

# Sexually Transmitted Disease and Mental Illnesses : Understandings and Implications

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## Abstract

*Both sexually transmitted diseases (STDs) and mental illnesses are important public health concerns. Both mental illnesses and STDs have high burden of care and they produce significant impairment in life. When these entities exist together, morbidity and consequently the cost of care multiply several times. Mental illness increases the risk of STD. Patients with STDs also have higher risks to develop mental illnesses. Considering the public health significance, it is important to understand the association of STDs and mental illness, so that appropriate preventive as well as remedial measures can be taken.*

## Introduction

Sexually transmitted diseases (STDs) are one of the major public health concerns worldwide. Having a mental illness, may pose risk to develop STDs in an individual. Studies have reported that the risk for the sexually transmitted diseases are 10-20 fold higher in the psychiatric patients, compared to the general population and the factors that have been found responsible for that are, impaired autonomy, increased impulsivity, increased susceptibility to persuaded or threatened sexual activity, poor living conditions, medical and environmental conditions [1]. The major factor for the increased sexually transmitted infections (STI) was found to be the prominent psychiatric conditions which impair the person's decision making and thought process. Failure of the standard STI prevention interventions in such vulnerable population demands the need for the newer and innovative methods for the prevention of STI [1].

A study from Brazil, revealed that nearly one fourth of patients with mental illness have lifetime history of STDs [2]. Similarly a study from United States revealed that the prevalence of HIV, Hepatitis B and C virus infection in patients with severe mental illnesses are several folds higher than their prevalence in general population [3]. Evidences suggest that women having sex with women (WSW) attending STD clinics, had disproportionately higher incidences of mental health issues (anxiety, depression, suicidal behavior) including substance use disorders [4]. A large scale study with a sample size of 289604, was conducted among the privately insured clients of America who used mental health facilities to find out the prevalence of sexually transmitted infections. The results showed that among the mentally ill females there was 3% chance of incurring STIs and in case of male the chance for being diagnosed with STI was about 1.2% [5]. The study recommended that among the united states privately insure population the strategies like screening for mental illness and STIs should be adopted to reduce the cost of health care [5]. The relationship between sexually transmitted diseases (STDs) and mental illness is bidirectional. Presence of STDs increases the risk of mental illness and vice versa. There may be exceptions to this relationship. For example, victims of sexual abuse are at risk of acquiring sexual transmitted diseases and psychological difficulties. Here, both the effects (STD and mental illness) are related more due to sexual abuse. Kawsar et al., in their study found the prevalence of sexually transmitted infections (STIs) in children and adolescents with sexual abuse to be 26% and psychological issues in this population to be 81% [6]. Mood changes,

attempts of self-harm and sleep disturbances were the common issues in this population [6].

### **STDs in patients with Mental Illness**

Sexuality is a very important aspect of any human being whether ill or healthy, but the sexual practices among the patients with mental illnesses, have been studied quite less. Research shows that they have negative self-esteem, low confidence level and they are also unhappy with their sexual life [7].

There are various factors that make the patients with mental illness vulnerable to acquire STDs. Patients with severe mental illnesses and those in intoxicated state with substance often have lack of judgement, which make them vulnerable to indulge in unsafe sexual practices and acquire STDs [8]. When severe mental illness and illicit substance use co-exist, high risk sexual behavior increases, further making the individual more vulnerable for STDs [9]. Evidences suggest that young individuals with schizophrenia spectrum disorders, mania, substance use disorder and antisocial personality carry higher risk to indulge in risky sexual practice and are at higher risk of acquiring STDs [10]. Even patients with depression can indulge in high risk sexual activities, which counters the myth that the depressed patients have no sexual desire at all [11].

The lack of insight and lack of self-concern in the patients with the major psychiatric illnesses also makes them more vulnerable for STI and decreases their chances of the adherence to the treatment leading to complications. It has also been observed in the studies that the people affected with STIs often first show affective symptoms, most commonly depression and diagnosis of STI follows [12]. Substance use has

been very strongly linked with the high risk sexual behaviour and studies also show that the use of alcohol and other stimulants have increased high risk sexual behaviour and consequently higher incidences of sexually transmitted diseases among heterosexuals [13]. Hypersexual behavior,

novelty seeking behavior and poor impulse control in various psychiatric disorders lead to indulgence in unsafe sexual practice and development of STDs. The figure 1 below describes the various factors that attribute to development of STDs in patients with mental illness.

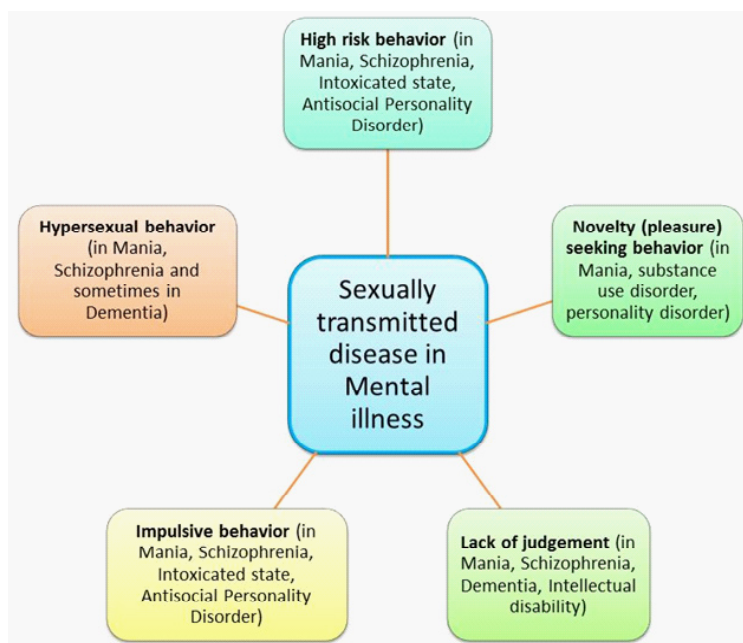


Figure 1: Explanatory model of Sexually Transmitted Disease in Mental Illness

If sexually transmitted disease is present in patients with mental illnesses, then the risk of transmission in the community increases due to their high risk sexual behavior and unsafe sexual practices.

### Mental illnesses in patients with STDs

Patients suffering from STDs go through enormous shame, guilt, fear and anger. This affects their mental health adversely. These psychological reactions are secondary to acquiring STDs. Similarly, STDs may cause

significant impairment and disability, which may develop mental illnesses. Stigma has a close association with STDs. Stigma causes isolation, unemployment and loss of self-repute, which may in turn cause psychological distress. A study suggests that there is high prevalence of the neurocognitive disorders in the HIV infected individuals and the highly active anti-retroviral treatment is also not that effective to stop the neuro psychiatric complications of HIV [14]. The figure 2, below explains the causes of mental illness in patients with STDs.

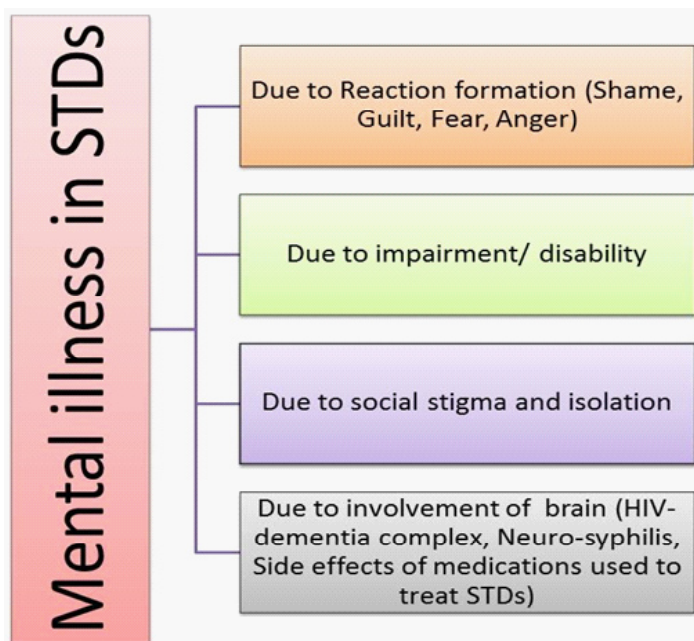


Figure 2: Explanatory model of Mental Illness in Sexually Transmitted Disease

Other than the above mentioned specific causes, the patients with STDs may also develop mental illnesses due to other risk factors like positive family history, substance use, past history of psychiatric illness, maladaptive personality and poor coping skills etc which put general population at risk also.

### **STD prevention strategies among the mentally ill**

The best quality evidences gathered over the past few decades suggest that the strategies for the behavioural change in the mentally ill to prevent the STIs are better if the interventions are targeted towards awareness, attitude and behavior of the individual. The strategies that caused fear among the patients regarding HIV were least effective [15]. Research evidences also show that only providing education to the mentally ill people is not enough

to ensure the prevention of the STI among them. There is a requirement of the behaviourally focused interventions like promotion of the barrier methods among both men and women irrespective of their serological status and training to effectively use them, and continuous reinforcement for maintenance of these behaviours. Peer interventions also have been found significantly effective in these groups [16].

Mentally ill people have been disproportionately affected by the spread of HIV. There are various factors like social stigma, clinic waiting time, no prior testing, lack of knowledge and poor attitude for the serological testing which contribute for increased susceptibility for the STI. Interventions like use of rapid HIV testing kits and education at the psychiatric setting can be an effective method for secondary prevention of the STIs [17].

Studies also suggest that the assertiveness training in the woman with the severe mental illness may help in the reduction of the HIV transmission and as well as the other sexually transmitted infections [18].

There are various types of interventions that are

tried effectively in prevention of STIs in patients with mental illnesses

- Informational motivational behaviour model (IMB) model [8]. This model can be used as a conceptual framework for the construction of the preventive intervention among the severely mentally ill.

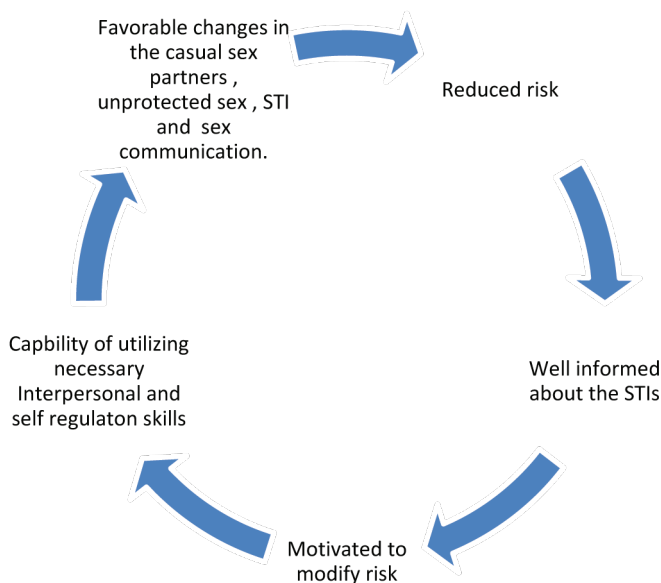


Figure 3: Informational motivational behaviour (IMB) model

- Introduction of the periodic and routine testing for STIs including HIV among the severely mentally ill, alcohol and other drug abusers. The best intervention for these groups could be long term relapse prevention maintenance strategies which could reduce the high risk behaviour among these groups of patients.
- Maintenance of the anti-psychotic therapy along with the motivational counselling for prevention of the substance abuse.
- Enhanced cognitive behavioural skill building intervention with health promotion. The essential components of this intervention

are use of condoms , attitudinal changes for regarding safer sex , perceived susceptibility to HIV and behavioural skills regarding the perceived personal efficacy and objective ability to use the protective methods [19].

A systematic review of the interventions for the prevention of the STI among the severely mentally ill population suggested that the more structured and the culturally appropriate interventions may be put into the practice [20].

### **Abuse, Neglect and Violence with relation to STI**

In people suffering with STI, a retrospective

evaluation of childhood history revealed that most people had adverse childhood experiences. The numbers of adverse childhood experiences are directly proportional to STI in adults [21]. Evidences also suggest that people with STIs are at higher risk to be abused [22]. Abuse and violence may increase the risk of mental illness in them.

A study among the low income African-American women was done regarding coerced sexual activity and it was found that the women who

reported about increased coercion had abused substances like alcohol, marijuana, crack and cocaine. They perceived that persuading the partner regarding the use of condoms will lead to violence. They also reported about being subjected to violence by the domestic partners and being involved in unwanted sexual activity as their partners threatened them for forceful sexual acts. These findings suggests that women face both psychological and social issues which make them highly vulnerable for HIV and other sexually transmitted disorders [23].

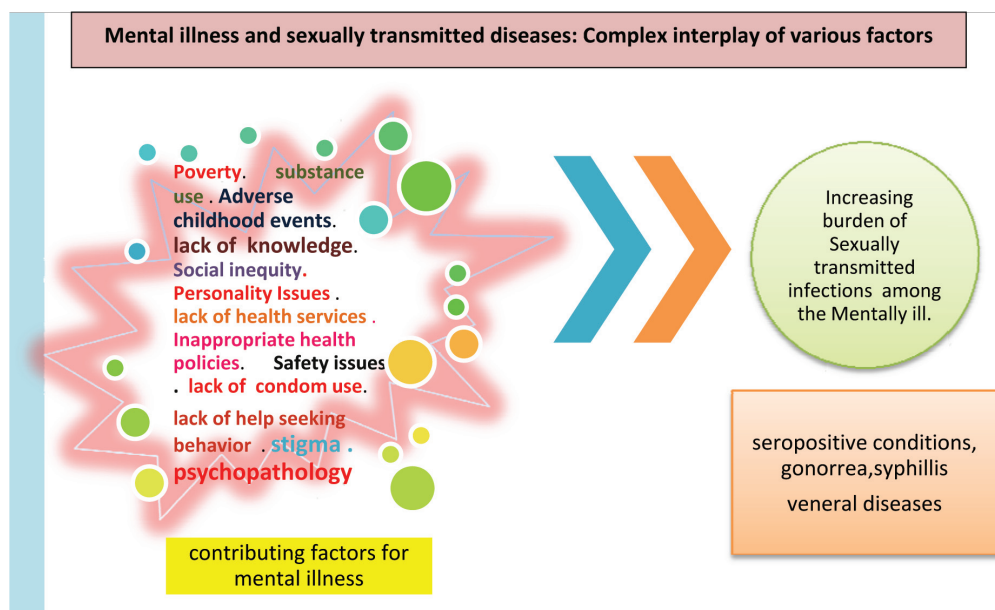


Figure 4: The factors in association with mental illness and STDs.

## Pharmacological considerations : Mental Illness and Sexually Transmitted Infections

Various studies show that there are clinically significant drug to drug interactions between the antibiotics used for the treatment of STIs and the 2nd generation of the antipsychotics, which also open up chances for more research to

find the best suited therapies for them. Certain antibiotics have been found to lower the plasma levels of the 2nd generation antipsychotics [24]. Macrolides and Fluoroquinolones have been found to cause prolongation of the QT intervals and increase the concentration of the potassium leading to arrhythmias when used together with the antipsychotics. Antiretroviral drugs and

second generation antipsychotic agents influence metabolism of one another through the CYP 450 enzyme system, hence the clinician need to consider appropriate medications to avoid this [14, 24].

## Conclusion

Prevalence of sexually transmitted disease is higher in patients with mental illnesses and vice versa. The clinicians need to screen for sexually transmitted diseases in individuals with

mental illnesses if initial evaluation of the patient gives a lead in this regards. Similarly patients with sexually transmitted diseases need to be screened for mental illnesses. A collaborative and multidisciplinary approach to these groups of patients may be more useful than the conventional approach. Identifying the risk factors of STDs in patients with mental illnesses and risk factors of mental illness in patients with STDs will help in prevention of both these disorders.

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