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Review of the Safety and Efficacy of Trauma-Focused Treatment Among Patients With Psychosis

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Abstract

Among people who experience psychosis, many have comorbid post traumatic stress disorder (PTSD) that is frequently undiagnosed and untreated. Symptoms have long-term implications, such as hallucinations, post-traumatic intrusions, and an increased risk of physical health conditions, like heart disease and respiratory issues. Many clinicians believe that diagnosing and treating PTSD in this population will be dangerous, so these patients are often excluded from trauma-focused treatment based on their psychosis symptoms. This paper will review current data regarding the rates of undiagnosed PTSD among this population as well as the safety and efficacy of treatment options. PubMed was used to identify peer-reviewed, academic journal articles pertaining to, "PTSD," "psychosis," "trauma-focused treatment," "content of first episode psychosis," and "schizophrenia." Eleven empirical studies were identified and included in this review. The results showed rates of PTSD among psychosis patients are much higher than currently identified, with one study finding that 16% of participants suffered from comorbid PTSD with only 0.5% of the population having been diagnosed previously. Data also showed that treatment for PTSD was safe and decreased both PTSD and psychosis symptoms in this population. These results strongly indicate that additional studies should be conducted in order to determine which trauma-focused treatments are the most safe and effective for this population. Clinicians working with psychosis patients should be informed of the results of these studies in order to encourage them to diagnose and treat the PTSD of their patients along with their psychosis.

Review of the Efficacy and Safety of Trauma-Focused Treatment Among Patients With Psychosis

Psychotic disorders are a debilitating group of mental illnesses associated with stigma in many cultures today (Eliasson et. al., 2021). The prevalence of these disorders is somewhat difficult to determine, but it is estimated that approximately 3% of the global population has experienced a psychotic disorder at some time in their life (Perälä et. al., 2007). The exact mechanisms of these disorders is unknown, but some psychologists believe that one factor in the development of a psychotic disorder could be the aftereffects of trauma (Croft et. al., 2019). Preliminary studies have shown that the incidence of experiencing a traumatic event is higher among psychosis patients than the general population (de Bont et al., 2015). However, patients diagnosed with a psychotic disorder are often excluded from trauma-related therapy due to concern over how well they will tolerate the difficult treatment process (de Bont et al., 2016). This has led to a large population of psychosis patients suffering from undiagnosed PTSD, further decreasing their quality of life (Buckley et. al., 2009).

Although psychotic disorders share many symptoms, seven separate diagnoses fall into this category (American Psychiatric Association, 2013). Schizophrenia is the most well-known, with symptoms including auditory and visual hallucinations, disorganized speech and behavior, catatonia, and negative symptoms (such as decreased emotional expression). If symptoms last longer than six months, the disorder is classified as schizophrenia, but if symptoms are present for less than six months, it is considered

BIOGRAPHY

Mary Eggers is a Case Western Reserve University graduate now working as a Mental Health Specialist at McLean Hospital. She is currently working in their schizophrenia and bipolar disorder inpatient unit and is interested in pursuing further education pertaining to trauma-focused treatment for people with psychosis.

schizophreniform disorder. Brief psychotic disorder is very similar, but symptoms only last between one day and one month. Schizoaffective disorder is also similar to schizophrenia, but patients experience symptoms of major mood disorder alongside those of psychosis. Schizotypal personality disorder is not always considered a psychotic disorder, but symptoms are somewhat similar and include cognitive distortions and eccentric behavior. Delusional disorder is categorized by experiencing delusional beliefs, which can include the idea that one is being conspired against or has a great talent that others fail to recognize. Catatonia is defined as decreased motor activity, decreased engagement, or excessive movement. It is difficult to classify because it can present as extreme agitation or flat affect. These conditions are much more complex than these descriptions allow, but they are generally categorized by the presence of delusions, disorganized thinking and motor behavior, negative symptoms, and hallucinations. These symptoms can be extremely disruptive of everyday life and often lead to suicidal ideation. In patients with schizophrenia, approximately 5% die by suicide, and close to 20% attempt suicide. The stigma surrounding these symptoms only leads to more distress for patients (Eliasson et. al., 2021). Furthermore, patients may have a difficult time discussing their symptoms with loved ones because they fear judgment. Thus, if therapists do not feel comfortable talking about trauma-related symptoms, patients may not have anyone in their life to talk with whom to talk about their hardships.

PTSD is distressing on its own, with symptoms like hypervigilance, the inability to experience positive emotions, avoidance of thoughts or external reminders related to the traumatic event, involuntary memories of the event, and dreams related to the event (American Psychiatric Association, 2013). Symptoms may also include depersonalization, which is characterized by feeling detached from oneself, or derealization, which is classified as feeling as though reality is not real. These symptoms are reminiscent of some aspects of psychotic disorders, like hallucinations and delusions, but are related to a specific event. The similarity between some symptoms of PTSD and psychosis supports the hypothesis that psychosis may sometimes stem from a traumatic event. PTSD is not rare, with an estimated 8.7% of Americans experiencing PTSD at some time during their lives. PTSD has been shown to be correlated with physical disability, as well as difficulty functioning socially and occupationally, and is associated with suicidal ideation. Studies have shown that people with PTSD have a high mortality rate and an increased risk for health conditions including cardiovascular disease, respiratory illness, and neurological diseases (Calhoun, 2006).

Both psychotic disorders and PTSD are associated with suicidal ideation, stigma, and decreased quality of life (American Psychiatric Association, 2013). Patients who suffer from both mental illnesses simultaneously experience the stigma and other associated risks for both disorders, potentially leading to worse outcomes. Increasing knowledge regarding the safety and efficacy of treating patients who are suffering from both disorders could greatly improve their quality of life and decrease mortality rates among people with these disorders each year. The purpose of this paper is to assess the safety and efficacy of the diagnosis of PTSD among psychosis patients and current treatment options for trauma-focused therapy for this population. This paper hopes to gain a better understanding and provide insight into how to best provide care for these patients.

"The strongest correlations were found between psychosis symptoms and sexual assault, bullying, and emotional neglect"

Literature Review

Diagnosis of PTSD

In order to improve treatment options for patients with comorbid psychosis and PTSD, it is important to first have a reliable method of diagnosis. In an attempt to determine if this is feasible, de Bont et al. (2015) created the Trauma Screening Questionnaire and administered it to 2,608 patients in long-term care facilities in the Netherlands. Participants were included in the study if they were diagnosed with a psychotic disorder or had psychotic symptoms with an ongoing mood disorder. They included adults aged 18 to 65 and excluded patients with a comorbid intellectual disability. The survey had been previously tested on non-psychosis patients and was shown to be effective in diagnosing PTSD. The survey included questions that screened for different types of trauma, including: sexual assault, severe neglect, physical abuse, emotional abuse, accidents, and natural disasters. In order to ensure safety, they administered the survey under the direction of a mental

Study	Meets Criteria for Diagnosis of Psychotic Disorder	Experienced at Least One Traumatic Event	Meets Criteria For Diagnosis of PTSD	Previously Diagnosed With PTSD
de Bont et al., 2015	100	100	16	0.5
Kilcommons and Morrison, 2005	100	94	53.1	5
Croft et al., 2018	100	83.8	n/a	n/a
Peach et al., 2021	100	67	27	n/a

Table 1: Percentage of Psychosis Patients Who Have Experienced Traumatic Events

Notes. Percentages of participants who meet criteria for diagnosis of PTSD and those who were previously diagnosed with PTSD were calculated from the percentage of those who had experienced at least 1 traumatic event.

health professional. Once the results were calculated, a second survey was administered to patients whose scores indicated a PTSD diagnosis. In order to ensure the validity of their results, the second survey was also completed by a randomly selected group of participants with few PTSD symptoms.

Their survey showed that 16% of the participants had diagnosable PTSD, but only 0.5% had been diagnosed previously. This result, shown in Table 1, signifies that 96.6% of the participants in this study who suffered from comorbid psychosis and PTSD had not been previously diagnosed with PTSD. These results are even more striking when compared to the rate of PTSD among the general population of the Netherlands, which is only 3.3%. The survey was shown to provide a correct positive result 44.5% of the time and correct negative result in 93.6% of the cases, which was found to be statistically significant.

After the results had been distributed, the participants were asked to evaluate their experience taking the survey in order to ensure that the diagnostic process was safe for this population. Zero participants expressed any negative impact of the survey on their mental health and most stated that they were relieved to be offered help with their PTSD symptoms. This is an extremely important result because it shows a potentially reliable way to diagnose psychosis patients with PTSD without causing distress. However, this study excluded patients who were being treated in a closed ward, meaning they potentially excluded patients with severe psychosis symptoms. It is also difficult to know if every participant with PTSD was correctly diagnosed because the sample size was too large to conduct in-depth interviews. However, these results are consistent with the established connection between psychosis and PTSD.

Kilcommons and Morrison (2005) also showed evidence for the connection between psychosis and PTSD by assessing 32 patients aged 18 to 60 with schizophrenia spectrum disorders being treated by psychiatric services in England. They used interview and self-report data to screen for the same types of trauma as de Bont et al. (2015) and included assessments for trauma exposure, psychosis symptoms, post-traumatic cognitions, and dissociative experiences. They found that 94% of the participants had experienced at least one traumatic event and 53.1% were diagnosed with PTSD, while only 5% of those had been previously diagnosed, as shown in Table 1. These findings are consistent with de Bont et al. (2015) and highlight how widespread the underdiagnosis of PTSD is in this population.

They also found that the severity of positive psychosis and PTSD symptoms were related to the severity of the traumatic experience. The data showed experiencing sexual assault was correlated with the highest rates of hallucinations, and higher scores on the dissociative experiences survey, specifically depersonalization, were significantly related to hallucinations. Patients may begin to experience paranoia and delusions following their trauma, which may either create or exacerbate underlying psychosis symptoms in

some people. This correlation highlights the importance of diagnosing this population with PTSD because, if this hypothesis proves correct in even some patients, treating their PTSD could potentially decrease their psychosis symptoms as well. These results are not generalizable because the participants were a small convenience sample and may not have spent enough time with a clinician to establish rapport. However, the results do demonstrate a potential relationship and therefore highlight the importance of developing a better understanding of this topic.

Another study was conducted in 2018 that attempted to provide more insight into the connection between psychosis and trauma. Croft et al. (2018) gathered longitudinal data from 4,433 participants starting before their birth and continuing until they were 18 years old. Data came from a larger study in the United Kingdom, but Croft et al. (2018) looked specifically at the data regarding psychosis symptoms and traumatic experiences. They controlled for family history of mental illness, Intelligence Quotient (IQ), and temperament as a child, among other potential confounding variables. Traumatic experiences were assessed using self-report measures from both the child and parent. They validated the results by collecting data again when the children were 22 years old.

> "Before beginning trauma-focused treatment for a patient with a psychotic disorder, the clinician should discuss the risks of the treatment and they should work together to determine if it is a safe option."

The results showed a strong correlation between traumatic experiences and psychosis symptoms, with participants who had experienced three or more types of trauma having 4.7 times the risk of experiencing psychotic symptoms when compared to participants who had never experienced a traumatic event. The strongest correlations were found between psychosis symptoms and sexual assault, bullying, and emotional neglect. Participants who experienced only one type of trauma were shown to be at an increased risk for psychosis symptoms as well. Physical abuse survivors had a 2.43 times greater risk of experiencing psychosis when compared to those with no traumatic experiences, emotional abuse survivors had 2.23 times the risk, sexual assault survivors had 3 times the risk, and bullying was correlated with 2.1 times the risk of experiencing psychosis symptoms. This highlights how important it may be to treat people for childhood traumatic events when the event occurs because it could potentially stop psychosis symptoms before they surface. More research is needed to determine if the correlation could be causative, but this study provides strong support of the hypothesis. Of the participants who experienced psychosis symptoms, 83.8% had experienced trauma, while only 62.2% of participants with no psychosis symptoms had experienced trauma, as shown in Table 1. This provides further support for a causal relationship between traumatic experiences and the development of psychosis. While more research is needed to confirm these findings, especially since more participants with childhood trauma dropped out of the study than those without, these results provide further evidence of a connection between traumatic experiences and psychosis symptoms.

Peach et al. (2021) conducted a study that relied more heavily on interview data than the previous studies. They recruited 66 participants who were experiencing first episode psychosis from an early intervention center in Australia. They conducted interviews to assess psychosis symptom severity, childhood traumatic experiences, PTSD symptoms, and demographic information, and recorded the content of five hallucinations and five post-traumatic intrusions for each participant. They found that of the 67% of participants who experienced childhood trauma, 82% also experienced hallucinations, and 55% also experienced post-traumatic intrusions. Of the 55% of participants with childhood trauma and post-traumatic intrusions, 92% also experienced hallucinations. The high rates of hallucinations in participants with a history of childhood traumatic events provides support for the relationship between PTSD and psychosis.

Researchers also analyzed the content of hallucinations from the population that experienced trauma and hallucinations. They found that 78% of participants had experienced at least one hallucination that was similar to their traumatic event. Most participants in this category also experienced at least one hallucination that was deemed unrelated to themes present in their traumatic event. A large number of participants experienced hallucinations similar to their traumatic experiences, which could potentially be treated through trauma-focused treatment. As shown in Table 1, results showed that 27% of participants suffered from

comorbid PTSD, which was found to be higher than the rate of PTSD among the general population of Australia. More research needs to be conducted in this area in order to determine if there is a true connection between traumatic experiences and hallucination content because 81% of the hallucinations recorded did not have similar content or themes to traumatic experiences of the participant. If there is an association between themes of psychosis symptoms and traumatic events, it could provide insight into how to best treat PTSD among psychosis patients.

The first part of this study was conducted a few years earlier (Croft et al., 2018) and Peach et al. (2021) found similar results using self-report measures. They found post-traumatic avoidance to be correlated with the severity of hallucinations and that post-traumatic intrusions were correlated with the severity of delusions. In other words, patients who experienced certain types of trauma-related symptoms experienced more severe psychosis symptoms. These results, while not necessarily generalizable to older populations, show there is a potential connection between traumatic experiences early in life and first-episode psychosis that could be helped with early intervention.

> "After the 8 weeks of therapy concluded, patients who received trauma-focused treatment showed a decrease in both PTSD and some psychosis symptoms, including paranoid thoughts."

Quality of Life in Psychosis Patients with PTSD

Many studies focus on underlying PTSD among psychosis patients, but Kilcommons et al. (2008) assessed underlying psychosis symptoms among a group of survivors of sexual assault. Participants were recruited from local support centers and colleges, and were excluded from participating if they had a history of psychosis symptoms prior to the assaults. Researchers included a convenience control group that was recruited from local colleges and ensured that the age range was similar to the group of sexual assault survivors. Using a combination of self-report and interview measures, they assessed auditory and visual hallucinations, delusions, PTSD symptoms, and dissociative experiences. Results showed 100% of the survivors had experienced delusional ideation to some degree, 90% selected "yes" for at least one of the questions related to auditory hallucinations, 92.5% selected "yes" for at least one question related to visual hallucinations, and 65.8% reached the threshold for a diagnosis of PTSD. Some of the assaults took place many years prior, so not all participants were still experiencing the symptoms required to be diagnosed with PTSD at this time. The results of this study may be more extreme than studies that assess different forms of trauma because most studies (Croft et al., 2018) have found that sexual assault is typically more strongly related to psychotic symptoms than other types of trauma. The population mostly consisted of a small group of white women, so more research would need to be conducted in this area in order to provide generalizable results. However, this data is consistent with the correlation previously demonstrated between psychosis symptoms and experiencing traumatic events.

It is important to estimate the impact that symptoms of comorbid PTSD and psychosis have on patients' lives in order to determine if treatment would be worth the potential risks to this population. Calhoun et al. (2006) assessed these factors among 165 veterans with a primary diagnosis of schizophrenia or schizoaffective disorder who were admitted to the Veterans Administration Hospital between 1998 and 2000. Participants took a survey assessing their physical and mental health in order to estimate their quality of life. In addition, their medical history was obtained to determine if there was a quantitative difference between the number of visits to the hospital in patients who suffer from schizophrenia and those who also have comorbid PTSD. Among the 41% of participants who had comorbid PTSD, scores on the quality of life surveys were significantly lower for mental health and slightly lower for physical health. Participants with comorbid PTSD also visited the hospital more than patients without PTSD. These results demonstrated the need for research to assess treatments for the comorbidity of PTSD and schizophrenia because their quality of life is worse than those with only schizophrenia. This study may not be generalizable because it only included male veterans and did not control for how long they had been out of combat.

Treatment of PTSD for Psychosis Patients

Therapists have expressed concern over trauma-focused treatment for psychosis patients because they are worried

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that talking about trauma with these patients would be too risky for their mental health. However, van den Berg et al. (2016) provided support that this reaction does not typically occur. They gathered a group of 16 therapists from the Netherlands specializing in psychosis with no experience in trauma-related therapy and trained them in cognitive behavioral therapy. They assessed the therapists' opinions about trauma-focused treatment for psychosis patients before and after treatment. Many of the therapists were concerned that treating this population for PTSD would have a high burden of care. However, when researchers followed up with participating therapists two years after the study had concluded, every therapist who was still working with psychosis patients was still using trauma-focused treatment. This study had a small sample size, and the therapists had strict protocols to follow, so it might not be generalizable to every clinician, but the results provide support that therapists should not assume treating this population will always cause harm to either party. The aggregate symptoms of the 79 patients improved over the course of treatment, regardless of their therapist's original feelings toward using trauma-focused treatment for this patient population. Even if clinicians are nervous to begin trauma-focused treatment among this population, preliminary results provide support that it is safe and effective.

Another study investigated the response of psychosis patients to trauma-focused therapy (Tong et al., 2017). They recruited participants from a treatment center in Australia with current symptoms related to a traumatic event and either a psychotic disorder or a mood disorder with psychotic symptoms. They taught participants about the physical symptoms of both PTSD and psychotic disorders in order to help them understand their trauma and how it impacts their psychosis symptoms. Patients also documented the timeline of their trauma, which has been shown to provide therapeutic results similar to exposure therapy. The therapists taught patients how to determine if they were really in danger and how to calm down if the panic stems from trauma-related symptoms rather than a true threat to safety. Throughout this process, participants were asked to document their thoughts about the treatment and their level of distress. While some participants felt an increase in overall symptoms at the beginning of therapy, 86% showed clinically significant improvement in both psychotic and PTSD symptoms by the end of the study. This study showed that trauma-focused treatment should be conducted in a controlled environment where the patients can receive consistent help because 25% of the patients experienced an increase in suicidal ideation at the beginning of the treatment. However, every participant in the study said the treatment was worth the discomfort and helped them overall. This result provides evidence that people with psychosis may be able to withstand the difficulties of trauma-focused treatment. Further research should be conducted in order to determine which types of trauma-focused treatment have the lowest risk of increased suicidality.

There is preliminary research detailing the results of eye movement desensitization and reprocessing (EMDR) and prolonged exposure therapy for psychosis patients, including a study conducted by de Bont et al. (2016). They gathered 155 patients with a lifetime psychotic disorder and comorbid PTSD from Dutch outpatient services. Patients were excluded if they changed medication during the experimental time-frame. Participants continued their psychosis-related therapy and either received EMDR, prolonged exposure therapy, or no additional therapy. The control group waited until the trial was finished, and they received the treatment of their choice in order to maintain an ethical trial. Therapy included weekly 90-minute sessions for 8 weeks. They measured psychosis symptoms, depression, and social skills through self-report surveys, and therapy sessions were supervised in order to ensure protocol was followed.

After the 8 weeks of therapy concluded, patients who received trauma-focused treatment showed a decrease in both PTSD and some psychosis symptoms, including paranoid thoughts. A few patients went into remission from their psychotic disorder, but most saw no changes in frequency of auditory or visual hallucinations or social skills due to the treatment. Prolonged exposure therapy showed greater decreases in symptoms than EMDR treatment.

Six months after therapy ended, de Bont et al. followed up with the participants, in a study published in 2018. Participants who received EMDR had a greater reduction

in symptoms than they did directly following the 8 week therapy period, indicating that they continued improving after treatment ended. Patients who received prolonged exposure showed the same symptom severity as they did directly following treatment, suggesting their improvements were well maintained after treatment terminated. They reassessed the effect after one year and found the same results. Their study showed that, although trauma-focused treatment didn't decrease depressive symptoms or visual or auditory hallucinations, it did reduce paranoid and delusional symptoms and PTSD symptoms. This prolonged reduction of symptoms provides strong support that there may be a treatment for PTSD among people with psychotic disorders that could improve their quality of life.

Discussion

The results from the studies above show that there are a significant number of people who meet the criteria of diagnosis for a psychotic disorder and PTSD who are unable to receive effective care for their mental illnesses. Because clinicians believe that these patients are unable to manage even talking about their traumatic events (van den Berg, 2016) and there are many people suffering with no one to talk to, the burden of care is placed on the patient because their therapist will often not attempt to assess their trauma history. Due to the high rate of comorbidity found in these studies, trauma-focused informational resources should be made available to every person with a psychotic disorder. Screening protocols should be implemented in order to deliver informed treatment that targets all of the symptoms that are decreasing their quality of life. More research is necessary to determine which screening tools are best at assessing trauma-related symptoms in this population. The creation of a new screening tool may be necessary in order to effectively separate psychosis symptoms from PTSD symptoms while causing as little harm as possible because discussing trauma history may cause psychotic symptoms to increase (Tong et al., 2017). Therapeutic rapport may need to be established before these screening tools can be used in patients who experience paranoid delusions.

> "Thus, if therapists do not feel comfortable talking about trauma-related symptoms, patients may not have anyone in their life to talk with whom to talk about their hardships."

Overall, the studies found that patients with psychosis were relieved to be able to discuss their trauma with a therapist and said the treatment was worth any discomfort they experienced (Tong et al., 2017). However, it is still important to note the increase in psychosis symptoms and suicidal ideation that occurred in some patients. Before beginning trauma-focused treatment for a patient with a psychotic disorder, the clinician should discuss the risks of the treatment and they should work together to determine if it is a safe option. They should also create a plan in the event their symptoms increase, including coping mechanisms geared toward each patient's specific symptoms and a support system they can turn to. The patient should spend time practicing the coping mechanisms before the onset of treatment and members of the support system should be informed of the possibility that they may be asked to help. The support system may include a clinician, family, or friends who the patient would feel comfortable going to for reality testing or to discuss difficult thoughts they may be having. They should discuss the possibility of suicidal ideation during the course of treatment and have specific steps in place if these thoughts occur.

Another main concern surrounding trauma-focused treatment for patients with psychotic disorders is the impact it will have on the mental health of treating clinicians. The studies in this review found that these concerns were eased upon delivering the treatment. This may not be true for every clinician, for example those with a history of trauma in their lives may have difficulty delivering trauma-focused treatment, but they should still be aware of the potential benefits of the treatment for their patients. Clinicians can then work together with their patients to make informed decisions about the best method of treatment.

There is little research about which trauma-focused treatments are most safe and effective among this population, so more studies should be conducted in order to determine which treatments should be utilized. Educating patients about the symptoms of PTSD and psychosis may be a safer alternative for patients with a history of severe suicidal ideation. Trauma-focused treatment may not be effective alone because delusions and hallucinations do not always stem from trauma (Peach et al., 2021), but patients should not be excluded from education or treatment due to their psychotic disorder diagnosis.

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