates that they are often hesitant to assess for trauma-related symptoms without formal training and guidance (Gairns et al, 2015; Bendall et al, 2018).

Information regarding the phenomenology, course, frequency and intensity of dissociative symptoms should then be used in case formulation and subsequent interventions for service users (Bendall et al, 2018). The assessment of dissociation in those FEP and a history of trauma may be particularly important given studies in groups with posttraumatic stress disorder have shown that high dissociators demonstrate a differential response to treatment protocols compared with low dissociators, thus affecting the efficacy of standard trauma-focused treatments (Lanius, Brand, Vermetten, Frewen & Spiegel, 2012). The effectiveness of trauma-informed treatments for psychosis might similarly be affected if symptoms of dissociation are not addressed appropriately.

There is some evidence that those with dissociative disorders respond well to psychotherapeutic interventions and demonstrate a reduction in dissociation and other associated symptoms such as depression, anxiety, posttraumatic stress and general distress

(Brand, Classen, McNary & Zaveri, 2009; Myrick et al., 2017). The effectiveness of an intervention targeting dissociative symptoms in those with psychosis and whether this leads to a decrease in symptoms and distress has not been trialled. Given the prevalence of severe dissociative symptoms found in this and other studies (e.g., Perona-Garcelán et al., 2010) further research into treatment approaches for those with dissociation and psychosis is warranted.

In conclusion, our study is the first to use a clinician-rated measure of dissociation to report rates of dissociative disorders and symptoms at clinical levels in a FEP cohort. The prevalence of dissociative disorders was lower but still comparable to those found in chronic schizophrenia samples. It was found that a significant proportion of the sample (36.4%) had experienced moderate to severe dissociative symptoms and such symptoms were significantly more prevalent in a group with childhood trauma compared with those with no trauma. These findings have implications for clinical practice and the management of trauma and dissociative experiences in an early psychosis setting. Clinicians should receive appropriate training to evaluate and treat dissociative symptoms. Future treatment protocols for early psychosis might benefit from including a section for addressing dissociative experiences.

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Conflict of Interest Statement

All authors declare that there are no conflicts of interests associated with this research.

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Table 1

Demographic and diagnostic information for sample (n = 66).

Descriptive		
	n	(%)
Born in Australia	59	89.4
Gender identification		
Male	28	42.4
Female	36	54.5
Transgender	2	3.0
Ethnicity		
Caucasian	46	69.7
Australian Aboriginal	2	3.0
Other	18	27.3
Occupational status		
Working/studying (full-time or part-time)	41	62.1
Diagnostic information		
Schizophrenia	12	18.2
Schizoaffective	19	28.8
Psychotic disorder NOS	9	13.6
Brief psychotic disorder	2	3.0
Schizophreniform	5	7.6
Delusional disorder	2	3.0
Substance-induced psychotic disorder	6	9.1
Bipolar I disorder with psychotic features	10	15.2
Major depressive disorder with psychotic features	1	1.5
Medication use in last 6 months	56	84.8
History of childhood trauma	35	53.0

Table 2

Frequency of dissociative disorders using the SCID-D-R (n =66)

	n	%
Present diagnosis		
Depersonalisation Disorder	3	4.5%
Dissociative Amnesia	1	1.5%
DDNOS*	4	6.0%
Past diagnosis		
Depersonalisation disorder	1	1.5%
Total lifetime prevalence	**9**	**13.6%**

Note. SCID-D-R = Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised, DDNOS = Dissociative Disorder not otherwise specified. Percentages have been rounded to one decimal place and therefore may not add up to 13.6 due to rounding error.
* One participant also had a past diagnosis of depersonalisation disorder

Table 3

Frequency of dissociative symptoms at moderate to severe levels
(lifetime)

	n	%
Amnesia	17	25.8
Depersonalisation	14	21.2
Derealisation	6	9.0
Identity Confusion	7	10.6
Identity Alteration	3	4.5

Note. Symptoms were assessed using the SCID-D-R and not associated with drug use only.

Table 4

Lifetime prevalence of (moderate to severe) dissociative symptoms in those with versus without a history of childhood trauma

	Dissociative symptoms present n (%)	Dissociative symptoms absent n (%)	Total
Childhood trauma			
Observed	21 (87.5)	14 (33.3)	35
No childhood trauma			
Observed	3 (12.5)	28 (66.7)	31
Total	24 (100)	42 (100)	66

Note. $\chi^2(1) = 17.99$, $p < .0001$

Symptom severity ratings based on criteria outlined in the Structured Clinical Interview for DSM-IV Dissociative Disorders-Revised (SCID-D-R)