

## Review Article

# Schizophrenia and Sexual Behaviour

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## Abstract

Schizophrenia is a chronic and severe mental health condition characterized by a range of symptoms, including hallucinations, delusions, disorganized thinking, and speech difficulties. Sexual behaviour in individuals with schizophrenia can be affected by a combination of factors, including the symptoms of the condition, medication side effects, social factors, and personal beliefs and values. Research suggests that individuals with schizophrenia are more likely to have issues with intimacy, experience difficulties with sexual functioning, and engage in risky sexual behaviour. Treatment strategies for these issues may include addressing the underlying causes of sexual dysfunction, developing appropriate communication skills, and providing support to promote healthy sexual relationships. Overall, understanding the complex relationship between schizophrenia and sexual behaviour is important for promoting the overall wellbeing of individuals living with this condition.

**Keywords:** Schizophrenia; Sexual behaviour; Sexual diseases; Medication

## Introduction

Recurrent or ongoing psychotic episodes characterise a mental illness called schizophrenia. Hallucinations (which generally involve hearing voices), delusions, and disordered thinking are among the main symptoms. Apathy, reduced emotional expressiveness, and social withdrawal are other signs. Symptoms often start in early adulthood, come on gradually, and often never go away. The diagnosis is based on observable behaviour, a history that includes the person's reported experiences, and observations from those familiar with the person; there is no objective diagnostic test. For schizophrenia to be diagnosed, symptoms and functional limitations must be present for six months (DSM-5). Numerous individuals with schizophrenia also suffer from other mental illnesses, particularly substance abuse, depression, anxiety, and obsessive-compulsive disorder. In their lifetime, 0.3% to 0.7% of people are given a schizophrenia diagnosis. An estimated 1.1 million new cases were reported in 2017, and there would be 24 million cases worldwide by 2022 (WHO, 2022).

Positive, negative, and cognitive symptoms are used to categorise schizophrenia symptoms. According to definitions, schizophrenia is a neurodevelopmental condition that lacks a clear aetiology and is believed to result from gene-environment interactions with risk factors (Gejman, Sanders, Duan, 2010).

Due to the potential involvement of numerous and varied insults from conception through adulthood, the interactions of these risk factors are complicated. Without interplaying environmental circumstances, a genetic propensity by itself will not result in the emergence of schizophrenia. Because of the genetic component, prenatal brain development is compromised, and environmental factors have an impact on postnatal brain development. There is evidence that genetically predisposed children are more likely to be affected negatively by environmental risk factors.

Numerous individuals with schizophrenia may also suffer from one or more additional mental illnesses, such as panic disorder, obsessive-compulsive disorder, or substance use disorder (Bucklet, Miller, Lehrer, Castle, 2008). Substance use disorder and antisocial personality disorder both raise the risk of violence when they coexist with schizophrenia. The risk of suicide is further increased by co-occurring substance use disorders. Delusional disorder, social anxiety disorder, avoidant personality disorder, and schizotypal personality disorder all include non-bizarre delusions as well as social isolation. The symptoms of schizotypal personality disorder are comparable to those of schizophrenia, but they are less severe. Obsessive-Compulsive Disorder (OCD) and schizophrenia co-occur significantly more

frequently than could be explained by chance. Yet, it can be challenging to distinguish obsessions that happen in OCD from the delusions of schizophrenia. There may be a large degree of overlap with post-traumatic stress disorder symptoms.

One of the most important aspects of daily living is sexuality. Research throughout the years has demonstrated how somatic illnesses, substance abuse, and psychiatric conditions affect the human body and sexuality. Studies of schizophrenia patients have typically concentrated on the dysfunctional effects of antipsychotic drugs and their lasting consequences on sexuality. According to a contentious study, people with schizophrenia typically exhibit higher levels of dysfunctionality than people in the general population, as well as less interest in and competency with sexual activity. Recent research shows that even though the majority of patients with schizophrenia experience sexual dysfunctions as a side effect of antipsychotic treatment, physicians often avoid discussing sexual concerns when treating patients with severe mental illness. A key unmet treatment requirement for people with schizophrenia is, according to surveys, the lack of therapy for personal and intimate relationships.

Mental health experts do not generally worry about their schizophrenia patients' sexual functioning. Caretakers have questioned, though: Is there sex after schizophrenia? It is widely believed that persons with schizophrenia always experience sexual dysfunction. Discussions about sexuality with patients regularly cause mental health practitioners to feel quite uncomfortable. However, they also understand the physiology of the human sexual response, the causes of sexual dysfunction, and the numerous therapy options that could help their patients. Physicians have an unfounded misconception that talking about sexual matters with patients who have schizophrenia may result in delusional preoccupations. Patients with schizophrenia have a poor ability to establish and maintain fulfilling, close relationships due to the nature of their illness. They frequently lack the psychosocial and sexual abilities required to form and sustain intimate bonds. Additionally, individuals typically encounter neuroleptic pharmaceutical side effects that negatively affect their sexual function. These elements work together to explain the high prevalence of sexual dysfunction in groups of patients with mental illnesses.

Numerous researches has examined the sexual behaviour and life of people with schizophrenia. According to Collins and Kellner, most schizophrenia patients have lessened sexual thoughts, impulses, and behaviours. In a study of 51 women with schizophrenia, it was discovered that they had considerably delayed sexual maturation as well as reduced levels of arousal and sexual engagement as compared to a control group of 101 gynaecological patients. In contrast to 13.4% of controls, Friedman and Harrison discovered that 60% of schizophrenic women had never orgasmed. Additionally, they discovered that female patients with schizophrenia had a higher prevalence of sexual abuse; the abuse had taken place both before they developed the illness, mainly during childhood, and after the development of psychotic symptoms. McEvoy et al. examined 23 women with schizophrenia who were getting neuroleptic treatment on an inpatient unit, and they discovered that the majority of them were both interested in and engaged in sexual activity.

The scant evidence so far suggests that persons with schizophrenia frequently experience sexual problems. Ghadirian et al. (1982) reported sexual dysfunction in 54% of males and 30% of females in a sample of 55 outpatients with schizophrenia treated with conventional antipsychotic drugs. In a more recent

study, 82% of men and 96% of women with schizophrenia had sexual dysfunction, according to a self-completed gender-specific questionnaire (Macdonald et al., 2003). When evaluating the success of a patient's treatment for schizophrenia, terms like the quality of life and level of functioning have grown in importance (Malla et al., 2006). Most people concur that sexual health and fulfilment should be fundamental components of quality of life (Mallis et al., 2006). According to a recent study (Olfson et al., 2005), sexual dysfunction in male patients with schizophrenia was linked to poorer quality of life, fewer romantic relationships, and less intimacy once relationships were established.

According to Sullivan et al. (Sullivan and Lukoff, 1990), 30–60% of patients with schizophrenia reported sexual dysfunction. A high prevalence of sexual dysfunction was noted in both patient groups in research [4] that included 20 drug-free male schizophrenia patients, 51 male schizophrenia patients receiving antipsychotic treatment, and 51 healthy controls. Erection and orgasmic impairments were primarily noted in treated subjects. Many untreated patients, though, reported a decrease in the frequency of sexual thoughts. In both male and female patients with schizophrenia, substantial rates of dysfunction were found in all areas of sexual functioning (desire, arousal, and orgasm), according to a study by Fan et al. These findings concur with earlier studies that used comparable patient samples (Sullivan and Lukoff, 1990; Macdonald et al., 2003) and looked at rates and features of sexual dysfunction.

It might be difficult to evaluate sexual functionality in people with schizophrenia. There is currently no standard tool or procedure for evaluating sexual functionality in schizophrenia patients. Sexual dysfunction in people with schizophrenia may be caused by a variety of elements, including the illness itself and its psychological effects. The study showed that lower orgasm and arousal in female patients were linked to both positive sensations and general symptoms (anxiety, depression etc.). Positive symptoms were linked to fewer sexual encounters among male patients. Additionally, it was discovered that in female patients, orgasmic trouble was linked to depression. But among male patients, there was no conclusive link between depression and sexual dysfunction. Although there are some changes, these findings are similar to those in earlier research.

The prevalence of sexual fancies and dreams did not differ between a group of chronically psychotic patients and controls, but the patients had a significantly lower interest in sex, lower frequency of intercourse, and worse satisfaction from sex. The frequency of sex and satisfaction from it were influenced by psychopathology severity, while interest in sex was influenced by the duration of institutionalisation. Schizophrenics had a range of sexual disorders, but there was a significant difference between the sexes in thought and perception disturbances (Lyketso, 1983). The open mental hospital's social life and that of the neighbourhood are not disturbed by the patient's sexual issues.

### Sexual Diseases

Regarding the human immunodeficiency virus spread, the chronically mentally ill make up a previously overlooked category (HIV). Due to their propensity to switch between casual sexual partners rather than maintaining monogamous relationships, these people are at risk of developing STDs. Due to their great mobility and tendency to move around a lot, together with their low socioeconomic level, they frequently interact

with other high-risk HIV populations. Psychosis may cause them to act more recklessly and with impaired judgement. Additionally, co-occurring substance misuse may make matters worse. In a study of 60 young schizophrenic women, Abernethy et al. discovered that two-thirds of them had engaged in sexual activity, the majority with many partners; just 25% used regular contraception, and 75% had not used any kind of contraception at the time of their most recent sexual encounter. Therefore, not only are these patients not engaging in safe sex, but this population also has a higher risk of becoming pregnant unexpectedly. Healthcare providers should evaluate the amount of knowledge about the disease, its transmission, and prevention among persons who may be at risk because education about safe sexual behaviours is now the only way to stop the spread of AIDS. To quantify the risk of HIV infection, Cournos et al. tried to identify the rates of pregnancy and the forms of sexual conduct among 95 individuals with schizophrenia. They discovered that 44% of the 95 patients with schizophrenia who were receiving treatment as either inpatients or outpatients had engaged in sexual activity in the six months prior, with multiple partners being involved in 66% of these cases. A younger age, a lower level of functioning, the occurrence of delusions, and more positive symptoms were all linked to having several sexual partners. In 12% of the sexually active patients, at least one partner had been identified as an IV drug user, HIV-positive, or both.

### Medication and Sexual Behaviour

There have been few research evaluating various antipsychotic medications in connection to sexual dysfunction, and the results have been mixed. In a group of 60 males with schizophrenia, Aizenberg et al. (2001) found that those on clozapine performed better in terms of desire, orgasm, and sexual pleasure than those taking traditional antipsychotic drugs. Male patients were divided into 3 treatment groups in prospective research (Wirshing et al., 2002): clozapine, risperidone, and a fluphenazine/haloperidol group. All three groups demonstrated a decline in sexual function; however, the clozapine group saw a statistically significant reduction in sexual attraction compared to the other two groups and a statistically significant reduction in erection and orgasmic dysfunction compared to the risperidone group. However, there was no discernible difference between the two therapy groups in terms of the incidence of sexual problems in a different trial that included 100 schizophrenia patients treated with clozapine and 53 treated with haloperidol (Hummer et al., 1999). Patients on clozapine in Fan's trial did not demonstrate improved sexual functioning as compared to those taking olanzapine or traditional medications. Patients who were taking clozapine had considerably higher scores, indicating that their symptoms were more severe. This may have contributed to their prescription of clozapine rather than being the cause of their sexual dysfunction. It should be highlighted that comparisons of sexual functioning between treatment groups should be done cautiously because patients were not randomly assigned to antipsychotic drugs. Additionally, the present investigation did not adequately characterise the data on the concurrent use of other substances that might be connected to sexual dysfunction. For instance, it is well known that both males and females who use Selective Serotonin Reuptake Inhibitors (SSRIs) experience problems with orgasm and other aspects of sexual function (Montejo-Gonzalez et al., 1997).

Sexual dysfunction is common in schizophrenia patients taking either first- or second-generation antipsychotics, according to numerous research. There haven't been any studies compar-

ing sexual dysfunction in Asian cultures between healthy controls and schizophrenia patients, despite the possibility that it negatively affects treatment adherence. According to Ghadirian et al. (1982), 30% of women and more than 50% of men who receive traditional antipsychotic therapy develop sexual dysfunction. According to Segraves (1989), erection and ejaculation disturbance are the most often reported sexual adverse effects in men on classical antipsychotics (30–60%). Sexual dysfunction is widespread among patients, according to Fakhoury et al. (2001), and is more likely to be extremely distressing for males (68%) than for women (49%). First- and second-generation antipsychotics were used to segregate groups for the prevalence analysis, but no discernible variation in prevalence was found. In the community of mentally healthy individuals as well, the prevalence of sexual dysfunction, such as Erectile Dysfunction (ED), rises significantly with age in males (Saigal et al., 2006; Laumann et al., 2007), with an estimated frequency of nearly 40% in those over 60. Additionally, compared to the general population, patients with depression and anxiety who are in their late 40s to early 50s have a high prevalence of ED, whereas those who are older than 60 have a low frequency (Sugimori et al., 2005). Therefore, to appropriately assess the prevalence of sexual dysfunctions in schizophrenic patients and to investigate the effects of mental illness and/or antipsychotics on sexual dysfunction, age-matched healthy controls are necessary. According to ethnicity, the incidence of sexual issues varies in healthy individuals. Asian communities are less likely than Western cultures to talk to their doctors about sexual dysfunction, possibly for socio-cultural reasons (Moreira et al., 2005a, b, 2006). As far as it is known, no research has examined the frequency of sexual dysfunction among schizophrenic patients in an Asian population, till 2009.

Fujii et al. (2009) used a cross-sectional, case-control survey methodology to gather information from 352 Japanese outpatients with schizophrenia who were taking antipsychotic medications and 367 healthy individuals. In contrast to the 38.0% for males and 38.4% for females in healthy controls, the prevalence of sexual dysfunction in schizophrenia patients was 59.3% for males and 49.1% for females. Male patients were found to have high rates of poor sexual desire (37.3%), erectile dysfunction (37.3%), and issues with ejaculation (35.6%), whereas female patients were found to have amenorrhea (38.7%) and low sexual interest (25.7%). Regarding the prevalence of total sexual dysfunction in males under 30 years old and in their 40s, as well as in females in their 30s and over 50 years old, there were significant disparities between cases and controls.

The findings of this study showed that compared to age-matched control subjects, male and female schizophrenia patients had a considerably higher prevalence of sexual dysfunction. The frequency of sexual dysfunction among schizophrenic patients receiving different antipsychotic monotherapies was similar, though. This shows that sexual dysfunction may be caused by the sickness itself. However, some sexual dysfunction was linked to polypharmacy and equivalently larger chlorpromazine dosages. According to these studies, antipsychotic drugs may hurt sexual function. It was unclear to Fujii et al. whether sexual dysfunction was linked to the illness itself or the side effects of antipsychotic medications.

### Sexual Offenses

According to compelling evidence (Modestin and Ammann, 1996; Mullen, 2000), there is a small but significant link between mental illness and violence in general. People with schizophre-



nia are about four times more likely than people without mental illness to have been convicted of a serious sexual offence (Wallace et al., 1998). In non-offender groups, psychiatric inpatients have higher rates of sexually deviant fantasies and behaviours than people who are not mentally ill (Alvarez and Freinhar, 1991). Studies point to a connection between sexually provocative behaviour and schizophrenia. There have been several attempts to create theories or typologies that would explain this relationship, but these models lacked detail and were insufficient to explain sexual offences. Currently, treatment programmes generally created for their non-mentally ill counterparts do not adequately address the needs of mentally ill sexual offenders, and they also receive little support from a mental health system that lacks competence in the treatment of sexual deviance. Although they are thought to make up less than 10% of sexual offences (Sahota and Chesterman, 1998a), their frequently complex character and numerous disorders make it difficult to identify and treat them effectively. Studies have looked at several issues, including adult sexual misconduct and adult psychopathology, to see if there is a connection between unpleasant childhood experiences and later adult problems. In general, research on the effects of early experiences has shown a connection between childhood maltreatment and a variety of adult sexually deviant behaviours, particularly a correlation between childhood sexual abuse and the eventual commission of sexual offences against minors (e.g., Salter et al., 2003). Adams and colleagues (1994) used a retrospective record review to assess the prevalence and clinical correlates of sexually deviant conduct in 499 adolescents with a variety of psychotic, affective, and behavioural disorders. While there was no evidence of sexual deviance in more than half of the sample, 41% had engaged in sexually victimising behaviours such as molestation and rape, exhibitionism, or continuous hypersexual activities (touching, flirting).

The likelihood that the deviant adolescents had previously been physically abused was much higher than that of the non-deviant respondents. Additionally, a lot more sexually troubled teenagers had histories of sexual abuse from an early age. In a sample of mentally healthy male sexual offenders diagnosed with paedophilia, rape, or exhibitionism, Lee et al. (2002) observed greater rates of self-reported childhood emotional abuse, sexual abuse, and behavioural disorders when compared to non-sexual, non-violent property offenders.

According to research, sexual material frequently appears in schizophrenic delusions and hallucinations (Skopec et al., 1976), along with signs of sexual dysfunction such as uncertainty over one's sexual identity and hallucinations (Tidmarsh, 1990). Although there have been few attempts to quantify this and it has been challenging to show experimentally that there is a correlation between psychiatric symptoms and sexual offences, the incidence of sexual pathology in schizophrenia would suggest such a relationship (Dietz, 1992). The exact content of delusions and hallucinations was examined by Smith and Taylor (1999a) about the commission of the index sexual offence. 96% of the 80 schizophrenic sex offenders in the study acknowledged having hallucinations or delusions at the time of the index offence. In comparison to 6% who had no illusions, 51% were assessed to have coincidental delusions about the crime. Additionally, 22% experienced no hallucinations whereas 45% were deemed to have hallucinations coincident with the crime. Delusions were considered to have a direct effect on the offending if they contained a sexual element that was consistent with the actual offence, and to have had an indirect effect if they did not, or if

the delusion was otherwise connected to the commission of the offence in the absence of any sexual component. If a hallucination included a specific directive to commit unlawful conduct, it was determined to have a direct influence. If it included a sexual element unrelated to the unlawful act (such as genital hallucinations or voices discussing sexual things), it was determined to have an indirect effect. Hallucinations and delusions that were directly or indirectly related to the crime affected 33% and 43% of the sample, respectively. Thus, it would seem that at least some mentally ill individuals' sexual misconduct is related to the substance of their delusions and hallucinations.

According to Baldwin and Birtwistle (1997), treatment with antipsychotic medications has the potential to have an impact on many aspects of sexual functioning through pharmacological influences on psychotic symptoms as well as direct and indirect effects on the central nervous system and hormonal activity. Patients using antipsychotic medications may regain previously diminished sexual thoughts and desires, but they may also experience drug-related sexual dysfunction [3,4] (Wirshing et al., 2002). Although atypical medications, like clozapine, have been linked to a lesser degree of sexual dysfunction [3] (Wirshing et al., 2002), clinical experience suggests that these medications' greater ability to reduce unpleasant symptoms may cause sexual urges or behaviours to emerge that would otherwise be suppressed by older antipsychotics. In the setting of decreased social and sexual functioning, a treatment that increases sexual desire may be particularly troublesome (Phillips et al., 1999). The health- and treatment-related issues may affect a person with schizophrenia's capacity to satiate their sexual urges in a socially acceptable way and raise the likelihood of sexually inappropriate behaviour.

### Conclusion

Antipsychotic-treated schizophrenia patients frequently experience sexual dysfunction. Psychiatrists usually underestimate the prevalence of sexual dysfunction, and its prevalence varies greatly between nations. Psychiatrists may be able to create more efficient plans to improve patient quality of life and treatment compliance if they are aware of treatment-related sexual dysfunction and interview their patients about it. Although these sexual abnormalities don't appear to be a side effect of schizophrenia and rarely result in antisocial behaviour, they appear to be a fundamental component of the condition. For example, unrestricted masturbation is still permitted on the wards but is not permitted on hospital property or in the neighbourhood (Lyketsos, 1965). Sexual perception and thinking disorders, as well as sexual fantasies, do not seem to influence actual behaviour. But in some rare circumstances, this might be an exception. It is important to carefully assess the mentally ill sexual offenders, paying close attention to the onset of sexual pathology, the presence of other antisocial behaviour, symptoms of mental illness, treatment side effects, social functioning, and the presence of any additional pathologies, such as drug abuse. Patients with schizophrenia can learn about sex, but Kalichman et al. have demonstrated that this knowledge needs to be reinforced in order to be retained over time. In order to make changes to our rehabilitation sexual education programmes that are more effective with the schizophrenic population, it would be worthwhile to study different teaching methods. The causal association between sexual function and antipsychotic medications as well as any potential moderating effects of schizophrenia symptoms require longitudinal studies. When evaluating sexual performance, one should also take

into account medical comorbidities, such as obesity, diabetes, and cardiovascular disease, which are prevalent in people with schizophrenia, as well as concurrent drugs. To address sexual dysfunction and quality of life in this patient population, efficient treatment options, including drugs, psychotherapy, and educational programmes, still need to be developed.

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