The relation of basic self-disturbance to self-harm, eating disorder symptomatology and other clinical features: Exploration in an early psychosis sample

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Background and Aims: The notion of basic self-disturbance has been proposed as a core feature of schizophrenia-spectrum disorders and as an indicator of future transition to psychosis in high-risk populations. However, the relation of this notion to many clinical characteristics has not been explored. The aim of this study was: (a) to investigate the distribution of self-disturbance and other symptoms dimensions in ultra-high risk (UHR), first-episode psychosis (FEP) and healthy control groups; and (b) to explore the association of self-disturbance with a history of self-harm, suicidal attempt, eating disorder symptomatology, school bullying victimization and sexual or physical abuse.

Methods: Patients with UHR status (n = 38) or FEP (n = 26) and healthy controls (n = 33) were assessed with the Examination of Anomalous Self-Experience (EASE) and the Comprehensive Assessment of at Risk Mental States (CAARMS). The clinical-historical variables were assessed through medical records.

Results: The FEP group scored significantly higher on the EASE than the UHR group, which scored significantly higher than the healthy control group, which had a very low score. Multivariate logistic regression analyses revealed that higher EASE score was significantly associated with a history of self-harm, disordered eating and bullying victimization (but not with suicide attempts or sexual/physical abuse) after controlling for positive, negative and depressive symptoms.

Conclusion: These novel findings suggest that self-disturbance may be related to a history of school bullying victimization, self-harm and eating disorder symptomatology in patients with or at-risk of psychosis. If further confirmed, these findings are potentially relevant to clinical risk assessment and therapy.

KEYWORDS
bullying, childhood trauma, first episode psychosis, self-disorder, suicide, ultra-high risk
1 | INTRODUCTION

In recent years, there has been a renewed interest in the study of psychopathology. It has been argued that treatment, nosological and patho- aerobic research would benefit from more fine-grained assessments targeting subjective disturbances (Nelson, Hartmann, & Parnas, 2018; Parnas & Bovet, 2015; Stanghellini & Broome, 2014; Stanghellini & Fiorillo, 2015). A prominent line of research has, over the last two decades, empirically investigated the concept of a basic disturbance of the self (Parnas & Henriksen, 2014). This notion was articulated, in various terms, as a core feature of schizophrenia in classic texts on this disorder (Bleuler, 1950; Jaspers, 1963; Kraepelin, 1919; Schneider, 1959). In the recent approach, the term “self” refers to the first-person perspective wherein all experience (perceptions, memories, fantasies, etc.) articulates itself as my field of experience (Zahavi, 2005). This tacit self-awareness is at the root of existing as a self-coinciding, temporally stable subject and agent of action. Such sense of “mineness” or “myself” is normally not an object of conscious awareness but simply an intrinsic and automatic feature of experience. This concept of self is described as basic (or “minimal” or “core self”) as it acts foundational for higher levels of identity or “narrative selfhood” developed in social and linguistic interactions (Zandersen & Parnas, 2019).

Sass and Parnas proposed the notion of self-disturbance (aka “minimal” or “basic self-disturbance”), which consists of two inter-dependent aspects: hyperrelexivity and diminished self-affection (Sass & Parnas, 2003). Hyperrelexivity refers to an exaggerated self-consciousness in which persons experience themselves, or processes and experiences normally inhabited as a part of oneself, as if these experiences were a kind of external object. For example, patients describe that thoughts are experienced “as if” being physically localized to a specific part of the head or brain (Parnas & Handest, 2003); or sensations normally tacit, like the act of breathing, become continually attended to (Nelson, Sass, & Skodlar, 2009). The complimentary diminished self-affection (or diminished self-presence) describes a diminished sense of first-person perspective infusing experience. For example, patients describe that thoughts appear anonymous or lacking mineness, the body or some of its parts are experienced as strange, alien or lifeless, perhaps with a sense of distance or disconnection between the mind and the body, or their sense of selfhood is ephemeral “as if he was a thing, a refrigerator, and not a human subject” (Parnas et al., 2005, 245).

In empirical research, basic self-disturbance has been assessed with the Examination of Anomalous Self-experience (EASE) (Parnas et al., 2005), an instrument to guide a semi-structured interview. Empirical studies from different groups and on different samples show a selective aggregation of self-disturbance in schizophrenia and schizotypal disorder compared to bipolar disorder (Haug et al., 2012; Parnas, Handest, Sæbye, & Jansson, 2003) and other psychiatric disorders (Nelson, Thompson, Chanen, Amminger, & Yung, 2013; Nordgaard & Parnas, 2014; Raballo, Sæbye, & Parnas, 2011; Rasmussen, Nordgaard, & Parnas, 2019). Self-disturbance correlates moderately with positive and negative symptoms (Koren et al., 2013; Nordgaard & Parnas, 2014; Raballo et al., 2018) and predicts transition to the schizophrenia spectrum (Parnas, Carter, & Nordgaard, 2016; Parnas et al., 2011) (for a review, see Parnas & Henriksen, 2014). Self-disturbance also possesses trait-like characteristics. Two recent studies demonstrated stability both in degree and patterns of self-disturbance across periods of 5 years (Nordgaard et al., 2016; Nordgaard, Nilsson, Sæbye, & Parnas, 2017).

Recent decades have seen comprehensive research and clinical effort in early detection and treatment of psychosis aiming to prevent or ameliorate illness progression through early intervention (Fusar-Poli, McGorry, & Kane, 2017; McGorry, Killackey, & Yung, 2008). Importantly, patients with first-episode psychosis (FEP) or ultra-high risk (UHR) status are characterized by a wide range of clinical concerns beyond early psychotic or attenuated psychotic symptoms. This includes a high degree of co-morbidity, suicidality and difficulties with interpersonal relationships (Fusar-Poli et al., 2013). Self-disturbance has been observed in at-risk youth populations (Koren et al., 2013; Raballo et al., 2018; Raballo et al., 2016) and predicted transition to psychosis in an ultra-high risk population (Nelson, Thompson, & Yung, 2012). However, little is known about how self-disturbance relates to other important clinical characteristics in FEP or UHR groups. A study of 49 patients with early schizophrenia found that self-disturbance correlated with suicidality (Haug & Melle et al., 2012) and childhood trauma among female patients (Haug et al., 2015). Some exploratory literature suggests that self-disturbance may interfere with individuals’ capacities to meaningfully engage with interpersonal settings such as school or psychotherapy (Henrikse & Nilsson, 2017; Nelson et al., 2009; Stanghellini & Lysaker, 2007). The association of self-disturbance to bullying victimization (possibly related to such difficulties with interpersonal engagement) has not been investigated. Likewise, the possibility of self-disturbance being related to eating disorder symptomatology, not uncommon in early psychosis patients, has not been explored to date. However, eating disorders often clinically appear to involve an objectifying attention to the body, also involved in manifestations of self-disturbance.

This study aimed to investigate self-disturbance, assessed with the EASE, in ultra-high risk (UHR), first-episode psychosis (FEP) and healthy control groups. We expected to replicate previous findings of a gradient regarding EASE scores: FEP > UHR > healthy controls (Nelson et al., 2012). Furthermore, this study explored the association of self-disturbance to self-harm, suicidal attempt, eating disorder symptomatology, school bullying victimization, and sexual or physical abuse. Based on the literature and clinical considerations, we hypothesised that self-disturbance would be positively associated with these clinical-historical characteristics.

2 | METHODS

2.1 | Sample

This research was part of a baseline clinical assessment in a larger longitudinal study (Self and Neurocognition Study; SANE [Nelson, Lavoie, et al., 2018]) designed to investigate the relationship between basic self-disturbance and neurocognitive and neurophysiological variables.
Sixty-seven individuals aged 15 to 24 with a status of UHR or FEP were recruited from outpatient clinics at Orygen Youth Health (OYH), a mental health service for youth located in the north-western metropolitan region of Melbourne, Australia. Referrals to OYH are accepted from a range of sources, including general practitioners and other primary care services, educational support services, drug and alcohol services, carers, families and young people themselves. UHR and FEP status was determined according to well-established criteria (Yung et al., 2003). The SANE study only included FEP patients with a psychotic disorder within the schizophrenia-spectrum (schizophrenia, schizophreniform disorder, schizoaffective disorder). One of the initial 67 patients withdrew consent and two UHR patients were excluded due to incomplete baseline measurements. Accordingly, the final clinical sample contained 26 FEP and 38 UHR patients.

Thirty-three individuals aged 15 to 24 were recruited through online advertising to be included in a healthy control group. Exclusion criteria were current or previous UHR status or any psychotic- or affective disorder. In both samples, IQ < 70 and/or lack of proficiency in English were exclusion criteria.

Participants were included between November 2014 and June 2017. The study was approved by the local research and ethics committee.

2.2 | Assessment: Clinical symptomatic

The Comprehensive Assessment of at Risk Mental States (CAARMS) (Yung et al., 2005) was used to confirm UHR and FEP status, as well as to assess positive, negative and depressive symptom dimensions, as in previous research (Hartmann et al., 2017). Functioning was assessed through the Social and Occupational Functioning Scale (SOFAS) (Goldman, Skodol, & Lave, 1992). The comprehensive assessment also included other psychopathological instruments and neurocognitive tests not reported here. DSM-IV diagnoses were established with the Mini International Neuropsychiatric Interview (MINI) (Sheehan et al., 1998).

Self-disturbance was assessed with the Examination of Anomalous Self-Experience (EASE) (Parnas et al., 2005). The EASE is the gold standard for assessing self-disturbance and consists of 57 items divided into five domains: Cognition and stream of consciousness, self-awareness and presence, bodily experiences, demarcation/transitivism and existential reorientation. The EASE is assessed in a semi-structured interview and has demonstrated high internal consistency and inter-rater reliability (Moller, Haug, Raballo, Parnas, & Melle, 2011; Raballo & Parnas, 2012). As in our previous studies (Nelson et al., 2013; Nelson et al., 2012), we rated EASE items according to the five-point scale, which rates lifetime presence including severity/frequency (Parnas et al., 2005), and summed the main items for a total score.

2.3 | Medical file extraction

A clinical audit tool (available from the authors upon request) was used to code aspects of clinical presentation from medical records. These records encompassed the entire treatment period at OYH varying between 6 months and 2 years based on clinical needs. Records contained progress notes detailing case management and psychiatric sessions, global summaries completed every 3 months named “care plans”, and end of treatment discharge reports. The variables of sexual/physical abuse, self-harm and previous suicide attempt were assessed systematically in all patients at the initial clinical assessment at OYH. However, the variables of school bullying victimization and eating disorder symptomatology were not systematically assessed in this clinical assessment. These variables were registered in the medical records if detected by the clinicians at some point during the initial clinical assessment or over the rest of the patient’s treatment period. Besides the variables included in this study, information regarding reasons for referral and treatment were also collected. The analysed variables were all coded binary as “present” or “not present” on a lifetime basis.

2.4 | Procedure

Clinical assessments were conducted by a research assistant (E.L.) trained and supervised in use of the EASE by a senior clinical psychologist with extensive research experience with the EASE (B.N.). Baseline assessment occurred within 8 weeks of participants’ entry to the clinic. The clinical-historical data were extracted from medical files by D.R.

2.5 | Data analysis

Analysis of variances were used for comparison of the EASE total score, SOFAS score and CAARMS positive, negative and depressive symptom scores between the FEP, UHR and control groups.

Multivariate binary logistic regression analyses were used to explore whether each of the selected clinical-historical variables (self-harm, suicidal attempt, eating disorder symptomatology, school bullying victimization and sexual or physical abuse) was predicted by the EASE total score, when controlling for positive, negative and depressive symptom scores. In the regression analyses, FEP and UHR patients were combined to increase statistical power. This approach, which has previously been adopted (Langer et al., 2017), is feasible given similarity between these groups with regard to demographic characteristics and theoretically acceptable given both groups constitute an early psychosis clinical population, albeit with differing severity of positive psychotic symptomatology. The healthy controls were excluded from regression analyses since they do not constitute a clinical group and no medical file data were available for them.

For all analyses, level of significance was $P < .05$. All analyses were conducted with SPSS version 22.

3 | RESULTS

We did not find any significant differences between the groups regarding socio-demographic and clinical characteristics (Table 1), except for a small age difference between the UHR and control
groups. Table 2 shows the distribution of EASE scores and other symptoms dimensions in UHR, FEP and healthy control groups. As expected, the EASE score was highest in the FEP and lowest in the controls with intermediate values in the UHR. These between group differences were statistically significant.

The multivariate binary logistic regression analyses of the relation between EASE total score and a history of self-harm, suicidal attempt, disordered eating symptomatology, physical or sexual abuse or school bullying victimization, among the FEP and UHR patients, are shown in Table 3. Self-harm, symptoms of disordered eating and bullying victimization were positively associated with EASE total score ($P < .003$). A history of self-harm was also negatively associated with the level of positive symptoms ($P = .04$). History of suicidal attempt was not significantly related to EASE score ($P = .057$) but significantly related to depressive symptoms ($P = .04$). History of abuse was also not significantly associated with EASE score.

4 | DISCUSSION

The novelty of this study is to investigate how self-disturbance relates to particular clinical characteristics and life history events in a sample of UHR and FEP patients. As hypothesised, self-disturbance showed a positive association with a history of self-harm, school bullying victimization and eating disorder symptoms above and beyond positive, negative and depressive symptoms. According to our knowledge, these associations have not previously been investigated. Furthermore, the study replicates previous findings showing that the EASE total score is significantly higher in FEP patients than in UHR patients (Nelson et al., 2012; Raballo et al., 2018), but self-disturbance is substantially and significantly present in the UHR group compared to healthy controls, which had a very low EASE score (Nelson et al., 2012).

Self-disturbance predicted a history of eating disorder symptoms. In the mid-20th century, eating disorder symptoms (and self-harm) were described as one of numerous "pseudo-neurotic" manifestations among schizophrenia-spectrum patients (Hoch & Polatin, 1949; O’Connor, Nelson, Walterfang, Velakoulis, & Thompson, 2009; Zander, Henriksen, & Parnas, 2018). However, the relationship between eating disorders and psychosis is under-researched (Morylowska-Topolska et al., 2017). A large clinical study found symptoms of eating disorders to be very common in chronic schizophrenia but rarely reaching the threshold of a comorbid eating disorder (Lyketsos, Paterakis, Beis, & Lyketsos, 1985). Whereas disturbances of broader notions of the concept of self have been discussed regarding
anorexia nervosa (Amianto, Northoff, Abbate Daga, Fassino, & Tasca, 2016; Legrand, 2010), a possible relationship between eating disorder symptoms and disturbances of the basic self appears unaddressed in the literature. On the basis of the phenomenology, one could speculate that rigid and restricting eating behaviours as well as distortions of body image, in some individuals, could be related to a hyperreflexive experience of the body. These symptoms could also involve compensatory aspects attempting to reconnect with a sense of bodily presence, as well as enforcing a narrative identity when the basic self is unstable and challenged.

A high level of self-disturbance was positively associated with a history of self-harm. While there are many theories of why individuals engage in self-harm and self-reported motivations are diverse and complex (Nock, 2014), two common reasons given are “to relieve feeling numb or empty” and “to feel something, even if it was pain” (Nock & Prinstein, 2004). Such statements can relate to several kinds of psychopathology, but in this context, the diminished first-person character of experience characterizing self-disturbance has particular relevance (eg, experiences described in the EASE bodily experiences domain such as “the body or some of its parts are perceived as strange, alien, lifeless or isolated” [item 3.3] and “a feeling that the mind and body do not fit or belong together” [item 3.4]). Considering this, self-harm may (for some individuals) be a behaviour attempting to reaffirm or reconnect with bodily presence. The relevance of self-disturbance (especially the bodily experiences), as a clinical risk marker of self-harm and to therapy addressing such behaviours, appears worthy of attention in future research.

The positive association of self-disturbance to a history of suicidal attempts was not significant ($P = .057$) when adjusted for positive, negative and depressive symptoms. This negative finding could be related to the limited sample size. A recent study with a larger sample of 100 adolescents from the general population found that self-disturbance was associated with suicidality over and above depressive and attenuated positive and negative symptoms (Koren et al., 2017).

We did not find an association between previous sexual or physical abuse and self-disturbance. A previous study of 55 young patients with early schizophrenia reported a significant moderate correlation between Childhood Trauma Questionnaire—Short Form scores and

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Binary logistic regression with presence/absence of clinical-historical characteristics as outcome variable in the first-episode psychosis + ultra-high risk groups combined</th>
</tr>
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<tbody>
<tr>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td>Self-harm</td>
<td></td>
</tr>
<tr>
<td>Positive symptoms</td>
<td>0.859</td>
</tr>
<tr>
<td>Negative symptoms</td>
<td>0.970</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>1.054</td>
</tr>
<tr>
<td>Self-disturbance</td>
<td>1.083</td>
</tr>
<tr>
<td>Suicidal attempt</td>
<td></td>
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<tr>
<td>Positive symptoms</td>
<td>1.036</td>
</tr>
<tr>
<td>Negative symptoms</td>
<td>0.992</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>1.149</td>
</tr>
<tr>
<td>Self-disturbance</td>
<td>1.021</td>
</tr>
<tr>
<td>Eating disorder symptoms</td>
<td></td>
</tr>
<tr>
<td>Positive symptoms</td>
<td>0.927</td>
</tr>
<tr>
<td>Negative symptoms</td>
<td>1.018</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>1.179</td>
</tr>
<tr>
<td>Self-disturbance</td>
<td>1.055</td>
</tr>
<tr>
<td>History of physical or sexual abuse</td>
<td></td>
</tr>
<tr>
<td>Positive symptoms</td>
<td>1.016</td>
</tr>
<tr>
<td>Negative symptoms</td>
<td>0.975</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>1.018</td>
</tr>
<tr>
<td>Self-disturbance</td>
<td>0.994</td>
</tr>
<tr>
<td>History of bullying victimization</td>
<td></td>
</tr>
<tr>
<td>Positive symptoms</td>
<td>0.908</td>
</tr>
<tr>
<td>Negative symptoms</td>
<td>0.956</td>
</tr>
<tr>
<td>Depressive symptoms</td>
<td>1.089</td>
</tr>
<tr>
<td>Self-disturbance</td>
<td>1.046</td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval; df, degrees of freedom; OR, odds ratio.
EASE scores in women, but not in men (Haug et al., 2015). In order not to overlook gender as a possible mediating factor, we ran a post hoc analysis adjusted for gender with non-significant results.

Finally, we report an association between self-disturbance and school bullying victimization. This relation has not previously been investigated, but research has shown an association between the severity of psychotic symptoms and experiences of bullying victimization (Kelleher et al., 2013). Self-disturbance is usually reported as being experienced since adolescence or even childhood (Koren, Lacoua, Rothschild-Yakar, & Parnas, 2016; Koren et al., 2013; Raballo et al., 2018), and it is widely argued that self-disturbance has particular interpersonal consequences (Henriksen & Nilsson, 2017; Nelson et al., 2009; Stanghellini & Lysaker, 2007). It is possible that individuals with experiences such as unstable identity and diminished common sense (“a lack of automatic, pre-reflective grasp of the meaning of everyday events, situations, people and objects” [EASE 2.12]) are more likely to be perceived as different or strange, increasing estrangement or bullying from peers. It is also possible that bullying victimization itself exacerbates self-disturbances, perhaps by weakening the already fragile self-world relationship.

This study has a number of limitations. The sample size is limited. Accordingly, we cannot rule out the possibility of type II error. The analyses regarding the association between self-disturbance and the clinical-historical characteristics occurred across UHR and FEP groups combined, chiefly to increase statistical power. A majority of UHR patients will not progress to a psychotic disorder, but experience only attenuated psychotic symptoms. Also, the data collected through audit of medical files contain retrospective data and, in daily clinical work, these are not collected with the same systematized rigour as in a research procedure. Importantly, the variables of school bullying victimization and eating disorder symptoms were not systematically assessed in the clinical assessment but reported if clinicians detected these variables during the assessment or treatment period. This may have introduced a bias in the recording of this information. Many variables were dichotomized—binary measures provide less-fine-grained information than continuous measures might. In summary, this study generates ideas for future hypothesis testing but, due to its exploratory nature and modest sample size, replication is important.

5 | CONCLUSION

This study replicates previous findings of a significantly higher level of self-disturbance in FEP patients compared to UHR patients, although the level of self-disturbance was substantial among the UHR patients. The healthy controls had a very low level of self-disturbance, significantly lower than the UHR group. Furthermore, the study presents novel findings indicating that self-disturbance is related to a history of self-harm, eating disorder symptoms and bullying victimization in individuals with FEP or UHR status. Our findings need replication in larger samples and with validated, dimensional instruments. If confirmed, these findings could be relevant to risk assessment and other clinical work addressing self-harm and eating disorder symptoms in these groups, especially psychotherapy, where an understanding of the patient’s lived experience is crucial.

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