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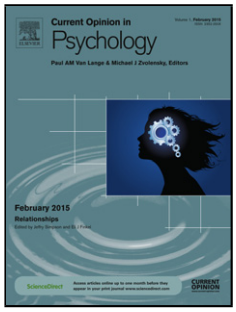

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Psychotic Symptoms in Borderline Personality Disorder: Developmental aspects

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Abstract

Even though the borderline concept has historically been intertwined with psychosis, psychotic symptoms in people with borderline personality disorder (BPD) have long been marginalized as somehow not real, transient, or "pseudo" in nature. Dispelling this myth, we summarize recent research indicating that (a) psychotic symptoms in general and auditory verbal hallucinations in particular in people with BPD show more similarities than differences with those symptoms in people with psychotic disorders, and (b) that the co-occurrence of BPD and psychotic symptoms is a marker of severe psychopathology and of risk for poor outcome (e.g., suicidality). We propose the period from puberty to the mid-20s, when both BPD and psychotic features usually emerge for the first time, constitutes a critical time window for early intervention to prevent the development of severe mental disorders in the future. Implications for the treatment of psychotic symptoms in BPD and future research directions in this field are discussed.

Keywords: Borderline Personality Disorder, Psychosis, Schizophrenia, Auditory Verbal Hallucinations, Voices

1. The role of psychotic symptoms in the development of the borderline personality disorder concept and classification

Historically, the term "borderline state" or "borderline patient" described a clinical presentation that had both a psychotic and neurotic appearance [1]. For a long time, substantial conceptual confusion existed, with some viewing "borderline" as either a form of schizophrenia (e.g., latent, pseudoneurotic or borderline schizophrenia) or a disorder of personality structure (i.e., Kernberg's borderline personality organization) [2]. With the introduction of the third revision of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) [3], the borderline personality disorder (BPD) diagnosis officially entered the psychiatric classification system. Here, it was separated from schizotypal personality disorder (SPD), which was thought to belong to the schizophrenia spectrum [2], and psychotic symptoms were, despite considerable controversy, omitted from the BPD criteria list [4]. It was not until the fourth revision of the DSM that psychotic symptoms in the form of "transient, stress-related paranoid ideation or severe dissociative symptoms" were added as an additional criterion to the BPD diagnosis [5]. The DSM BPD criteria have remained unchanged in section II of the current fifth revision [6]. In the alternative model of personality disorders in section III of the DSM-5, psychotic symptoms are not listed as a central feature of BPD, but the trait "psychoticism" (i.e., cognitive and perceptual dysregulation) can be specified when appropriate [6].

The BPD diagnosis only entered the International Classification of Diseases and Related Health Problems in 1992 in the 10th edition (ICD-10) [7] as the borderline subtype of emotionally unstable personality disorder and has never included psychotic experiences. The forthcoming eleventh edition of the ICD will adopt a dimensional rating of personality dysfunction, with a borderline pattern descriptor applied when relevant, which reads in part "…transient dissociative symptoms or psychotic-like features in situations of high affective arousal." [8].

The last two decades has seen an increasing number of studies of psychotic symptoms in BPD that have used larger samples than earlier, with more appropriate comparison groups, and standardized tools to assess psychotic symptoms. In this review, we will summarize this new research to evaluate the validity of the long-standing notion that psychotic symptoms in BPD are stress-dependent, transient, limited to paranoia, and "atypical" or "quasi-psychotic" (i.e., circumscribed, short-lived, and non-bizarre) [9] or even "factitious" [10]. Complementing recent reviews on this topic [e.g., 11–15], we will include both studies of adults and youth (i.e., adolescents and young adults) samples. In addition, we will propose a developmental framework for the co-occurrence of BPD and psychotic symptoms in youth, discuss implications for treatment, and identify key questions for future research.

2. What we know about psychotic symptoms in borderline personality disorder

2.1. Psychotic symptoms in BPD are manifold and phenomenologically similar to those in schizophrenia spectrum disorders

Auditory verbal hallucinations (AVH) are the most common form of psychotic symptoms among patients with BPD [16–18]. Studies in adult samples have demonstrated that 29%-50% of patients report AVH [13,16,19]. These symptoms occur frequently and are perceived as critical, controlling, distressing, malevolent, omnipotent, and of higher social power than the person with BPD [17,19–21]. Studies comparing psychotic symptoms in groups of patients with schizophrenia or with BPD have reported no group differences in most characteristics of AVH, including frequency, duration, location (i.e., inside or outside the head), loudness, or conviction [16,18,22]. However, patients with BPD have reported their voices to be more distressing, more negative in content [16] and less disruptive to life [22]. Moreover, they felt more controlled by their voices [18] and had greater emotional resistance to them [23]. No group differences have been found in the prevalence of commenting voices, whereas dialoguing voices have been found to be significantly more present in patients with schizophrenia (71%), compared with patients with BPD (40%) [18]. AVH in patients with BPD have been found to emerge at a younger age (during adolescence) than in patients with schizophrenia (during early adulthood) [18,22].

Adult patients with BPD experience a wide range of other psychotic symptoms in addition to AVH, including hallucinations (11% visual hallucinations, 8% gustatory hallucinations, 17% olfactory hallucinations, 15% tactile hallucinations [19]), thought insertion (100%), thought blocking (90%), being influenced by another agent (70%) [21], dissociation (17-90%) [17,21], delusions (20%) [17], and ideas of reference (27%) [17]. Compared with patients with schizophrenia, patients with BPD report less delusions, conceptual disorganization and negative symptoms [e.g., blunted affect or social withdrawal; ,16,18]. Hallucinations in patients with BPD are associated with delusions, but not negative symptoms or disorganization [19].

Only a few studies have investigated the influence of stress on psychotic symptoms in BPD. Niemantsverdriet et al. [19] reported a positive correlation between the severity of hallucinations and the number of current life stressors. Using experience sampling technique, Glaser and colleagues [24] found patients with BPD experienced the strongest psychotic reactivity to daily life stress compared with patients with a psychotic disorder or a cluster C personality disorder and healthy controls, and that psychotic reactivity in BPD was not limited to paranoia, but involved a broader range of psychotic experiences, including hallucinations.

While most studies examined adult samples, AVH and other psychotic symptoms have recently been explored in outpatient youth (15 to 25-year olds) with either a first manifestation of BPD or schizophrenia spectrum disorder. These results confirmed those from the adult literature. AVH experienced by youth with BPD were indistinguishable from AVH occurring in youth with schizophrenia spectrum disorder with regard to physical (frequency, duration, location and loudness), cognitive (beliefs regarding origin of voices, disruption to life and controllability), and emotional characteristics (negative content and distress) [25]. However, youth with BPD + AVH had less severe delusions and difficulties in abstract thinking compared with those with schizophrenia spectrum + AVH [25]. Interestingly, youth with BPD held more negative beliefs about their voices in terms of supremacy of voices than those with schizophrenia spectrum disorder and these beliefs were closely linked to depression [26].

2.2. Psychotic symptoms in BPD are an indicator of illness severity and poor outcome

Studies in adults with BPD have found that AVH are associated with a higher number of BPD criteria, more co-occurring mental disorders [19], more symptoms of depression and anxiety, feelings of loneliness and schizotypy [27], and a higher incidence of suicidal plans and attempts in the month prior to study and a higher number of hospital admissions over two years after baseline [28]. Both visual and auditory hallucinations in patients with BPD are associated with a 2.23-fold increase in suicide attempts [29], and both hallucinations and delusions in patients with BPD are significant predictors of a quicker readmission to acute psychiatric inpatient care after discharge [30]. Finally, co-occurring psychotic disorder in patients with BPD constitute a significant predictor of referral to a specialized psychiatric department for severe mental disorders after termination of the treatment at a specialized outpatient clinic for personality disorders, after adjusting for other co-occurring disorders [31].

A recent study of 15 to 18-year olds found a positive association between psychotic symptoms as assessed by the Youth Self Report and BPD severity, defined as the number of DSM-IV criteria, after adjusting for other psychopathology and functional impairment [32]. In another study of 15-25 year olds with full-threshold BPD, those who experienced AVH showed higher levels of psychopathology (i.e., self-harm, paranoid ideation, dissociation, anxiety and stress), compared with those who did not [25]. These results add to the adult literature suggesting that patients with both BPD and psychotic symptoms belong to a subgroup with a more severe form of BPD.

2.3. Summary

Research over the last two decades has shown that AVH occur frequently in individuals with BPD, are not exclusively transient but can also be prolonged, are more notable for their similarities with AVH in schizophrenia than for any differences, and tend to intensify when the person is under stress in the same way that positive symptoms increase with stress in psychotic disorders. Delusions are also common, but patients with BPD differ from those with schizophrenia in their lack of negative psychotic symptoms and disorganization. In BPD, psychotic symptoms are associated with greater distress, co-occurring

psychopathology, suicidal risk, and hospital readmission, suggesting that they should be seen as a marker of illness severity.

3. Adolescence and young adulthood is a sensitive time period for the emergence of both BPD and psychosis

Adolescence and young adulthood is the time period when both BPD features [33,34] and psychotic symptoms [35] usually emerge for the first time. At this early stage it can be difficult to differentiate whether psychotic symptoms are inherent to BPD or indicate an increased risk for the development of a psychotic disorder. While the majority of studies have investigated the co-occurrence of psychotic symptoms and BPD in adults, there is very limited research examining associations of BPD and subthreshold or threshold psychotic disorders. In the following section we will summarize the few prospective studies that have examined the association between BPD and subsequent psychosis, and then propose a developmental framework for the co-occurrence of BPD and psychotic symptoms in youth that might inform treatment and future research.

A few studies have investigated the predictive value of BPD assessed at baseline in individuals at clinical high risk for psychosis (CHR) for transition to a manifest psychotic disorder [36–39]. BPD neither increased nor decreases the risk for transition. In those individuals who made the transition, the presence of a baseline BPD diagnosis or BPD features was unrelated to the type of psychotic disorder diagnosis. A recent study investigated the psychopathological outcomes of adolescents with BPD using path analysis to control for the associations between all outcomes. BPD symptoms assessed at age 11-12 years were related to psychotic symptoms at age 12, which were linked to psychotic symptoms at age 18 years, with depressive symptoms at 12 years and hypomanic symptoms at 22-23 years. Psychotic disorders were not included as outcome variable in this study, as their frequency was too low [40]. Based on these findings, it could be cautiously concluded that youth with BPD and psychotic symptoms are at risk of a wide range of future psychopathologies, including both non-psychotic and psychotic disorders (i.e., multifinality or heterotypic continuity as a developmental pathway).

Caspi et al. [41] have proposed that one general underlying dimension, the "p" factor, summarizes an individual's vulnerability to develop any form of psychopathology, and that psychotic symptoms are at the p factor's pinnacle. Any individual with a strong vulnerability for general psychopathology might, if severe enough, experience psychotic symptoms, regardless of the presenting diagnosis. Incorporating this model into personality pathology, Sharp [34,42] suggests that adolescent BPD symptoms might be understood as a manifestation of the confluence of internalizing and externalizing psychopathology, on a severity pathway that leads to subsequent major mental disorders, including psychotic disorders. Based on these considerations and the research reviewed above, we propose BPD is a severity factor, and so is psychosis. If they co-occur, they act synergistically in determining prognosis. Young people having both BPD and psychotic symptoms should be considered as having severe psychopathology and being at high risk for a wide range of poor outcomes, including the development of another serious mental disorder (without being specific to any particular disorder) as well as outcomes beyond the narrow concept of diagnosis (e.g., suicidality, severe and persistent functional impairments).

4. Clinical considerations

The evidence summarized in this review has important clinical implications. First, as psychotic symptoms in BPD are not limited to stress-related, transient paranoid ideation, the BPD criteria in the ICD and DSM are likely to require revision. The historical narrative that psychotic symptoms in BPD are somehow not real, transient, or quasi in nature is a disrespectful myth that is inconsistent with the current evidence regarding the subjective experience of patients. Second, clinicians should routinely enquire whether patients with BPD experience AVH or other psychotic symptoms. When present, AVH should be considered as legitimately as such a report in a patient with another DSM-5 psychotic disorder. Labels such as "psuedohallucinations" or "quasi-psychotic" simply add to the stigma already experienced by those with BPD and should, thus, be avoided. Third, it is a false dichotomy to consider that such patients have *either* BPD *or* a psychotic disorder. In fact, they have both. As in depression and bipolar disorder, psychotic symptoms are simply a marker of more severe disorder. Fourth, while hallucinations

(particularly AVH) and delusions are common among people with BPD, co-occurring negative symptoms and disorganized thought are uncommon and might indicate the presence of an even more extensive illness. Finally, when planning treatment, clinicians should take into account that individuals with BPD and psychotic symptoms are at a greater risk of developing a range of negative outcomes, including suicide.

5. Future directions in the study of psychotic symptoms in borderline personality disorder

The evidence presented here has reignited the debate about the validity of the BPD concept and its questionable distinction from the schizophrenia spectrum [43]. Future research should not become bogged down in such spurious categorical distinctions. Studies should recognize both the dimensional and dynamic nature of psychopathology and evolving phenotypes across the transition from childhood to adulthood by adopting a clinical staging approach. Such an approach needs to incorporate the measurement of personality pathology [44,45] in order to focus on etiological factors of and treatment options for psychotic symptoms in BPD.

Except for one study investigating sensory gating deficiencies (a candidate mechanism of AVH in patients with schizophrenia) in adults with BPD and AVH [46], there are few studies examining neural correlates of psychotic symptoms in BPD [47]. In addition, the role of childhood adversity and dissociation in the development of psychotic symptoms in BPD needs clarification. While there is robust evidence for an indirect link between childhood adversity and both delusions and hallucinations, via dissociation, in psychotic disorder [e.g., 48,49], inconsistent findings have been reported in BPD [11,12,15,16,18,19,25].

To date, no randomized controlled trial (RCT) has investigated the efficacy of antipsychotic medication or psychological interventions for AVH (or any other positive symptom) in BPD [15], measuring AVH as a primary outcome and using standardized measures to assess AVH employed in RCTs for psychotic disorders [15,50]. Yet there is evidence that youth with both first-episode psychosis and co-occurring BPD have poorer access to standard treatment, including guideline concordant

antipsychotic medication prescription [51]. A first RCT on ariprirazole in youth with BPD and AVH in currently underway [50]. In addition, there is preliminary evidence suggesting that both negative beliefs about voices [20,26] and the self [52] contribute to emotional distress in BPD who experience AVH, and could, thus, become the target for psychological therapies, such as cognitive behavioral therapy or interventions addressing the self-experience at the narrative level [53,54].

Declaration of interest

None.

Conflict of interest

None.

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* of special interest

** of outstanding interest

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