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Substance Use and Homelessness in People with Schizophrenia



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ABSTRACT

Schizophrenia is a severe mental disorder that affects how a person feels, thinks, and behaves. Individuals living with schizophrenia typically have symptoms such as hallucinations, delusions, and disorganized speech or thought. These symptoms can be so severe that they can affect everyday activities such as work, school, social interaction, and self-care. Without proper diagnosis and treatment, schizophrenia can result in severe complications that can drastically affect every area of life. The purpose of this review was to explore the link between schizophrenia, substance use, and homelessness. In homeless and poorly adherent individuals with serious mental illness, a multidisciplinary treatment approach and medications may reduce homelessness and improve mental illness symptoms.

INTRODUCTION

Schizophrenia is a chronic and severe mental illness treated with the correct medications and psychosocial support. About 75% of those with schizophrenia usually develop symptoms between ages 15 and 25 [1]. Nearly half of the affected individuals suffer from substance use disorders, homelessness, anxiety, and depression [1]. The National Institute of Mental Health (NIH) describes schizophrenia as persistent and disabling if left untreated [2]. People with schizophrenia may seem distant from reality, causing significant distress for the individual and their loved ones. Individuals experiencing symptoms of this mental illness, such as hallucinations, delusions, or disorganized speech, may have difficulty completing everyday tasks, hold a job, or participate in school due to the severity of their symptoms [2]. During this stressful time, it is common to develop substance abuse problems, leading to hospitalization, loss of employment or housing, and other legal issues. Our research seeks to explore the relationship between schizophrenia, substance use, and homelessness. Previous studies have shown that people with schizophrenia have a higher risk of substance use and homelessness than those who do not have schizophrenia. Research questions include how schizophrenia impacts the prevalence of substance use and homelessness and how substance use and homelessness ultimately affect symptoms of schizophrenia.

BACKGROUND

The National Alliance of Mental Illness (NAMI) propagated, the estimated prevalence of schizophrenia in US adults is 0.25%-0.64% [3]. Research suggests multiple causes of schizophrenia, including genetics, environment, brain chemistry, and substance abuse. About 80% of the risk for schizophrenia comes from genetic and epigenetic factors [1]. A large body of evidence has shown that substance use in the early years can increase one's risk for schizophrenia. As illustrated in Figure No. 1. nearly half of patients with schizophrenia also acquire a substance use disorder, which can contribute to treatment nonadherence, relapse, incarceration, homelessness, violence, suicide, and a poorer prognosis [1]. Homelessness is common in people with mental disorders such as schizophrenia, with the prevalence of homelessness ranging from 25% to 50% across the world [4].



Figure No. 1: Homelessness and substance use disorders are common in people with schizophrenia.

Characteristics of Schizophrenia

Diagnosing schizophrenia is executed by a health care provider who evaluates symptoms for six months and must rule out all other possible conditions such as tumors or other psychiatric disorders [3]. Schizophrenia, according to the DSM-5, includes two or more of the following symptoms: delusions, hallucinations, disorganized speech, grossly disorganized or catatonic behavior, and negative symptoms (see Figure No. 2). The impact of disturbances associated with this disease must persist for at least six months and include at least one month of active-phase symptoms [1]. Stress and the use of drugs and alcohol tend to increase these symptoms and cause them to have a higher rate of developing co-occurring medical conditions such as heart disease and diabetes, leading to an early death. Schizophrenia can occur at any age, but it is often diagnosed in the late twenties to early thirties. Schizophrenia is more commonly diagnosed in males between ages 15-25, while women tend to be diagnosed later at age 25-35 [1]. However, there are risk factors and cognitive abnormalities associated with schizophrenia that can be identified as early as age 4 [5].

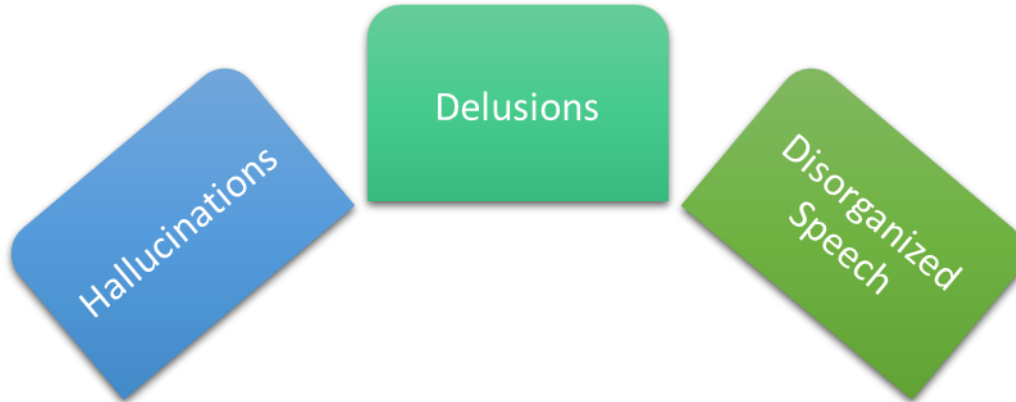


Figure No. 2: Schizophrenia includes one or more symptoms such as hallucinations, delusions, or disorganized speech.

Case Study

Patient A was a 30-year-old woman diagnosed with schizophrenia. The police brought this patient to the emergency room after she was found roaming the streets with no shoes screaming at people. She tested positive for methamphetamines and was admitted for psychiatric evaluation. During interactions with her, she expressed that she was homeless and has used methamphetamines for a few years. She had a strict upbringing and suffered from mental illness starting in her teenage years. After many years of suffering from an unknown mental illness, she was finally diagnosed with schizophrenia in her early 20s.

She could not graduate from high school, which caused her stress levels to be significantly elevated. The substances caused her to become too delusional, paranoid, and disorganized. Her drastic behavior change took a toll on her relationships with her family and friends as they began to ignore and avoid her. With no appropriate educational background, she struggled to obtain a job and could not make money, leading to becoming homeless. During her time being homeless, she began using drugs to cope with stress.

She experienced delusional thoughts, auditory hallucinations throughout her stay in the hospital and struggled to form coherent conversations with others. She seemed very pleasant and was compliant with her plan of care; however, her ability to remain compliant with treatment is

indeterminate. During the conversation, she expressed her desire to quit using methamphetamines and other substances because she was convinced that drug use led to brain damage. She seemed unaware of the effect her diagnosis has on her life, but it was reassuring to hear that she desired to take better care of her body.

LITERATURE REVIEW

The purpose of this literature review was to summarize the evidence related to the relationship between schizophrenia, substance use, and homelessness. Databases, including university online library journal database, Google Scholar, PubMed, Clinical Key, and CINHALL, were used to formulate this literature review. All sources were published between 2016 and 2020. Additionally, common search items included schizophrenia, substance use, homelessness, mental health, and mental disorder. Results were then narrowed based on full-text sources, article publication date, and peer-reviewed journal publications.

Substance Use

A long history of association between substance use and mental illness exists [6]. Substance use such as methamphetamine, cocaine, cannabis, and alcohol can potentially induce acute psychosis in individuals using. Studies support that acute episodes of substance-induced psychosis can convert to more chronic psychotic disorders such as schizophrenia [6]. Substance use in schizophrenia is often associated with a worsening clinical state, impaired cognitive functioning, and premature death by suicide [7]. Substance use is often used as a coping mechanism when dealing with the stress of stigma associated with mental illness and symptoms of their illness. Individuals with schizophrenia have a higher risk of using substances compared to the general population [8].

Petersen *et al.* [8] investigated the association between a diagnosis of schizophrenia and the risk for developing substance abuse using a longitudinal design. The sample included a group of individuals who were diagnosed with schizophrenia. The researchers followed the cohort for several years and found that within the first year after being diagnosed with schizophrenia, the risk for developing substance abuse was at its highest. They found that over time the risk for substance use is reduced but still significant after 10-15 years. Overall, they found that

schizophrenia was significantly associated with the development of any substance abuse. This study emphasizes the importance of preventing substance abuse and integrating treatment of individuals diagnosed with schizophrenia [8].

Housing

As previously mentioned, homelessness is prevalent in people with mental disorders, such as schizophrenia, ranging from 25% to 50% worldwide [4]. In a systematic review to estimate the prevalence of schizophrenia and other psychotic illnesses among homeless people, one significant finding was that there were higher rates of schizophrenia among homeless people compared to the general population [4]. This suggests the need for improved prevention mechanisms, detection, and treatment of schizophrenia among homeless people.

Furthermore, it is thought that homeless people with schizophrenia who seek housing and treatment are limited to institutionalized settings, such as psychiatric hospitals or institutions. These settings are typically viewed as restrictive and less therapeutic than independent housing [9]. One study sought to challenge the idea that such settings lead to worse treatment results [9]. The authors explored the outcomes of independent housing options for homeless people with schizophrenia. They compared it to other residential settings, such as assessing social integration, health status, quality of life, and feelings of choice. They also found that independent housing was associated with improved accommodation outcomes for homeless populations [9].

In another longitudinal study, Jones *et al.* [6] aimed to investigate how risk exposures contribute to psychotic symptoms among adults living in precarious housing or were otherwise homeless. Participants were recruited from hotels and went through a baseline assessment, including an interview, mental status exam, focused neurological exam, history of past hospitalizations, screening laboratory tests, and also assessed medication lists. Psychotic symptoms and substance use were all recorded throughout the study. Many of these hotel participants had experienced past psychotic disorders and substance use. Over time, they identified that “people living in precarious housing or homelessness demonstrated an increased risk for psychotic features” (delusions and hallucinations), and these features were prominent and associated with functional impairment, especially when they had a history of a psychotic disorder [6]. They also found that

the use of methamphetamine, alcohol, and cannabis each showed association with psychotic features in this vulnerable population.

Treatment Adherence and Homelessness

Homeless people with schizophrenia have a more challenging time adhering to their medications. Medication noncompliance may lead to a greater risk of relapse, hospitalization, suicide, criminal behavior, and victimization [10]. Rezansoff *et al.* [10] conducted a randomized controlled trial to determine whether a housing intervention known as Housing First would increase medication compliance among homeless patients with schizophrenia. They randomly assigned 297 patients to one of three groups: scattered-site Housing First, congregate Housing First, or treatment as usual (control group). The scattered-site Housing First condition was paired with Assertive Community Treatment (ACT). It provided the participants with their apartment and 24/7 access to an ACT team comprised of psychiatrists and other multidisciplinary support. Interestingly, it did not require more than once-weekly meetings with the treatment team. The congregate Housing First condition housed participants in their hotel rooms with on-site, 24/7 support from a multidisciplinary team that provided structured, mandatory congregations, including communal meals.

Furthermore, the control group received no housing services and supports; however, most participants did live in a neighborhood with a fair amount of medical and social services targeted to the needs of homeless people [10]. Researchers found the highest rates of medication adherence to be within the scattered-site Housing First group. These participants had nearly twice the rate of compliance as those in the control group [10]. The researchers suggest that only increasing access to medications may not be enough to improve adherence. Instead, a combination of appropriate housing with ACT is a better means of increasing adherence to antipsychotic treatment among homeless people with schizophrenia [10].

In another randomized controlled trial, researchers examined the long-term effects of Housing First in homeless people with severe mental disorders such as schizophrenia [11]. Over two years, the researchers reviewed social recovery, cognitive symptoms, and quality of life among homeless people who needed intense support through mental and physical health services. They included homeless participants diagnosed with schizophrenia and randomly assigned them to

Housing First or treatment as usual [11]. Additionally, the researchers collected data every six months throughout the two years. They found that Housing First participants displayed more remarkable social recovery, enhanced quality of life, and improved mental health symptoms, suggesting that Housing First is an effective intervention to aid homeless people with schizophrenia [11].

Summary of Literature

As illustrated in Figure No. 3, people struggling with schizophrenia face many challenges that can lead them to resort to inadequate coping mechanisms, such as substance use, and ultimately lead them to become homeless. The literature review has shown a significant link between schizophrenia, substance use, and homelessness. It was identified that not only are schizophrenic patients at higher risk for developing a substance use disorder, but their substance use can also contribute to worsening symptoms of schizophrenia. Homelessness seems to have the same effect. Patients are at their highest risk of developing a substance use disorder within the first year of their diagnosis due to the increased stress associated with the disease. The presence of schizophrenia is also linked with higher morbidity and mortality rates related to suicide, substance use, and alcohol use [4]. The risk for premature death is 3.5 times greater in people with medical illness than in the general population, and schizophrenic patients die more than 20 years prematurely on average [1].



SCHIZOPHRENIA

Homelessness

Substance Use

Causes	Risk-Factors	Interventions
<ul style="list-style-type: none">•Unable to hold a job•Stress from battling demands of the world•Unable to complete everyday tasks•Unable to form relationships•Peer rejection•Bullied•Inadequate coping•Stigma•Unaware of the effects of diagnosis on life	<ul style="list-style-type: none">•Premature death•High suicide rate•Poverty•Poor quality of life•Psychotic features•Delusions•Hallucinations•Victimization•Comorbid health conditions•Poor health maintenance behaviors•Increased chance of substance use in the first year of schizophrenia diagnosis	<ul style="list-style-type: none">•Assist with housing•Provide support•Ease access to healthcare•Provide early assessment and education•Educate on stress adaptation strategies•Administer antipsychotic medications•Provide assertive community treatment•Provide communal meals•Encourage family relationships

Figure No. 3: Causes, risk factors, and interventions for people suffering from homelessness and substance use disorder related to schizophrenia.

SUMMARY

Individuals with schizophrenia are at greater risk for poor health maintenance behaviors, substance use, poverty, and homelessness [1]. This finding was consistent across multiple studies reviewed in the literature that included previous evidence. Early assessment plays a crucial role in improving the prognosis for those with schizophrenia. Proper assessment, diagnosis, and treatment are essential components for decreasing comorbidities related to schizophrenia and preventing premature death.

Research has repeatedly shown that early intervention is a priority to helping individuals at risk for schizophrenia. Without early detection and prevention strategies, this vulnerable population may continue to get into this awful substance use cycle and homelessness. Research has just begun looking into early signs of schizophrenia, even before the first psychotic episode, and found that social and cognitive impairments develop much earlier, and prevention should start there [5]. Some possible strategies for prevention in at-risk groups include improving maturation of neuronal pathways, use of probiotics, omega-3 fatty acids, choline supplements, antioxidants, stress adaptation strategies, prevention of drug use, reducing bullying and peer rejection by more targeted anti-bullying and individual coaching programs, improving familial relationships, improving resilience with use of cognitive remediation, and physical exercise [5]. Specific interventions, such as adequate assessment and the use of antipsychotic medications, put in place earlier in their diagnosis can help reduce risk factors such as substance use and stress [7]. Most of these prevention strategies specifically target stressful situations that this population may face and focus on modifiable risk factors.

Intervention strategies should focus on modifiable risk factors and improve mental health care within hospitals. People who suffer from mental health disorders and substance use disorders do not receive appropriate care related to barriers in the health care system [12]. Several approaches are available to improve health care and outcomes in vulnerable populations, such as new payment options and educational programs on mental health and substance use for nurses and physicians. The World Health Organization (WHO) indicated that more than 69% of people diagnosed with schizophrenia do not receive adequate care and are less likely to seek care [13]. Lack of access to mental health services is an issue that most of those with mental disorders face.

Evidence from literature has shown that schizophrenia is treatable with medications and psychosocial support [13].




CONCLUSION

Schizophrenia is a severe mental illness that requires early attention before it leads to substance use and homelessness. Symptoms of schizophrenia can be hard to manage at times and can prevent someone from forming relationships, completing everyday tasks, and holding a job. While there is no cure for schizophrenia, research has shown that early interventions and medications can help treat the disorder. Early intervention measures should focus on stress reduction techniques to prevent drug use and help patients form better relationships. Schizophrenic patients need extensive support, access to proper healthcare, and education earlier in their diagnosis to prevent further decline. This cycle of battling symptoms of schizophrenia and trying to meet the demands of the world is very stressful and can eventually lead to homelessness. Mental illness among the homeless is prevalent, and unfortunately, there are higher rates of schizophrenia among homeless people than the general population [4]. Housing First and other homeless programs have been effective at improving the quality of life with these individuals; however, intervention needs to be made far before getting to this point.

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