

Trauma and psychosis: some aspects of a complex relationship

There are many aspects to the complex relationship linking trauma and psychosis. These include the age of the individual when the trauma occurred, gender and the relationship of the trauma to the stage or phase of illness. Among the various angles from which this question can be approached, research foci have ranged from the issue of trauma consequent to psychosis (psychological trauma linked to the experience of a first psychotic episode (1), or traumatic events that patients with psychosis can experience while in treatment (2)), to that of trauma as a factor influencing the emergence or the course of psychosis. This latter facet of the question has received more attention in recent years.

While trauma and its consequences in patients suffering from psychotic disorders had long been neglected, a recent resurgence in interest regarding this question was triggered by the accumulation of data showing high rates of exposure to early trauma, in particular childhood sexual abuse (CSA) and childhood physical abuse (CPA), in patients with psychosis. A recent review (3) of studies conducted among patients with psychotic disorders has shown that 42% of female and 28% of male patients reported CSA, while 35% of female and 38% of male patients reported CPA. Irrespective of gender, 50% of patients reported at least one form of abuse (CSA or CPA). In studies focussing on patients with bipolar disorder, global rate of childhood trauma ranges from 45 to 68%, with 15–21% of patients reporting sexual abuse and 21–28% physical abuse (4–6).

In the context of both the observation of psychotic forms of post-traumatic stress disorder (PTSD) in war veterans and the Freudian concept of a traumatic basis to the development of 'neurosis', there has

been an intense and sometimes passionate debate around the potential causal role of trauma in the later development of psychosis. Read and Ross (7) recently challenged what they considered a distorted, albeit dominant interpretation of the diathesis-stress model, where diathesis would relate exclusively to bio-genetic factors, hence inaccurately placing trauma exclusively on the stress side of the equation. An important number of publications have actually converged to suggest that interaction of certain micro- and macro-environmental factors (cannabis, urbanicity, minority status and trauma) with genetic risk affects the vulnerability to psychosis (8).

The evocation of a causal role of trauma in the development of psychosis is based on two main arguments. First, retrospective studies have shown that childhood trauma is more frequent in patients with psychosis than in the general population. Bebbington et al. (9) for example have found that when compared with general population, exposure to various forms of trauma was higher in psychosis patients, with odd ratios of 15 for sexual abuse, 9 for violence at home and 5 for having been victim of serious injury or assault. Given the similarly high rates of CSA and CPA among individuals with depression and personality disorders, trauma is probably a generic vulnerability factor for a diverse range of phenotypes. Second, a limited number of prospective studies have found a relationship between the occurrence of trauma and the later development of psychosis. In the context of the Nemesis study, Janssen et al. (10) have found that patients who reported a history of emotional, physical, psychological or sexual abuse before the age 16 at baseline assessment, were 7 times more likely to have developed

psychotic symptoms 2 years later. Results of the study also suggested a 'dose-effect relationship', with those who had been exposed to repeated sexual abuse being at even higher risk to have developed psychosis, with an odds ratio of 30. In a similar study of 2524 adolescents, Spauwen et al. (11) found that those who reported exposure to trauma at baseline were more vulnerable to develop psychosis 4 years later. The validity of such findings has however been questioned on the basis of methodological limitations, such as the small number of subjects with psychosis even in large population-based epidemiological studies, heterogeneity in the diagnosis of psychosis or lack of consistency in the definition of trauma. These factors make comparisons between studies and interpretation of results difficult. The causal relationship between childhood trauma and later development of psychosis is therefore still a matter of controversy (3).

Nevertheless, both psychological and neurobiological mechanisms have been proposed to explain this potential relationship. Among other psychological models, Bentall et al. (12) have for example proposed that the development of psychosis following trauma may be linked to causal attribution and theory of mind deficits. In a cyclic model where causal attributions influence self-representations, which in turn influence future attributions, trauma would induce a bias where negative events would be attributed to external agents which would subsequently contribute to the building of a paranoid view of the world. At the neurobiological level, Read et al. (13) have suggested that childhood trauma may impact negatively on the neuro-developmental process if they occur early enough. In particular, when trauma is intense or repeated, chronic dysregulation

of the hypothalamic-pituitary-adrenal axis may result, which may lead to dopaminergic abnormalities (14). Similarly Brunelin (15) showed that the risk for schizophrenia may be characterised by an enhanced sensitivity to stress, that is manifested in both the cortisone and dopamine systems. Environmental factors may hence result in both psychological and physiological changes that overlap with the known pathophysiology of schizophrenia, and include epigenetic modulation of risk factors. This process of psychological or physiological alterations has been referred to as sensitisation, and underlies the triggering and persistence of psychotic symptoms (16).

The psychological impact of trauma and its potential durable effect on affective behaviour and brain neurochemistry may also influence clinical presentation of psychosis and its evolution over time. Various studies have shown that patients with psychosis who had experienced childhood trauma had higher levels of psychotic symptoms, more cognitive deficits and a poorer level of functioning (13,17). In complement to these cross-sectional studies, Lysaker et al. (18) have shown that higher levels of psychotic symptoms and poorer functioning level were maintained over time. Similar findings were reported for individuals with bipolar disorder, where patients who had childhood trauma had longer delays before treatment, higher rates of substance abuse, higher levels of manic symptoms and higher rates of suicide (4–6). In a recent study conducted in an epidemiological sample of first episode psychosis patients, we found a high prevalence of sexual (16%) and physical (26%) abuse in childhood. Patients who had experienced sexual and/or physical abuse were more likely to present with psychiatric co-morbidities (PTSD, substance abuse) and to have attempted suicide in the past. Additionally, they had a poorer premorbid level of functioning, a longer duration of untreated psychosis, a higher risk of suicide during treatment and were more likely to disengage from treatment (19).

Given the strikingly high prevalence of trauma history in patients suffering from psychosis and the many clinical problems potentially related to this issue, it is of primary importance for clinicians to be sensitive to this question. There is a critical need for more systematic assessment of trauma history and better

staff training regarding this problem. The following observations by Read (20) may be useful when discussing previous trauma with patients suffering from psychosis. It is important to ask patients with psychosis about possible exposure to trauma. Without asking, only 10–30% of trauma histories are identified. While trauma is rarely part of the clinical assessment, because of other assessment priorities such as suicidal risk or agitation, fear of destabilising patients, doubt about veracity of reported trauma, fear of blaming families, reluctance to discuss this type of issue with patients of the opposite gender and lack of experience with this type of issue, 85% of patients who have experienced such events are relieved when they are offered the opportunity to talk about it.

When trauma is discussed with a patient, it is characteristically a process rather than an event. It is not necessary to gather all details at once, and patients typically need time to gradually divulge what they went through. Clinicians need to be available and to positively reinforce the efforts patients make to talk about such issues. It is also important to evaluate the risk for secondary victimisation, recurrence of trauma and suicide.

Finally, it is becoming increasingly apparent that trauma-specific treatments may be beneficial for psychotic patients with a history of traumatic experiences. Patients with early and complex trauma may benefit from integrated treatment programs with an emphasis on psycho-education, stabilisation and the development of safe coping skills (21,22). Other approaches focus on PTSD. Several case studies and open trials reported that cognitive behavior therapy treatments for PTSD can be used safely and effectively in patients with schizophrenia (23). More recently, a randomised controlled trial of a group-based cognitive-behavioural intervention for PTSD with an emphasis on cognitive restructuring has yielded promising results in patients with severe mental illness (24). Independent of the strategy chosen, trauma treatments for patients with schizophrenia should take place in the context of a comprehensive service that includes case management, medication management and integrated dual diagnosis treatment when substance abuse problems are present. Clearly, more research is needed to further develop and evaluate treatment approaches appropriate for this vulnerable population and implement them into routine practice.

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Philippe Conus^{1,2}; Michael Berk^{2,3,4}, Ingo Schäfer⁵

¹Treatment and Early Intervention in Psychosis Program (TIIPP), Département de Psychiatrie CHUV, Université de Lausanne, Clinique de Cery, 1008 Prilly, Switzerland;

²Orygen Youth Health Research Centre, Department of Psychiatry, University of Melbourne, 35 Poplar Road, Parkville Victoria 3052, Melbourne, Australia;

³Department of Clinical and Biomedical Sciences, Barwon Health, University of Melbourne, Geelong, Australia;

⁴Mental Health Research Institute, Parkville, Australia;

and ⁵Department of Psychiatry and Psychotherapy, Centre for Psychosocial Medicine, University Medical Centre Hamburg-Eppendorf, Hamburg, Germany

Dr Philippe Conus,
Treatment and Early Intervention in Psychosis Program
(TIIPP), Département Psychiatrie CHUV,
Université Lausanne, Clinique de Cery, 1008 Prilly,
Switzerland.

Tel: +41 21 643 6111;

Fax: +41 21 643 6469;

E-mail: philippe.conus@chuv.ch

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References

1. MCGORRY PD, CHANEN A, MCCARTHY E, VAN RIEL R, MCKENZIE D, SINGH BS. Posttraumatic stress disorder following recent-onset psychosis. An unrecognized postpsychotic syndrome. *J Nerv Ment Dis* 1991;**179**:253–258.
2. FRUEH CB, KNAPP RG, CUSAK KJ et al. Patients' report of traumatic or harmful experiences within the psychiatric setting. *Psychiatr Serv* 2005;**56**:1123–1133.
3. MORGAN C, FISHER H. Environmental factors in schizophrenia: childhood trauma – a critical review. *Schizophr Bull* 2007;**33**:3–10.
4. LEVERICH GS, McELROY SL, SUPPES T et al. Early physical and sexual abuse associated with an adverse course of bipolar illness. *Biol Psychiatry* 2002;**51**:288–297.
5. LEVERICH GS, POST RM. Course of bipolar illness after history of childhood trauma. *Lancet* 2006;**367**:1040–1042.
6. GARNO JL, GOLDBERG JF, RAMIREZ PM, RITZLER BA. Impact of childhood abuse on the clinical course of bipolar disorder. *Br J Psychiatry* 2005;**186**:121–125.
7. READ J, ROSS CA. Psychological trauma and psychosis: another reason why people diagnosed schizophrenic must be offered

- psychological therapies. *J Am Acad Psychoanal Dyn Psychiatry* 2003;**31**:247–268.
8. VAN OS J, KRABBENDAM L, MYIN-GERMEYS I, DELESPAUL P. The schizophrenia envirome. *Curr Opin Psychiatry* 2005;**18**:141–145.
 9. BEBBINGTON PE, BHUGRA D, BRUGHA T, et al. Psychosis, victimisation and childhood disadvantage – Evidence from the second British National Survey of Psychiatric Morbidity. *Br J Psychiatry* 2004;**185**:220–226.
 10. JANSSEN I, KRABBENDAM L, BAK M et al. Childhood abuse as a risk factor for psychotic experiences. *Acta Psychiatr Scand* 2004;**109**:38–45.
 11. SPAUWEN J, KRABBENDAM L, LIEB R, WITTCHEN HU, VAN OS J. Impact of psychological trauma on the development of psychotic symptoms: relationship with psychosis proneness. *Br J Psychiatry* 2006;**188**:527–533.
 12. BENTALL RP, CORCORAN R, HOWARD R, BLACKWOOD N. Persecutory delusions: a review and theoretical integration. *Clin Psychol Rev* 2001;**21**:1143–1192.
 13. READ J, PERRY BD, MOSKOWITZ A, CONNOLLY J. The contribution of early traumatic events to schizophrenia in some patients: a traumatogenic neurodevelopmental model. *Psychiatry* 2001;**64**:319–345.
 14. HEIM C, NEWPORT DJ, HEIT S. Pituitary – adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. *JAMA* 2000;**284**:592–597.
 15. BRUNELIN J, D'AMATO T, VAN OS J, COCHET A, SUAUD-CHAGNY MF, SAOUD M. Effects of acute metabolic stress on the dopaminergic and pituitary-adrenal axis activity in patients with schizophrenia, their unaffected siblings and controls. *Schizophr Res* 2008;**100**:206–211.
 16. COLLIP D, MYIN-GERMEYS I, VAN OS J. Does the concept of 'sensitization' provide a plausible mechanism for the putative link between the environment and schizophrenia? *Schizophr Bull* 2008;**34**:220–225.
 17. LYSAKER PH, MEYER P, EVANS JD, MARKS KA. Neurocognitive and symptom correlates of self-reported childhood sexual abuse in schizophrenia spectrum disorders. *Ann Clin Psychiatry* 2001;**13**:89–92.
 18. LYSAKER PH, BEATTIE BA, STRASBURGER MA, DAVIS LW. Reported history of child sexual abuse in schizophrenia – association with heightened symptom levels and poorer participation over four months in vocational rehabilitation. *J Nerv Ment Dis* 2005;**193**:790–795.
 19. CONUS P, COTTON S, SCHIMMELMANN BG, MCGORRY PD, LAMBERT M. Pre-treatment and outcome correlates of sexual and physical trauma in an epidemiological cohort of first episode psychosis patients. *Schizophr Bull* (in press).
 20. READ, J. Breaking the silence: learning why, when and how to ask about trauma, and how to respond to disclosures. In LARKIN W, MORRISON A, eds. *Trauma and psychosis* London: Brunner-Routledge, 2006:195–221.
 21. FALLOT RD, HARRIS M. The Trauma Recovery and Empowerment Model (TREM): conceptual and practical issues in a group intervention for Women. *Community Ment Health J* 2002;**38**:475–485.
 22. TRAPPLER B, NEWVILLE H. Trauma healing via cognitive behavior therapy in chronically hospitalized patients. *Psychiatr Q* 2007;**78**:317–325.
 23. CALLCOTT P, STANDART S. Trauma within psychosis: using a CBT model for PTSD in psychosis. *Behav Cogn Psychother* 2004;**32**:239–244.
 24. MUESER KT, ROSENBERG SD, XIE H et al. A randomized controlled trial of cognitive-behavioral treatment for posttraumatic stress disorder in severe mental illness. *J Consult Clin Psychol* 2008;**76**:259–271.