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Research

Vulnerability to risky sexual behavior among patients with severe mental illness in Uganda

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Abstract

Background The relationship between severe mental illness and risky sexual behaviors, defined as acts associated with a higher risk level is notably significant in sub-Saharan Africa. In Uganda, mental disorders have been substantially correlated with unsafe sexual practices, contributing to the global burden of risky sexual behaviors. The consequential outcomes, such as sexually transmitted diseases, has resulted into a significant challenge in managing severe mental illness and potentially increased risky sexual behaviour. There is an urgent need to identify and understand factors specific to Uganda that amplify the vulnerability of severe mental illness patients to risky sexual behaviors. This study aimed to understand the vulnerability factors to risky sexual behaviour in severe mental illness in central and south-western Uganda, seeking to inform the development of tailored and effective intervention strategies to address this critical issue.

Methods This was a qualitative descriptive study that was carried out at Butabika and Masaka hospitals in Uganda, involving a varied group of 32 individuals, comprising 12 persons with diagnosed Severe Mental Illness (Schizophrenia, Bipolar Affective Disorder, or Recurrent Major Depressive Disorder) and to risky sexual behaviors, 8 caregivers (who had patients with severe mental illness and to risky sexual behaviors) and 12 mental health specialists, (who had treated these participants). Purposive sampling was done by intentionally selecting participants based on specific attributes relevant to the research question and the objective of the study which was to explore the factors contributing vulnerability to risky sexual behaviour in severe mental illness in central and south-western Uganda. The interviews were conducted, centered on personal experiences and influences on risky sexual behaviors for the persons with severe mental illness, targeting insights into the nuanced interplay of severe mental illness and sexual behavior. For caregivers and mental health specialists, the interviews were conducted to gain a comprehensive understanding of the unique challenges, perspectives, and experiences they encounter in providing support and treatment respectively. The interviews were tape-recorded and transcribed verbatim. Framework analysis of transcribed interviews, using NVivo11 software that helped to systematically organize and code data within the predetermined and emergent thematic framework, we were able to identify patterns and themes to address the research question and objective.

Results The study findings underscored a pervasive pattern of engaging in risky sexual behavior among individuals coping with severe mental illness, a growing concern traditionally associated with sexually transmitted infections like HIV and AIDS, unwanted pregnancies, and sexual encounters with strangers. This problem was largely attributed to factors such as compromised judgment due to underlying morbidity, abnormally high libido, poverty, desperation,

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and inadequate social support. Additionally, sexual deprivation, often a result of stigma, discrimination, and prolonged periods of hospitalization, was found to contribute to irresponsible and risky sexual acts. Respondents also highlighted certain practices and structural weaknesses within hospital environments, such as stripping patients naked when going to seclusion rooms and inadequate patient monitoring.
Conclusions The findings underscore the need for targeted interventions addressing both individual and structural factors to alleviate the risks associated with sexual behavior among individuals with severe mental illness.

Keywords Risky sexual behavior · Severe mental illness · Socio-cultural factors · Uganda · Mental health services

Abbreviations

ARVs	Anti-Retro Viral
HIV	Human Immunodeficiency Virus
RSB	Risky sexual behavior
SMI	Severe mental illness
STI	Sexually transmitted infections
SSI	Semi-structured interviews
PEP	Post exposure prophylaxis
PWMI	Person with Mental Illness
OPD	Outpatient department

1 Background

The global burden of mental health has shown no reduction since 1990, with mental illness being the leading cause of disability worldwide, responsible for 15% of years of life lost [1]. Mental disorders vary in severity, and severe mental illness (SMI) occurs when an individual's ability to engage in functional and occupational activities is severely impaired [2].

The prevalence of risky sexual behavior (RSB) among persons with SMI is high, reaching 80% compared to the general population [3]. RSB is characterized by acts associated with a higher risk level, leading to unintended sexual-related outcomes, such as having multiple sexual partners, engaging in unprotected sex, exchanging money for sex, or having sex under the influence of alcohol [4, 5]. These behaviors can result in unintended pregnancies and an increased risk of contracting sexually transmitted infections, impacting the central nervous system [4].

Mental disorders significantly affect cognition, emotional regulation, and behavior, potentially contributing to risky sexual behaviors [6]. Complications arising from RSB, such as sexually transmitted diseases, further complicate the management of severe mental illness due to associated neuropsychiatric complications and an increased pill burden [7–9]. Studies in developed countries have linked RSB among SMI to factors like younger age, poor social support, internal stigma, marital status, the type of mental disorder, and substance abuse [10].

Unsafe sex is the second leading risk for the burden of disease, with sub-Saharan Africa carrying almost three-quarters of the global burden [11–13]. Unfortunately, psychiatric care services for SMI in sub-Saharan Africa often neglect routine assessment and management of RSB, making individuals with SMI more prone to engaging in high-risk sexual behavior and facing potential health consequences [14–18].

Various theories contribute to understanding vulnerability to RSB in individuals with severe mental illness. The Health Belief Model posits that an individual's perception of susceptibility to health risks, perceived severity of consequences, and perceived benefits of preventive actions influence health-related behaviors, including sexual choices [19]. The Social Cognitive Theory emphasizes the role of observational learning and social influences, suggesting that individuals with SMI may adopt risky sexual behaviors through exposure in their social environment [20].

The Psychosocial Stress Model suggests that the stress associated with severe mental illness may lead to maladaptive coping mechanisms, including engaging in risky sexual behaviors [21]. Additionally, the Social Ecological Model underscores the impact of interconnected factors at individual, interpersonal, community, and societal levels on health behaviors, recognizing that vulnerability to RSB in severe mental illness is influenced by a complex interplay of factors across these levels [22–24]. These theories collectively contribute to a comprehensive understanding of the multifaceted aspects of vulnerability to RSB in the context of severe mental illness.

In Uganda, mental illness has been associated with having multiple sexual partners [25, 26] and higher HIV prevalence [27, 28]. Understanding the contextual issues related to RSB among SMI and the various factors contributing to

vulnerability is crucial, as it would inform strategies to address the problem. In light of this, we conducted the study to explore the factors contributing to vulnerability to RSB in severe mental illness in central and south-western Uganda.

2 Methods

2.1 Study design and population

This was a qualitative descriptive study utilizing semi-structured interviews. Purposive sampling was employed to deliberately select participants with specific attributes, influences, insights, unique challenges, perspectives, and experiences relevant to the research objective. The study included adults clinically diagnosed with Schizophrenia, Bipolar Affective Disorder, or Recurrent Major Depressive Disorder, who were clinically stable, undergoing treatment, and attending outpatient departments at Butabika or Masaka Hospitals. Participants with co-occurring substance use disorders were excluded to maintain clarity in understanding primary psychiatric conditions. A total of 32 participants, comprising 12 individuals with severe mental illness, 8 caregivers, and 12 mental health specialists, were involved. The study was part of a larger Severe Mental Illness (SMILE) study focusing on HIV prevalence among individuals with severe mental illness and adhered to the COnsolidated criteria for REporting Qualitative research (COREQ) checklist [29].

2.2 Study setting

The research was conducted at Butabika National Referral and Teaching Mental Hospital and Masaka Regional Referral Hospital in Uganda. Butabika, the largest mental health facility, is situated 10 km east of Kampala, offering in-patient services for 550 adults and treating approximately 350 outpatients daily. Masaka Regional Referral Hospital, located in rural south-western Uganda, serves as a general hospital with a mental health unit having 30 adult in-patient beds and an outpatient clinic.

2.3 Data collection

Data Collection Process The principal investigator and research assistants, trained using the Sexual Reproductive Health and Rights manual [30], conducted the interviews. The training covered understanding sexuality, gender identity, sexual health, reproductive health, cultural influences, sexual dysfunction, sexual consent and communication, sexual violence, and harassment. The interviews were led by the principal investigator and two research assistants, ensuring engagement with a diverse sample aligned with the research questions.

Data Collection Interviews were conducted between December 15, 2019, and January 6, 2020, using a semi-structured interview guide (Supplementary file 1). Participants were chosen purposively from lists of individuals with severe mental illness, caregivers, and mental health specialists. Data collection continued until thematic saturation, indicating no new information emerging. Interviews were tape-recorded, transcribed verbatim, and conducted in English for health workers and translated from the local language (Luganda) for others [31].

The interviews conducted in the local language were translated to English at the time of transcription. The interviewing and transcription were translated through a systematic procedure involving bilingual speakers, the first and second authors, proficient in both the original language (Luganda) and English. The translation process emphasized linguistic equivalence and cultural relevance, with careful consideration given to maintaining the intended meaning and nuance of the questions. Initial individual translations were cross-checked, and any discrepancies were resolved through discussion and consensus to ensure accuracy. The translated interview guide was then pilot-tested with individuals proficient in both languages to identify and address any potential ambiguities or cultural nuances. The final translated interview guide was then used in order to maintain the integrity of the questions while making them accessible to participants in both languages during the data collection process.

2.4 Data collection tool

A semi-structured interview guide was employed, covering various sections to explore different aspects of risky sexual behavior (RSB) among individuals with severe mental illness (SMI). The guide included inquiries about participants' understanding of RSB, personal experiences with sexual encounters, contraceptive use, thoughts on substance use and its impact on sexual decisions, perceptions of risks associated with sexual behavior, prevention strategies for sexually transmitted infections, and the role of health education in addressing RSB. Sample questions focused on condom use, feelings of regret after sexual encounters, and the accessibility of contraceptives, aiming to provide a comprehensive understanding of participants' experiences and perspectives on RSB within the context of SMI.

2.5 Data analysis

The transcribed documents underwent scrutiny by the principal investigator for inconsistencies, and the final version was proofread by a qualitative data analyst. Data were de-identified, and approved interviews were analyzed using a framework analysis approach [32–34], assisted by the qualitative data analysis software NVivo11. A coding framework was initially developed based on four broad themes: beliefs about risky sexual behavior, predisposing factors for risky sexual behavior, experiences of risky sexual behavior, and health education on risky sexual behavior. Sub-themes were generated as the data were examined, and coding was performed accordingly. The data were input into the analysis package to facilitate organization, sorting, and arrangement. The focus of data analysis was on comprehending the informants' experiences, extracting meaning, and deriving valid inferences from what the informants articulated. The lead author and the first co-author, possessing expertise in qualitative research and data analysis, conducted the coding and analysis, ensuring methodological rigor.

3 Results

In this section, we present the findings summarized under four sub-themes: perception and explanatory model, extent of risk, predisposing factors, and health education on risky sexual behavior.

3.1 Socio-demographic characteristics of study participants

In the 12 patient interviews, there were 4 males and 8 females. Among the 8 caregiver interviews, 3 were males, and 5 were females. The mental health specialists interviewed included a male Clinical Psychologist, male Occupational Therapists, a male and a female Psychiatric Clinical Officer, a female Social Worker, and three female psychiatric nurses. Among the psychiatrists, there was 1 male and 2 females. An equal number of participants were obtained at both research sites, except for the occupational therapists and social worker, who were sourced exclusively from Butabika National Referral Hospital due to the unavailability of these professionals at Masaka Hospital during the research period. Additionally, one psychiatrist was interviewed in Masaka, while the remaining psychiatrists were interviewed at Butabika Hospital.

3.2 Description of risky sexual behavior

Risky sexual behavior was predominantly understood in the context of HIV and AIDS and unwanted pregnancies. For most persons with mental illness (PWMI) and caretakers, risky sexual behavior simply meant having sex with someone whose HIV status is unknown. It was noted that besides HIV and AIDS and unwanted pregnancies, other associated problems such as sexually transmitted infections were not feared as much. With the perceived "risk" primarily understood in terms of contracting HIV and unwanted pregnancies, the precautionary measures and safeguards taken also tended to be limited in scope. For example, some female PWMIs were apparently placed on family planning methods guarding against unwanted pregnancies. "…Because she was sexually active, they advised me to take her for family planning. Like I said having sex is something natural. Because she is also human; so we made some inquiries and I took her for family planning to avoid unwanted pregnancy" (SSI 18, Caregiver, Butabika).

"*…. Risky sexual behavior refers to sexual acts or behaviors that can lead to unintended consequences like contracting Sexually Transmitted Infections or unintended pregnancies*" KII 08, health worker, Butabika).

"*……not using condoms during sex and one can get pregnant" (*SSI, PWMI, Masaka*)*

"…I will talk about gonorrhea; because it disturbed me a lot. You don't urinate properly, and it's itchy. The other thing that was worries me is that HIV and AIDS you die in a bad way" (SSI, PWMI, Masaka)

*"…I may say… like to sleep with any person one comes across" (*SSI 6, Caregiver, Butabika*)*

The PWMIs, caregivers, and health workers described RSB as engaging in sexual activities with multiple partners without protection, potentially leading to pregnancies or the contraction of diseases like gonorrhea, HIV, and AIDS. They noted that the availability of various contraceptive methods, such as injectaplan and condoms, contributed to a false sense of safety, providing individuals with the liberty to engage in sexual acts with numerous partners. Examples were cited of patients found in possession of condoms, even within admission wards.

3.3 The extent of risky sexual behavior

It was observed that risky sexual tendencies are common among persons with severe mental illness (SMI). Many PWMI participants confessed to instances of risky sexual behavior, specifically engaging in unprotected sex with individuals they barely knew, either by consensus or coercion, and only testing for their HIV status later. Some individuals with mental illness, living with HIV, expressed aversion to condoms and admitted to having unprotected sex with multiple partners without reservation or remorse, arguing that using condoms for protection when already infected lacks rationale.

Additionally, it was noted that hospitals are aware of this issue, considering it a contemporary challenge yet to be adequately addressed. Nearly all health workers were familiar with cases of sexual encounters among patients within the hospitals, including instances where female patients seduced and lured male patients into having sex. The risk was perceived to be higher among female patients, who were often the victims. For male patients, the risk was considered minimal, with the argument that sexual drive diminishes, in part as a side effect of medication, except for those under the influence of drugs such as marijuana. Moreover, girls/women were reported to be reluctant to engage in intimacy with men with mental illness.

While mental illness was generally believed to increase vulnerability and susceptibility to risky sexual behavior, some PWMI admitted to having consensual risky sexual encounters with numerous partners even during times when they were in a sound mental state and well aware of their actions. For such cases, it was suggested that promiscuity might be more indicative than being victims of manipulation due to mental illness.

"*...Yes, for most of the times, I have been in my normal state and I consented...||...At times I can be there when I have some problem; and decide to have sex with a man knowing that when I do it, he will give me some money. And at times he may give me even before sleeping with him*" (SSI 02, Female PWMI, Masaka).

"…One, I think it depends on how we set up the structures in the hospital… even the wards. Most of them don't have what to eat so they go and have sex in order to get money. Yes. I have seen some… like two of them personally and I had to intervene by engaging them in activities so that they can get something good out of it". (KII25, Health worker, Butabika)

"*…It could be the state of the illness at the point… it could be mania. Some people when they are manic, their sexual arousal becomes high. So it may have affected them that way. So, it could happen and actually when you look at mental patients, we have talked about high libido somehow some types of mental illness are also characterized by high libido. At times when the libido is high they may not actually think of whom they are meeting in hospital or outside, they can utilize any chance" (*KII7, Heath worker, Butabika).

"… mental illnesses bring about increased libido. Some mental illnesses increase the libido; and many times because patients have even impaired judgment, they are indiscriminate with whom they interact with. So, some men take advantage of that and we've had so many patients with mental illness getting pregnant and they didn't know the father of the unborn babies. Just right this morning I had a patient who told me, one of her needs…Yes. That she needs to have sex every morning. Every morning. That is her need. One of her basic needs is having sex and then food. If they could provide her with those, then she would be fine" (KII 2 Butabika)

"…*Now the fact that the brain is already distorted makes them have strong sexual feelings… we the caretakers who care for our children sometimes we think that you the health workers have medicine that can stop them from doing that*" (SSI 6, Caregiver, Butabika);

It emerged that despite the perceived risk, some PWMI continue to engage in unprotected sex with multiple partners but rely on routine HIV testing as their safety measure, providing them with a sense of security.

3.4 Predisposing factors

The respondents identified several factors that predispose persons with SMI to RSB. Sexual encounters involving persons with SMI were noted to be either consensual or forced (rape). Most respondents acknowledged that it is normal for persons with mental illness to experience sexual feelings and desire, potentially leading to consensual sex. It was further reported that the impaired judgment, often associated with the illness, makes persons with SMI more likely to succumb to illicit sexual advances. Their compromised sense of judgment was also noted to increase their vulnerability, as they are easily manipulated and less able to negotiate for safer sex.

"...*I don't think it is my child's father who infected me with HIV but those men who used to rape me. I would see them but could not do anything because I was weak and could not fight them...||... Even recently, I was raped here in Masaka, when I was still breastfeeding my 3rd born child. They raped me when I was with my baby*" (SSI 02, Female PWMI, Masaka)

Another mental health service user reported:

"...b*ut even for my case, when my husband decided that we separate, I told some young man about it and he told me he could help me. That he would take me to some office where they would help me, I only needed to pay them 50,000/-($13) and they would help me fix my marriage, and my husband would not send me away. But he told me to sleep with him before he could help me (*SSI 01 Female PWMI, Butabika).
"…*he can admire a woman and say, "I wish I can also be with that woman and sleep with her". So that admiration may force him to do what he wouldn't have done. Another thing the mental illness can make him admire the woman*" (SSI 7 Male, PWMI, Masaka)

The respondents emphasized the inherent difficulty for persons with PWMI to negotiate for safer sex due to a compromised sense of judgment, significantly increasing their risk of contracting HIV. Indeed, some PWMI admitted to contracting HIV due to careless sexual encounters with different people, whether by choice or coercion, attributing these actions to their mental state at the time. Health workers also acknowledged being aware of cases where PWMI contracted HIV from fellow patients within the hospital.

Moreover, complacency was reported to be common among PWMI, attributed to their unstable mental status and the availability of Antiretroviral Drugs (ARVs). For instance, females were said to fear pregnancy more than HIV, arguing that for HIV, medication could be taken, allowing survival for many more years. Risky and inappropriate sexual acts were further reported as manifestations and signs of the underlying morbid processes. Some participating PWMI affirmed that during episodes of mental illness, they experienced a heightened libido, often frequenting places with many people or deliberately putting themselves in situations where they could easily attract advances or even face coercion.

"...*We usually want to be in towns because towns usually have very many people…and it is among those that you may get one who can attempt to rape you and you will not refuse*" (SSI 01, Female PWMI, Masaka)

Similarly, some participants openly admitted to actively seeking sexual encounters, openly demanding sex from individuals they encountered due to the heightened libido associated with their mental illness. They further commented on the tendency to strip naked and loiter, particularly noted among female patients, as an act that predisposes them to sexual advances, making them susceptible to opportunists. On the contrary, others reported getting exposed to risky situations as they followed the commanding voices (hallucinations) they experienced. For instance, one patient revealed:

"...*Like me when I undressed, I first heard voices telling me; 'remove the clothes and run, they will not see you.' Those things that I thought were chasing me. Then I would drown into water and hear them say 'we are not seeing her'. But after drying up, I could hear them say "she is here, we have seen her." It's now that I know that those things were false. They used to tell me to remove the clothes so that they couldn't see me. And one time, I narrowly survived being raped by drug addicts* (SSI 04, Female PWMI, Masaka).

Some participants attributed risky sexual acts to poverty, desperation, and inadequate social support, asserting that some PWMIs engage in transactional sex as a means of fulfilling their financial and material needs. This behavior was further fueled by the stigma and discrimination often directed at individuals with severe mental illness. Alcohol and illicit drugs, such as marijuana, were also reported to have a negative influence on the conduct of persons with severe mental illness, often driving them into reckless sexual behavior.

Respondents also indicated that the effects of severe mental illness, including stigma and discrimination, consequently lead to sexual starvation, especially for those without sexual partners. Individuals in this situation are keen to seize any opportunity that may arise after a prolonged period of sexual starvation during hospitalization, and are less likely to take precautions or engage in safer sex.

> "*...like I told you, if you have mental illness you can take long without having sex. So, when you see a woman, you want to use the chance to sleep with her....and you will not even think of protection. Sometimes you may end up contracting diseases and things of that kind*" (SSI 09, Male PWMI, Butabika).

The respondent continued:

> "*...I had taken long without, and was sexually thirsty. So, it forced me to sleep with many women, something I couldn't do before. Time came when I became wild with women. I slept with many, without even testing for HIV*" (SSI 09, Male PWMI, Butabika)

Similarly, PWMIs reported that the distressing experience of being abandoned by their sexual partners upon learning about their mental illness, and the subsequent frustration, often compels them to seek a replacement within a short period. This haste predisposes them to manipulation and sexual exploitation in the process.

"... *No, at night usually. It usually happens in the dark; but also staff members having sex with patients; although we report these incidents and they never do anything about it. Yes the administration is aware, but they never take the matter further than the deputy senior nursing officer"* (SSI 08, Health worker, Butabika).

..." *The other thing that I have heard in corridors is that sometimes it's even the staff. Yes we have heard that sometimes it is the staff themselves involved. Male staff mostly taking advantage of female patients. No one has been reprimanded because it's been moving in rumors, and no one has been confirmed to be reprimanded, but patients have talked about it*" (SSI 23, Health worker, Butabika).

It further emerged that health workers inadvertently contribute to exposing PWMIs to RSB, including sexual harassment and abuse. Participants expressed concern about the practice of stripping chaotic patients naked when taking them to seclusion rooms, which was deemed not only as a form of molestation but also causing unnecessary sexual arousal, seduction, and temptation.

Moreover, respondents commented on the inadequate monitoring and surveillance of patients on admission wards as a systemic weakness that patients exploit to engage in sexual acts. This was partially attributed to laxity on the part of hospital staff as well as inadequate staffing. Some health workers also attributed risky sexual tendencies among patients to a failure to conduct vulnerability assessments, especially during emergency assessments. They emphasized that vulnerability is higher among patients with a history of early exposure and sexual abuse, who may engage in such behavior for gratification or as a means of revenge. The respondents highlighted the importance of assessing the history of sexual abuse among patients and recommended that health workers be trained in this aspect.

It was further noted that within the mental hospital setting, activities in the Occupational Therapy department bring together both male and female patients, providing them with an opportunity to mix and interact. During such interactions, some patients hook up and make plans for sexual engagement. Similarly, there is no serious punishment for patients attempting or engaging in illicit sexual acts. Instead, such patients only get separated from one another, which may not guarantee prevention of a recurrence.

3.5 Health education on risky sexual behavior

Participants reported a notable absence of health education specifically addressing risky sexual behavior within the hospitals. The health education conducted by health workers, they observed, often centers around drug adherence and other critical topics. They emphasized that, for the prevention of risky sexual behavior, patients need education about the issue, the situations placing them at risk, and the associated dangers.

Ideally, this education should be integrated into psychoeducation sessions when patients are relatively mentally stable. Health workers were seen as the most suitable educators for this purpose, given their respected and trusted position compared to caretakers.

> "... *We majorly focus on other areas. But also the nature of our patients... most people think someone who is mentally ill...as regards issues of sexual abuse, protection, they would not understand because of their reasoning. So, most people don't take it serious*" (KII 23, Health worker, Butabika).
> *I think we need some form of training for health workers but also how to screen. People who have been sexually abused, how do you know that someone has gone through sexual abuse? For some people, they may not talk about it, some depending on their condition they may not have the capacity to talk about it. Others because of cultural issues they fear "people are going traumatize me if I talk about this". I think it's something we need to learn how to assess and also help counsel these people who have gone through this kind of abuse. So we need some form of training of health workers but also we should appreciate that our patients are also human beings and this is important information they need to learn. And also how to protect themselves"*. (KII 23, Health worker Masaka)
> "…*I am not sure, much as there is an HIV clinic there but at Outpatient Department (OPD) we don't really engage them too much. But on the wards, the nurses do that respectively… most especially at ADU; because it's one of our major problem*". (KII 20, Health worker, Butabika)
> "…*Now that is two sided. Because there are some who understand like mine, she can hear and understand. However, there can be one who can't understand or hear anything well because of the mental illness… may not understand what is being taught like normal person*" (SSI 5, Caregiver Butabika)
> "… *no one has taught me about this. Yet it is very important. …Because there are many people who don't take health matters serious…people who don't fear contracting diseases. Because when people get the health education and some counseling, they can change*" SII 6, PWMI, Butabika)

However, it was reported that a few health workers, especially those in lower cadres, sometimes attempt to conduct health education sessions on a case-by-case basis as the need arises. This need was said to be heightened by several cases of sexual encounters and abuse among patients that have been registered.

In conclusion, respondents recommended the integration of sexual and reproductive health topics into all health education sessions held with PWMIs, with a specific focus on addressing risky sexual behavior. They further emphasized the necessity of educating the parents and caretakers of PWMIs and stressed the importance of close monitoring by caretakers. Some health workers specifically recommended establishing arrangements for long-stay patients in mental hospitals to meet their spouses occasionally for sexual gratification. They argued that this could minimize cravings and the risk of engaging in sexual encounters with strangers among patients.

4 Discussion

Based on the research findings, it's apparent that RSB was a common theme among individuals with severe mental illness. This observation is consistent with numerous past studies involving both clinical and general population samples, which have discovered correlations between psychiatric illness, risky sexual activity, and sexually transmitted diseases [35–38]. Lundberg et al. 2005 Ugandan study found a higher occurrence of unprotected sex with casual partners among female patients with mental illness. Furthermore, HIV has been reported more among mentally ill female patients compared to their male counterparts [39]. In a similar investigation into HIV risk behavior among individuals with severe mental illness in Nigeria, it was found that nearly half of the participants had partaken in activities that increased their risk of contracting HIV [11, 40]. This data was confirmed by both health service users (those with severe mental illness and their caregivers) and healthcare professionals who noted that even within hospital settings, risky sexual tendencies were alarmingly common and posed a serious health concern [41, 42]. The issue is especially critical as it was revealed that HIV-positive individuals with severe mental illness knowingly engaged in unprotected sex with multiple partners, which, underlines their potential role in further spreading the HIV virus [43–46]. Owing to the seriousness of the matter, it necessitates the development and implementation of suitable interventions within existing mental health service delivery frameworks.

Our study findings corroborate the connection between psychiatric disorders and risky sexual behavior, an association moderated by various elements such as socio-economic conditions like poverty, psychopathological and behavioral shifts

linked to mental disorders, increased exposure to hazardous situations, and usage of substances like alcohol, among others. Mental disorders like mania, characterized by an increased libido and tendencies towards risky sexual behavior [47, 48], portray the intricate pathways that intertwine mental health and precarious sexual behavior [49]. Furthermore, we found out that stigma plays in the sexual behavior of individuals with mental illnesses [50, 51]. It was observed that some of the persons with mental illness have been driven to inappropriate sexual behavior due to desperation and lack of social support, underpinning the far-reaching effects of societal stigma on these individuals [50, 52]. Previous investigations have indeed documented instances where young individuals engage in romantic associations as a coping mechanism to deal with experienced stigma [50]. This emphasizes the profound need for mental healthcare systems to amplify their efforts against stigma, promoting a culture of understanding and acceptance, thereby not only fostering more beneficial relationship choices but also creating a healthier societal environment for individuals dealing with mental illness. In essence, a multifaceted approach, taking into account socioeconomic, behavioral, and psychopathological factors, can contribute to a better understanding and management of risky sexual behavior within the mentally ill population. Furthermore, an increased focus on anti-stigma interventions could significantly improve the overall well-being of these individuals, while also tackling precariously-related sexual behavior.

Additionally, almost all health workers commented on instances of sexual encounters among patients within the hospital area attributable to understaffing and inadequate supervision. Disturbingly, the sexual exploitation of PWMI did not exonerate health workers as perpetrators, yet they should be providing the much needed care. This is a problem that some other studies have described as endemic but hidden by ineffective management processes [53]. Indeed, some of the very senior hospital staff that participated admitted that it is one of the present day challenges for the mental hospital that is yet to be addressed. It is therefore imperative that the hospital management devises viable and realistic measures to address this problem.

While numerous studies have established a connection between mental illnesses and RSB, some of the respondents opposed the link between mental illness and RSB, arguing that persons with severe mental illness often lose the sexual urge. It's important to explicitly connect the concepts of behavioral factors and the impairment of sexual function due to severe mental illnesses. This is corroborated by a variety of research indicating that certain severe mental illnesses, including but not limited to depression and psychosis, often result in the impairment of sexual function. This impairment is identified as a prominent side effect of both the mental condition and psychotropic medication [54, 55]. Moreover, it is significant to shed light on the societal perspectives towards individuals with mental illnesses. Notwithstanding the widespread myth that characterizes people with mental illness as dangerous, they are also, paradoxically, perceived as vulnerable, particularly in terms of sexual exploitation, conspicuously among females. This perspective aligns with certain theoretical frameworks that portray mental illness as a "triple problem" [56]. Those affected face not only the symptoms of their mental disorder but also grapple with society's stigmatization. People with severe mental illness are frequently misunderstood as being vulnerable to exploitation. The intricate relationship among psychiatric disorders, personal traits, societal views, and their combined influence on risky sexual behavior emphasizes the need for a more in-depth, comprehensive understanding. Ongoing research in this area is crucial for developing compassionate and effective strategies to support individuals navigating these complex circumstances.

5 Conclusion

Our study underscores the pervasive presence of risky sexual behavior among individuals with severe mental illness, aligning with previous research linking psychiatric disorders to heightened sexual risk. The findings reveal a complex interplay of factors such as socio-economic conditions, behavioral shifts associated with severe mental illness, and the impact of stigma on risky sexual behavior. The study highlights the need for targeted interventions within mental health service frameworks, emphasizing a multifaceted approach that addresses factors associated with risky sexual behaviors and how to prevent these factors. Additionally, the study sheds light on the alarming issue of sexual encounters within hospital settings, necessitating attention and realistic measures from hospital management to safeguard the well-being of individuals with severe mental illness. The study emphasizes the importance of acknowledging the impairment of sexual function associated with severe mental illness.

6 Recommendations

A comprehensive and targeted sexual and reproductive health education program should be integrated into mental health care settings. This is crucial to address and mitigate the risky sexual behavior among persons with mental illness. There is need to train health workers, Persons with Mental Illness and caregivers in assessing and addressing potential contributing factors. Ongoing research is essential for developing nuanced and compassionate strategies that comprehensively support individuals grappling with the intricate dynamics of severe mental illness and risky sexual behavior.

7 Study strengths

The inclusion of a National Referral Mental Hospital as one of the study sites adds significance by providing a diverse representation of severe mental illness cases. The research illuminates the pervasive nature of risky sexual behavior in this population, providing valuable insights into the interconnected factors influencing such behavior. The identification of socio-economic conditions, behavioral shifts linked to severe mental illness, and the impact of societal stigma enhances the study's comprehensiveness. Moreover, the call for targeted interventions within mental health service frameworks demonstrates a practical approach to addressing the multifaceted nature of risky sexual behavior in this population.

The study's attention to sexual encounters within hospital settings underscores a critical issue that requires attention, emphasizing its relevance for improving the well-being of individuals with Severe mental illness.

Overall, the study's strengths lie in the in-depth exploration of the subject from health workers, care givers and persons with mental illness, offering a foundation for future research and the development of compassionate strategies to support individuals navigating the intricate dynamics of severe mental illness and risky sexual behavior.

8 Limitations of the study

It's important to acknowledge the potential limitation arising from the sensitivity of the topic, as participants may have experienced discomfort discussing issues related to sexuality and recall bias.

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Author contributions Caroline Birungi (BC) designed the study, presented the proposal to the research ethics committee, was given a go ahead to collect this qualitative data using tape recorders, BC analyzed, interpreted the data and wrote the manuscript. Joshua Ssebunnya (JS) guided the data collection being a qualitative data specialist, JS reviewed data analysis, reviewed the manuscript, Noah Kiwanuka (NK) reviewed the proposal and the manuscript. Noeline Nakasujja (NN) reviewed the proposal, data collection, analysis and the manuscript. Eugene Kinyanda (EK) reviewed the proposal, data collection, analysis, interpretation of the data. All authors read and approved the final manuscript.

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Data availability The datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate Ethical approval for the study was obtained from the following institutions namely, Higher Degrees Research Ethics Committee (HDREC), the Uganda National Council of Science and Technology (HS 2337), the Uganda Virus Research Institute's Research and Ethics Committee, UVRI(GC/127/19/10/612) and Permission was obtained from Directors of Butabika National Referral Mental and Masaka Regional Referral Hospital. Written informed consent was obtained from all participants and care givers and confidentiality was ensured. All participants were 18 years and above, with the ability to consent to participate in the study. The caregivers who were interviewed did so because we needed to get their views and not because their patients were unable to consent. All participants (patients, care givers and health workers) read the consent forms and then agreed to participate and gave written informed consent for the study. All data collection was carried out in accordance with relevant guidelines and regulations (HDREC, UVRI and UNCST).

Consent for publication Not applicable.

Competing interests We declare that we have no competing interests.

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