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Post-traumatic stress disorder in psychosis

Zespół stresu pourazowego w psychozie

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 <https://doi.org/10.15557/PIPK.2024.0032>

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Abstract

The diagnosis of schizophrenia spectrum disorders often overshadows other psychopathological issues, such as post-traumatic stress disorder (PTSD), which has a significantly higher lifetime prevalence in individuals with psychosis, ranging from 14% to 53%, compared to the general population. The experience of psychosis and its treatment, particularly during the first episode, can be traumatic and frequently leads to PTSD, which may present with a specific clinical profile. Recognising PTSD in individuals with psychosis is challenging for several reasons: difficulties in gathering a trauma history, diagnostic challenges arising from the similarity between PTSD and psychosis symptoms, and systemic barriers in healthcare. An additional complication is the structure of PTSD diagnostic criteria in the DSM-5 classification, which can make it difficult to classify psychosis-related experiences as traumatic. The diagnosis of complex PTSD, as introduced in the ICD-11, is poorly studied among individuals with psychosis, though initial research indicates its high prevalence in this group. Screening tools can be helpful in identifying traumatic experiences, while self-report questionnaires and diagnostic interviews are useful in accurately diagnosing PTSD in individuals with psychosis. Psychotherapy for PTSD in the context of psychosis is both effective and safe, and it also contributes to improved treatment outcomes for psychosis itself. The most well-researched methods are trauma-focused cognitive behavioural therapy and eye movement desensitisation and reprocessing (EMDR).

Keywords: psychosis, trauma, PTSD, EMDR

Streszczenie

Diagnoza zaburzeń z kręgu schizofrenii często przysłania inne problemy psychopatologiczne, np. zespół stresu pourazowego, którego częstość w ciągu całego życia u osób z psychozą jest znacznie wyższa niż w populacji ogólnej i wynosi 14–53%. Samo doświadczenie psychozy i jej leczenie, zwłaszcza przy pierwszym epizodzie, może być urazowe i niekiedy prowadzi do zespołu stresu pourazowego, który może mieć specyficzny obraz kliniczny. Rozpoznawanie stresu pourazowego u osób z psychozą jest trudne z wielu powodów, składają się na to trudności w zbieraniu wywiadu dotyczącego traumy, trudności diagnostyczne, wynikające z podobieństwa objawów stresu pourazowego i psychozy oraz barier systemowych w opiece zdrowotnej. Dodatkowym problemem może być konstrukcja kryteriów diagnostycznych zespołu stresu pourazowego w klasyfikacji DSM-5, które utrudniają zakwalifikowanie doświadczeń związanych z psychozą jako urazowych. Wprowadzona w ICD-11 diagnoza złożonego zespołu stresu pourazowego jest słabo zbadana wśród osób z psychozą, jednak pierwsze badania wskazują na jego dużą częstość w tej grupie. W identyfikacji traumatycznych doświadczeń pomocne może być zastosowanie narzędzi przesiewowych, natomiast w postawieniu trafnej diagnozy stresu pourazowego u osób z psychozą przydatne są kwestionariusze samoopisowe i wywiady diagnostyczne. Psychoterapia stresu pourazowego w kontekście psychozy jest skuteczna i bezpieczna, a ponadto ma wpływ na poprawę wyników leczenia samej psychozy. Najlepiej zbadanymi metodami są terapia poznawczo-behawioralna skoncentrowana na traumie oraz EMDR (*eye movement desensitisation and reprocessing*).

Słowa kluczowe: psychoza, trauma, PTSD, EMDR

INTRODUCTION

The diagnosis of schizophrenia spectrum disorder often carries such a significant burden that it can obscure the identification of other issues, including psychopathological ones, that the patient may be facing (Grubaugh et al., 2008). One such issue could be the presence of post-traumatic stress disorder (PTSD) symptoms. Given that psychosis itself is often an extremely difficult and sometimes traumatic experience, and that the treatment process – especially for a first episode – can be turbulent, it is not surprising that symptoms of PTSD frequently accompany a diagnosis of non-affective psychosis.

Types and significance of trauma in psychosis

Trauma can contribute to the development of various mental disorders, including psychotic ones. However, current psychiatric classifications clearly recognise traumatic experiences as the direct cause of only a few disorders, such as PTSD. Fornells-Ambrojo et al. (2016) identify four categories of traumatic experiences in individuals with psychosis:

1. objectively traumatic experiences unrelated to psychosis (e.g. violence, sexual abuse);
2. objectively threatening experiences related to psychosis (e.g. involuntary hospitalisation, forced medication, the use of mechanical restraints – treatment-related factors);
3. experiences perceived as threatening but arising from psychotic symptoms, such as distorted perceptions and altered reality (distorted reality PTSD); an example might be hearing a voice threatening death or hallucinatory visions of an attacking perpetrator;
4. experiences perceived as threatening due to delusional interpretation of normal perceptions (e.g. perceiving a car following from behind as being chased by the mafia). These experiences are also related to the distortion of reality.

Since the experience of psychotic symptoms can be traumatic in itself, and hospitalisation sometimes involves the use of direct coercion or forced medication, introducing an additional traumatic factor, Berry et al. (2013) proposed the concept of “psychosis-related PTSD” (PR-PTSD). This term refers to PTSD caused by the experience of psychosis and unpleasant or potentially traumatic treatment-related experiences. It encompasses categories 2, 3, and 4 from those listed above. In the literature, PR-PTSD is also referred to as “post-psychotic PTSD” (White and Gumley, 2009).

Traumatic experiences are more common in individuals diagnosed with schizophrenia spectrum disorders than in the general population (Matheson et al., 2013; Stanton et al., 2020). Such experiences in a person's history have a causal link to the development of psychosis (Bendall et al., 2012; Bentall et al., 2012; Trotta et al., 2015; Varese et al., 2012), and this relationship is dose-dependent (Shevlin et al., 2008; Varese et al., 2012). Furthermore, a history of trauma influences the clinical presentation of psychosis, as it has been shown to primarily result in

greater severity of positive symptoms (Bailey et al., 2018; Peach et al., 2021). Traumatic experiences also impact the course of psychosis and treatment outcomes. Trauma, especially childhood trauma, in individuals with psychosis, increases the risk of treatment resistance (Hassan and De Luca, 2015) and worsens treatment adherence (Lecomte et al., 2008). Additionally, traumatic events occurring after the onset of psychosis are associated with a higher risk of relapse (Martland et al., 2020).

Epidemiology of PTSD in psychosis

There are few epidemiological studies on the prevalence of PTSD in populations with severe mental illness. In their review, Grubaugh et al. (2011) highlight the limited number of studies using the Clinician-Administered PTSD Scale (CAPS), considered the gold standard for diagnosing PTSD. In three studies that used this tool, the prevalence of PTSD among individuals with psychosis was reported at 13%, 44%, and 46% (Ford and Fournier, 2007; Gearon et al., 2003; Resnick et al., 2003). Lifetime prevalence rates of PTSD ranged from 14% to 53% (Ford and Fournier, 2007; Neria et al., 2002), which is significantly higher than in the general population (Kessler, 2000). However, PTSD diagnoses in medical records are severely underreported. For example, in a group of 275 patients with psychosis, Mueser et al. (1998) diagnosed 43% with PTSD, but only 2% of these cases were recorded in their medical documentation. Regarding the prevalence of PR-PTSD, various reviews indicate a range between 11% and 67% (Berry et al., 2013), 11% and 51% (Fornells-Ambrojo et al., 2016), or 14% and 47% (Buswell et al., 2021). These significant differences result from varying methodologies and the diverse groups studied. It is worth noting that when more precise diagnostic methods were used, such as the Clinician-Administered PTSD Scale for Schizophrenia (CAPS-S), researchers reported rates of 37% and 38% (Tarrier et al., 2007; White and Gumley, 2009). Among studies on PR-PTSD, few focus on the first episode of psychosis. In their meta-analysis, Rodrigues and Anderson (2017) estimate the prevalence of PR-PTSD in first-episode psychosis at 30%, although a higher percentage – 42% of patients – reported PTSD symptoms that did not meet all the criteria for the disorder.

DIFFICULTIES IN RECOGNISING PTSD IN PSYCHOSIS

There are several reasons why PTSD is rarely diagnosed in patients with psychosis. These are related to difficulties in gathering a history of traumatic experiences, the structure of PTSD criteria in psychiatric classifications, and the overlap between post-traumatic stress symptoms and psychotic symptoms.

Gathering information about trauma

Although identifying trauma in a patient's life history is crucial for many reasons, gathering this information often

presents significant challenges in practice. Many professionals lack proper training in this area and are influenced by the belief that asking questions about traumatic events may exacerbate psychosis symptoms (Chadwick and Billings, 2022). Some professionals also express doubts regarding the credibility of trauma-related information, but research indicates that reports of abuse by individuals with psychosis remain consistent over time and are reliable (Goodman et al., 1999). Additionally, there are systemic barriers, such as limited time per patient, excessive workloads, and – in a broader context – the prevailing biomedical model, which contributes to the neglect of trauma's role in the treatment of psychosis.

There are also factors related to service users, who tend to avoid discussing traumatic experiences (a symptom of post-traumatic stress) and rarely bring up trauma on their own. However, they appreciate when professionals recognise these experiences as significant and encourage them to share. One solution to many of the difficulties in obtaining information about a traumatic history is the use of self-report questionnaires. There is evidence that for some individuals, it is easier to disclose information about certain events in this form than through direct conversation (Jansen et al., 2016). Among various tools for assessing trauma in individuals with psychosis, the Childhood Trauma Questionnaire – Short Form has the most supporting evidence for its usefulness in this group (Airey et al., 2023). The Traumatic Experiences Checklist (TEC), available in Polish as “TEC-PL”, has also shown satisfactory utility. The only tool that directly explores experiences related to psychosis and its treatment is the Trauma and Life Experiences checklist (TALE) (Carr et al., 2018). It is important to stress that during the assessment stage, the goal is not to conduct a detailed discussion about traumatic experiences, which could potentially destabilise some individuals. Preliminary trauma screening allows the interview to focus on identifying trauma-related symptoms and helps develop an appropriate plan for further treatment.

Nosological problems

Diagnosing PR-PTSD presents challenges related to the definition of traumatic experience as a basis for diagnosing post-traumatic stress disorder (PTSD). While the ICD-11¹ includes a relatively broad range of traumatic experiences in its PTSD criteria, including physical illness, the DSM-5 is more restrictive. In this classification, Criterion A for PTSD defines a traumatic experience as exposure to death or the threat of death, serious injury, or sexual violence in at least one of the following ways: direct experience, witnessing it firsthand, learning that a close person experienced it, or being exposed to detailed accounts of the traumatic experience. Therefore, this criterion cannot be met in cases of PTSD symptoms caused by distorted reality

(distorted-reality PTSD). For comparison, in a study by Abdelghaffar et al. (2018), 42.3% of individuals with a first episode of psychosis met all clinical criteria for PTSD, but when Criterion A was excluded, this number rose to 69.2%. As a result, Fornells-Ambrojo et al. (2016) propose adding a new PTSD subtype to the DSM, referring to patients who are unable to assess the reality of the perceived threat. This distorted-reality PTSD may occur not only in individuals with psychosis but also, for example, in cases of dementia. Experiences related to psychosis are usually not isolated events but tend to have a chronic nature, with many traumatic events identifiable over time. From this perspective, there are similarities between PR-PTSD and PTSD caused by somatic illness. As in the latter case, post-traumatic stress symptoms in psychosis can vary in intensity both during psychotic episodes and periods of remission (Kangas et al., 2002). Moreover, as with somatic illness, the clinical presentation of PR-PTSD may differ from PTSD resulting from a single traumatic incident, potentially involving fewer elements of re-experiencing, affective and cognitive changes, and hyperarousal, but with a similar level of avoidance (El-Gabalawy et al., 2018). According to the model of PTSD due to stress related to somatic health (Edmondson, 2014), intrusions are more often connected to future concerns and fears about what might happen, rather than recollections of past events. Arousal, on the other hand, is often triggered by internal cues, making it difficult to avoid. White and Gumley (2009) confirmed a similar mechanism in individuals with psychosis and PR-PTSD, showing a stronger correlation between the avoidance scale on the CAPS and the Fear of Recurrence Scale compared to individuals with psychosis but without PR-PTSD. This suggests that the fear of recurrence in individuals with PR-PTSD is driven by post-traumatic stress symptoms.

Avoidance symptoms in PTSD related to somatic illness can also present differently and have significant practical implications for treatment. Kronish et al. (2012) reported that individuals who survived a stroke and exhibited symptoms suggestive of a PTSD diagnosis were nearly three times more likely not to adhere to prescribed medications compared to those without PTSD symptoms. It can be expected that in patients with PR-PTSD, a similar pattern occurs, where avoidance symptoms in PTSD may manifest as elements of “denial” and “lack of insight” in psychosis, leading to noncompliance with treatment. While childhood trauma is a known risk factor for noncompliance in psychosis treatment (Lecomte et al., 2008), there is limited data on PTSD as a specific contributing factor, although comparable findings exist for bipolar disorder (Sajatovic et al., 2007).

Overlap of PTSD and psychosis symptoms

One reason PTSD symptoms in patients with psychosis are often unrecognised is their partial similarity to positive symptoms. According to the criteria introduced by ICD-11, diagnosing PTSD requires the presence of a traumatic

262 ¹ <https://icd.who.int/browse/2024-01/mms/en#2070699808>.

experience in the patient's history and meeting three criteria: 1) re-experiencing symptoms (intrusive memories, flashbacks, nightmares), 2) avoidance symptoms, and 3) a sense of current threat. If the psychotic episode was an extremely difficult and overwhelming experience, it can be re-experienced. This involves reliving elements of the psychotic episode as if those events were happening again in the present moment. This can occur in response to an external trigger that activates the memory. For example, if a patient heard the voice of Satan threatening them with death during their psychosis, re-experiencing might involve a vivid, though short-lived, memory of that voice, which may be indistinguishable from the original experience. In such situations, clinicians can easily mistake these re-experiencing symptoms for positive symptoms of psychosis.

An additional complication is that traumatic memories are not always recalled as whole experiences; instead, individual components of the memory (e.g. an image, sound, or only somatic sensations) may be re-lived, disconnected from the context of the entire event. This phenomenon is related to disruptions in the encoding of episodic memory (Hardy, 2017). One may have difficulty understanding these atypical experiences, and identifying their origins in an appropriate manner becomes impossible due to impaired integration of contextual information related to the intrusion (Steel et al., 2005).

Other elements of PTSD diagnosis that may further complicate the clinical presentation include perceptions of heightened current threat, manifested as hyper-vigilance, an exaggerated startle response, and angry outbursts. If the content of psychotic experiences is associated, for example, with the feeling of being watched, then perceptions of heightened current threat can activate such content, emotional responses, and physiological reactions (mainly fight-or-flight responses). This can lead to the development of a sense of being followed. Experiencing a feeling of threat may lead to conclusions that a real danger exists ("if I feel threatened, then there must be a real threat"). In this way, PTSD symptoms can drive positive psychotic symptoms.

RELATIONSHIPS BETWEEN PTSD AND PSYCHOSIS

The relationships between PTSD and psychosis can be complex. On one hand, psychosis may lead to PR-PTSD; on the other hand, PTSD symptoms can contribute to the development of a psychotic disorder or the emergence of specific psychotic symptoms. The literature also describes a condition known as "PTSD with secondary psychotic features" (PTSD-SP) (Compean and Hamner, 2019). PTSD-SP is not associated with greater severity of core PTSD symptoms or with the type or intensity of trauma experienced. Hallucinatory content is primarily linked to traumatic experiences, while delusional content tends to be persecutory in nature. Formal thought disorders, such as loose associations, incoherence, and neologisms, are usually absent in PTSD-SP (Braakman et al., 2009).

Morrison et al. (2003) also highlight the possibility of a blurred boundary between experiences associated with post-traumatic stress and psychotic experiences, which can be viewed as two sides of the same coin in response to trauma. This notion is supported by observations that PTSD resulting from developmental trauma may contribute to the emergence of psychotic experiences, especially in adolescence (Strelchuk et al., 2022). These psychotic experiences are rooted in intrusions of fragmented traumatic memories, accompanied by dysfunctional emotional regulation mechanisms, abnormalities in episodic and perceptual memory processing, and impairments in semantic memory (Hardy, 2017).

COMPLEX PTSD IN PSYCHOSIS

The issue of comorbidity between PTSD and psychosis has become more complex with the introduction of a new diagnosis in the ICD-11, namely, complex PTSD (cPTSD). This diagnosis underscores the significance of chronic traumatization, particularly during developmental stages, which significantly impacts individual development. As early as the 1990s, Judith Herman (1992) emphasised the distinctiveness of this disorder from classic PTSD. Later, the diagnosis of DESNOS (disorders of extreme stress not otherwise specified) was proposed, but it was not included in the DSM-IV (Pecovitz et al., 1997). It was not until the eleventh edition of the ICD classification that this diagnosis was formally recognised. The ICD-11 definition of cPTSD includes two components: (1) meeting the PTSD criteria and (2) symptoms of disturbance in self-organisation (DSO). This latter component encompasses three symptom groups: (1) affect dysregulation, (2) negative self-image, and (3) interpersonal disturbances.

To date, only one study has assessed the prevalence of cPTSD in individuals with psychosis (Panayi et al., 2022). This study found that among 144 participants, 40% met the criteria for cPTSD, while only 10% met the criteria for PTSD. Similar proportions have been observed in other clinical groups, highlighting the high prevalence of cPTSD as a distinct disorder. There is also evidence for a moderate correlation between cPTSD and psychosis in the general population (Ho et al., 2021), and latent class analysis in the general population has identified two classes of cPTSD features co-occurring with psychotic experiences. In the first class, cPTSD features were accompanied by all the psychotic experiences, while in the second, only some of them were present (Frost et al., 2019). This may reflect the existence of one group with both psychosis and cPTSD and another with PTSD and secondary psychotic features.

ASSESSING PTSD IN INDIVIDUALS WITH PSYCHOSIS

Differentiating between psychosis and post-traumatic stress symptoms can be challenging, so it is recommended to use

clinical assessment tools, including self-report questionnaires and diagnostic interviews. Numerous self-report tools for assessing PTSD are commonly employed in research and clinical practice. Among individuals diagnosed with schizophrenia, tools such as the Impact of Event Scale (IES) (Creamer et al., 2003) and the Posttraumatic Stress Diagnostic Scale (PDS) (Foa et al., 1997) have been used. The only screening tool whose effectiveness has been specifically tested in individuals with psychosis is the PTSD checklist (PCL). However, based on the obtained results, the authors advise against using it in this group (Steel et al., 2017). Potential difficulties in understanding the questions were highlighted, as well as challenges in distinguishing PTSD-related symptoms from others, including those of psychosis. This particularly concerns sensory intrusions, dissociative symptoms, hyperarousal, and avoidance. Diagnostic interviews are generally considered more reliable than self-report questionnaires, with the Clinician-Administered PTSD Scale (CAPS) regarded as the gold standard for diagnosing PTSD (Fornells-Ambrojo et al., 2016). However, in individuals with a history of psychosis, due to their deficits in information processing and sometimes limited capacity to observe and describe their experiences, PTSD symptoms may be inadequately reported. For this reason, Gearon et al. (2004) proposed a modified version of the CAPS interview, the CAPS-Schizophrenia (CAPS-S), which uses simplified language and reframed questions with behavioural references. For example, instead of asking about “physiological reactions”, phrases such as “heart racing, change in breathing, headaches, or stomach aches” are used. Diagnosing cPTSD according to ICD-11 criteria is a relatively new area, and the most commonly used screening tool for this purpose is the International Trauma Questionnaire (ITQ)² (Seiler et al., 2023). The diagnostic interview that aligns with ICD-11 criteria is the International Trauma Interview (ITI) (Gelezelyte et al., 2022). However, no studies have yet evaluated these tools in a population with psychosis.

SIGNIFICANCE IN TREATMENT

According to the latest edition of the guidelines from the U.S. Department of Veterans Affairs, trauma-focused therapy is the recommended treatment of choice for PTSD (VA/DoD clinical practice guideline..., 2018). Recommended approaches include prolonged exposure therapy, cognitive processing therapy, eye movement desensitisation and reprocessing, brief eclectic psychotherapy, and narrative exposure therapy. However, there are no specific guidelines for treating individuals with PTSD who also have a diagnosis of schizophrenia spectrum disorders.

Recent clinical studies have explored trauma-focused therapy for patients diagnosed with both PTSD and psychosis.

These studies indicate that treatment using exposure therapy or EMDR is well-tolerated and effective. In a study by van den Berg et al. (2015), 56.6–60% of patients who received such treatment no longer met the criteria for PTSD, compared to 27.9% in the group without this treatment. Furthermore, the improvement was sustained over a 12-month follow-up period and was associated with reductions in persecutory thoughts and depressive symptoms, as well as higher rates of psychosis remission (loss of a schizophrenia diagnosis) (van den Berg et al., 2018; de Bont et al., 2016).

Further evidence supporting the safety of PTSD treatment in individuals with psychosis comes from a study by van den Berg et al. (2016), who found no exacerbation of psychosis, increase in hallucinations, paranoia, or dissociation related to trauma-focused therapy. However, a higher frequency of symptom exacerbations and re-victimisation was observed in the control group that did not receive trauma therapy. A closer examination of the therapy process revealed that 32–46.5% of patients experienced an intensification of symptoms during the first four sessions (out of eight planned in the protocol) and between sessions, but these reactions did not result in treatment discontinuation (Burger et al., 2023).

Ongoing multicentre studies are currently investigating trauma-focused therapy in psychosis (Burger et al., 2022). However, there is no specific clinical research targeting therapy for complex PTSD in the context of schizophrenia spectrum disorders. One long-term study, the STAR study (Study of Trauma And Recovery), aims to address various aspects of the effects of trauma, including emotion regulation difficulties, beliefs, and PTSD symptoms (Peters et al., 2022). This study also includes measures of cPTSD symptoms.

No studies have been found on the effectiveness of pharmacotherapy in treating PTSD symptoms in individuals with a history of psychosis. However, as a general principle, antipsychotic medications are used in this patient group. While not specifically mentioned in the guidelines of the U.S. Department of Veterans Affairs, evidence suggests that, among antipsychotic drugs, quetiapine may reduce the severity of hyperarousal and re-experiencing symptoms (Zhang et al., 2023). On the other hand, the National Institute for Health and Care Excellence (NICE) guidelines for the treatment of PTSD (NG116)³ recommend considering antipsychotic medications, such as risperidone, if first-line medications (selective serotonin reuptake inhibitors, venlafaxine) are ineffective. However, these recommendations do not apply specifically to individuals with PTSD and psychosis. There are reports that antipsychotic medications may have mixed effects on PTSD symptoms – both alleviating and exacerbating them – and may also affect patients’ readiness to engage in PTSD psychotherapy (Kamitsis et al., 2022).

² <https://www.traumameasuresglobal.com/itq>.

³ <https://www.nice.org.uk/guidance/ng116/chapter/Recommendations#principles-of-care>.

CONCLUSIONS

Research shows that PTSD symptoms are common in patients with schizophrenia spectrum disorders, and that psychotic episodes themselves can be the source of these symptoms. Identifying PTSD in individuals with psychosis provides an opportunity for targeted trauma-focused treatment, which can lead to improved health outcomes. There is scientific evidence supporting the effectiveness and safety of prolonged exposure therapy and EMDR.

Conflict of interest

The authors do not report any financial or personal connections with other persons or organisations which might negatively affect the contents of this publication and/or claim authorship rights to this publication.

Author contribution

Original concept of study; writing of manuscript; critical review of manuscript; final approval of manuscript: RT, IJP

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