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Psychotic symptoms with sexual content in the "ultra high risk" for psychosis population: Frequency and association with sexual trauma

Andrew Thompson [a,b,*], Barnaby Nelson [a,b], Catherine McNab [a], Magenta Simmons [b], Steven Leicester [a], Patrick D. McGorry [a,b], Andreas Bechdolf [a,b,c], Alison R. Yung [a,b]

[a] The PACE Clinic, ORYGEN Youth Health, Parkville, Melbourne, Australia
[b] ORYGEN Youth Health Research Centre, Centre for Youth Mental Health, University of Melbourne, Australia
[c] Department of Psychiatry and Psychotherapy, University of Cologne, Germany

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ABSTRACT

Individuals at "ultra high risk" (UHR) for psychosis have been found to experience high rates of sexual trauma. An aetiological role for sexual trauma has been proposed for psychotic disorders and may influence psychotic symptom content. We aimed to investigate the relationship between previous sexual trauma and reported psychotic-like experiences, in particular psychotic symptoms with a sexual content in a UHR sample. We investigated the prevalence of "attenuated" or "subthreshold" psychotic symptoms with a sexual content in a consecutive series of patients recruited to a specialist UHR clinic. Patient's experience of general and sexual trauma was rated separately using a trauma questionnaire based on the list of events qualifying as traumas under DSM IV. The sample consisted of 92 patients, 14 (15.2%) had experienced an attenuated psychotic symptom with sexual content. The most common symptom was overvalued ideas/delusions of being watched in the shower/toilet or undressing. A considerable proportion of the sample (36.2%) had experienced sexual trauma (sexually molested or raped). Presence of attenuated psychotic symptoms with sexual content was related to history of previous sexual trauma (OR 7.17, $P<0.01$). This relationship remained significant when other traumatic experiences, PTSD diagnosis, age and sex were adjusted for. Further research into this relationship with regard to outcome and treatment is warranted.

1. Introduction

There has been renewed interest in the role of trauma in the development of psychotic disorders (Bendall et al., 2008; Morgan and Fisher, 2007; Read et al., 2005), with some investigators suggesting a causal role for trauma in the aetiology of psychosis (Morrison et al., 2003; Read et al., 2001, 2005). Previous trauma experience in individuals with schizophrenia is also associated with poor long term functioning (Lysaker et al., 2005). Sexual trauma has been a particular focus, with high levels reported by people with psychotic disorders (Bendall et al., 2008), a relationship between increased frequency of delusions and hallucinations, and a history of traumatic events in patients with an established psychotic disorder (Hammersley et al., 2003; Lysaker et al., 2005; Lyskaer and Larocco, 2008; Schenkel et al., 2005; Whitfield et al., 2005). Authors have hypothesised psychological processes linking trauma and psychosis. For example Allen and Coyne suggest trauma induced dissociative symptoms affect a persons' internal anchors such as a sense of self (Allen et al., 1997), whilst Morrison et al. (2003) suggest that negative beliefs formed as result of the trauma predispose psychotic experiences especially in response to further traumatic life experiences. It has been highlighted that in sexual trauma the violation of interpersonal boundaries has particular relevance to these processes. Other authors have discussed the potential role of childhood trauma on biological processes such as the Hypothalamic Pituitary Adrenal (HPA) axis (Read et al., 2001).

Some authors have suggested that individuals with psychotic disorders who have experienced sexual trauma may be more likely to have particular psychotic symptoms than those without such trauma (Ross et al., 1994). The association between sexual trauma and psychotic symptoms may be in terms of symptom *form* (for example auditory hallucinations and paranoid ideation (Read and Argyle, 1999)). However, history of sexual trauma may influence *content* rather than (and possibly in addition to) *form* (Hardy et al., 2005; Lyskaer and Larocco, 2008). Understanding of this symptom content may be more relevant to psychological treatment approaches especially those focusing on trauma. The content of psychotic symptoms is a relatively neglected area of research and clinical focus. This is despite a rich tradition of psychopathological research that has documented different types of psychotic phenomena (Fish, 1985; Jaspers, 1963; Sims, 1988). Indeed, with the exception of the Diagnostic and Statistical Manual of Mental Disorders (DSM)

* Corresponding author. ORYGEN Youth Health Research Centre, 35 Poplar Rd, Parkville, VIC 3052, Melbourne, Australia. Tel.: +61 3 93422800; fax: +61 3 93423706.
E-mail address: andy.thompson@mh.org.au (A. Thompson).

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(American Psychiatric Association, 1994) system distinguishing between bizarre and non-bizarre delusions, diagnostic systems do not place any relevance on the actual content of psychotic symptoms.

In the limited research on psychotic symptom content to date, symptoms with sexual content have received most attention. Psychotic symptoms with sexual content appear to be common in chronic psychotic populations (Lucas et al., 1962). Delusions of a sexual nature in chronic psychosis samples have included symptoms such as delusions of heterosexual activity and homosexual activity, sexual grandiose themes (such as erotomania), infidelity, delusions of sex change and false belief of pregnancy or children (Bennun and Lucas, 1990; Borras et al., 2007; Phillips et al., 1996; Soyka et al., 1991). Rudden et al. (1983) reported that 28% of psychiatric inpatients with delusions reported some form of sexual delusion.

Given the high levels of psychotic symptoms with sexual content in psychotic populations, and the growing evidence that trauma, particularly sexual trauma, may play a role in onset of psychotic symptoms, the question arises as to whether history of sexual trauma influences content of psychotic symptoms. There is some evidence for this suggestion. For example, in a cohort of female inpatients, survivors of incest appeared to be more likely to experience sexual delusions (Beck and van der Kolk, 1987). Another study of 40 female patients who were victims of incest suggested two categories of symptoms that occur in these patients: the first was thought content disturbances, nightmares, obsessions, dissociation and phobias, the second was perceptual disturbances primarily illusions and hallucinations (Ellenson, 1985). The auditory hallucinations often took the form of the intruder such as footsteps and voices of the persecutor or were directive (Ellenson, 1986). In a study of 200 adult outpatients Read et al. (2003) reported that adult sexual abuse was related to hallucinations, delusions and thought disorder and that child abuse (including sexual abuse) was a significant predictor of auditory and tactile hallucinations but not delusions, thought disorder or negative symptoms. However, another study found that in a sample of psychotic inpatients those who were abused (either physically or sexually) as children were no more likely to experience auditory hallucinations or sexual delusions than those who had not been abused (Goff et al., 1991). Despite this it appears that the majority of research to date suggests that previous sexual trauma has an influence on the form of psychotic symptoms.

Two studies have specifically investigated the relationship between trauma and psychotic symptom content in adults. Hardy and colleagues examined a sample of 75 patients with non affective psychosis and identified a subgroup of individuals who had experienced trauma (Hardy et al., 2005). Of this trauma group ($N=40$) they found that only 12.5% of patients had what they assessed to be a "direct" relationship between the trauma and their hallucinations (in which there was a literal correspondence between the content of the trauma and the content of the hallucination), but 57.5% had an "indirect" relationship between the trauma and their hallucinations, in which the thematic content (humiliation, intrusiveness, guilt and threat) was the same but not the literal content. However, content ratings were restricted to four broad theme categories. Read and Argyle (1999) investigated the content of delusions and hallucinations in a sample of 22 acute psychiatric inpatients with a history of sexual or physical abuse. They found that the content of both the hallucinations and delusions was related to the abuse in around half of the patients. The authors acknowledge that the conclusions were limited as the reports were based on information from the case files. Whilst these studies offered preliminary support for the influence of sexual trauma on psychotic symptom content, they consisted of relatively small sample sizes, did not focus specifically on symptoms with a sexual content and were restricted to chronic psychotic populations.

Furthermore, one could conjecture that if sexual trauma were aetiologically related to psychotic symptoms and onset of psychotic disorder, then history of sexual trauma and presence of sexual content should be present in the "prodromal" or pre-psychotic phase prior to the onset of frank psychotic disorder. This period often includes the presence of "attenuated" or subthreshold psychotic-like symptoms (Jackson et al., 1995; Yung et al., 2003). During the last 15 years "ultra high risk" (UHR) for psychosis criteria have been established (Yung and McGorry, 1996; Yung et al., 1998, 2003). These criteria are largely based on the presence of attenuated psychotic symptoms and identify a help-seeking clinical population with an average one-year transition rate of 36.7% in UHR patients who do not receive antipsychotic medication (Ruhrmann et al., 2003). However, despite an increased recent research interest in this population there has been very little emphasis on investigating psychotic symptom content. Investigating symptom content in this group may help us understand the evolution of psychotic symptoms, especially in UHR individuals who go on to transition to a frank psychotic illness. Indeed it is likely that the "prodromal" period provides the clearest view we have of the psychotic process, before any secondary effects of psychosis such as medication, effect on general life factors and stigma (Yung and McGorry, 1996).

We have recently reported high rates of trauma, particularly sexual trauma, in the UHR population (Thompson et al., 2008) seen at the PACE (Personal Assistance and Clinical Evaluation) clinic in Melbourne, Australia. High levels of sexual trauma have also recently been reported in other high risk for psychosis clinics (Thompson et al., 2009). Anecdotal clinical impression from our clinic has highlighted the high prevalence of attenuated psychotic symptoms that are of a sexual nature or have a sexual content. This has on occasions been related to a background of sexual abuse, which had not previously been disclosed. We were therefore interested in exploring the relationship between sexual trauma and content of attenuated psychotic symptoms further. We aimed to investigate both the prevalence of "attenuated" psychotic or subthreshold psychotic-like symptoms of a sexual content in a UHR sample and the relationship of these symptoms to previous sexual trauma. We hypothesised that there would be an association between history of sexual trauma and attenuated psychotic symptoms of a sexual content.

2. Method

2.1. Setting

The PACE (Personal Assessment and Crisis Evaluation) clinic is part of Orygen Youth Health, a public mental health service treating young people aged between 15 and 24 years living in western metropolitan Melbourne, Australia (see Yung et al., 2007). Patients are eligible for treatment at PACE if they meet at least one of three UHR groups: (1) Attenuated Psychotic Symptoms (APS). Presence of attenuated (subthreshold for a diagnosis of a psychotic disorder) psychotic symptoms within the previous 12 months. (2) Brief Limited Intermittent Psychotic Symptoms (BLIPS): history of brief self limited psychotic symptoms which spontaneously resolve (within 7 days) in the previous 12 months. (3) Trait group (FH): genetic vulnerability to psychotic disorder (either schizoptypal personality disorder or family history of psychotic disorder in a first degree relative). All three UHR groups require that the individual has had a drop in functioning or persistent low functioning for at least one month within the previous 12 months. The full criteria can be found in Yung and colleagues (Yung et al., 2004). All patients accepted into PACE are allocated to a clinical psychologist who provides case management and a comprehensive psychosocial intervention "Cognitive Behavioural Case Management" (CBCM) for 6 to 12 months on an outpatient basis. For a comprehensive description of the PACE treatment model see (Nelson and Yung, 2007). Psychologists in the service had between 4 and 15 years of clinical experience.

2.2. Subjects

The sample consisted of consecutive patients who were treated at the PACE clinic between April 2007 and October 2007. The inclusion criteria are those described above for the clinical service. Exclusion criteria for the PACE clinic are: the presence of psychotic disorder, a known organic cause for presentation and an intellectual disability (IQ<70).

2.3. Measures

UHR status was assessed using the Comprehensive Assessment of At-Risk Mental States (CAARMS) (Yung et al., 2005). This instrument consists of a semi-structured interview designed to assess the UHR criteria and has been found to have excellent