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Mental health-related quality of life and associated factors among people living with severe mental illness in southwestern Uganda

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A B S T R A C T

Background: Severe mental illness (SMI), including schizophrenia, bipolar disorder, and major depressive disorder, adversely affects multiple dimensions of quality of life, limiting individuals' ability to participate in everyday activities and maintain meaningful social and occupational roles. Globally, nearly one in seven people live with a mental disorder, and approximately 24.2% of Ugandan adults have at least one mental disorder. However, evidence on factors associated with mental health-related quality of life (MHQoL) among people living with SMI in Uganda remains limited. This study examined factors associated with MHQoL among adults living with SMI.

Methods: A cross-sectional study was conducted among 422 adults with schizophrenia, bipolar disorder, or major depressive disorder attending the outpatient psychiatry clinic at Mbarara Regional Referral Hospital between May and June 2024. MHQoL was assessed using the Mental Health-related Quality of Life questionnaire. Sociodemographic, clinical, and psychosocial factors were measured using validated instruments. Bivariate and multivariable linear regression analyses identified factors associated with MHQoL.

Results: Higher medication adherence (b = 0.96; 95% CI: 0.10–1.83), family support (b = 0.13; 95% CI: 0.05–0.22), friend support (b = 0.05; 95% CI: 0.004–0.10), religiosity (b = 0.13; 95% CI: 0.003–0.26), and stigma resistance (b = 0.16; 95% CI: 0.02–0.29) were independently associated with better MHQoL. Social withdrawal (b = −0.13; 95% CI: −0.26 to −0.004) and stereotype endorsement (b = −0.14; 95% CI: −0.26 to −0.02) were associated with poorer MHQoL.

Conclusion: Greater perceived social support, religiosity, and stigma resistance were associated with better MHQoL, whereas social withdrawal and stereotype endorsement were associated with poorer MHQoL among people living with SMI. These findings highlight the importance of addressing psychosocial factors alongside pharmacological treatment. Longitudinal and intervention studies are needed to determine whether targeting these factors improves MHQoL.

1. Background

Mental health is an essential component of overall health and well-being and extends beyond the mere absence of mental illness. The World Health Organization defines mental health as a state of well-being in which individuals realize their abilities, can cope with the normal stresses of life, work productively, and contribute meaningfully to their communities (World Health Organization, 2022). Mental health influences emotional regulation, cognition, behavior, interpersonal relationships, and the ability to function effectively in daily life (Patel et al., 2018). Poor mental health is associated with psychological distress, impaired social and occupational functioning, reduced quality of life, and increased risk of disability and premature mortality (Vigo et al., 2016). Severe mental illnesses (SMIs), including schizophrenia, bipolar disorder, and major depressive disorder with psychotic symptoms, are among the leading causes of disability worldwide due to their chronic nature, recurrent symptoms, and substantial impact on functioning and social participation (Fan et al., 2025; GBD Mental Disorders Collaborators, 2022). In low- and middle-income countries such as Uganda, the burden of mental illness is further compounded by limited mental health resources, shortages of specialized professionals, stigma, poverty, and inadequate access to mental health services, all of which negatively affect treatment outcomes and overall well-being (Kigozi et al., 2010; Patel et al., 2018). Individuals living with schizophrenia, bipolar disorder, and major depressive disorder in LMIC settings frequently experience impaired social functioning, reduced occupational productivity, social exclusion, and difficulties maintaining interpersonal relationships, all of which negatively affect psychological well-being and overall quality of life (Priebe et al., 2010; Xiang et al., 2008). Severe mental illness affects multiple dimensions of functioning beyond symptom severity. Individuals with schizophrenia, bipolar disorder, and major depressive disorder often experience impairments in cognition, emotional regulation, motivation, self-care, interpersonal relationships, and participation in everyday activities. In

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major depressive disorder, persistent low mood, loss of interest, impaired concentration, and, in severe cases, psychotic symptoms such as delusions or hallucinations may substantially disrupt social functioning and independent living. Similarly, schizophrenia and bipolar disorder are characterized by disturbances in perception, cognition, and behavior that interfere with maintaining employment, education, family relationships, and community participation. Mental disorders are a major global public health concern. According to the World Health Organization, nearly one in seven people worldwide live with a mental disorder (World Health Organization, 2025). In Uganda, the burden is considerably higher, with an estimated 24.2% of adults living with at least one mental disorder (Opio et al., 2022). Recent evidence from Kalungi et al. (2025) further demonstrates a high prevalence of common mental disorders among Ugandan adults, reinforcing the substantial mental health burden in the country. Mental health care in Uganda is primarily provided through regional referral hospitals with minimal community-based follow-up, leading to disruptions in continuity of care (Ssebunnya et al., 2011). However, it is estimated that fewer than one in ten individuals who require mental health care in Uganda receive adequate treatment, reflecting significant deficiencies in service availability, accessibility, and continuity of care (Kigozi et al., 2010; Ssebunnya et al., 2011). One of the major contributors to this treatment gap is the severe shortage of specialized mental health professionals. Uganda has a very limited mental health workforce, including psychiatrists, psychiatric nurses, psychologists, and social workers, most of whom are concentrated in urban areas, leaving rural populations with minimal access to specialized care (Kigozi et al., 2010). In addition to workforce shortages, community-based mental health services remain limited, resulting in overreliance on regional referral hospitals and the national psychiatric hospital for care delivery (Kohrt et al., 2018; Ssebunnya et al., 2011). Many individuals living with mental illness therefore experience delays in diagnosis, interruptions in treatment, and inadequate psychosocial support, all of which contribute to poor treatment outcomes and diminished quality of life (Bwanika et al., 2022; Nsereko et al., 2011). MHQoL is assessed from the individual's own perspective and reflects how mental illness influences daily functioning across domains such as self-image, independence, mood, relationships, daily activities, physical health, and future outlook. Unlike clinician-rated symptom measures, MHQoL captures patients' subjective experiences and therefore provides a more comprehensive assessment of recovery and functioning in everyday life. It incorporates psychological, social, and functional domains, and is increasingly recognized as a crucial indicator of outcomes in mental health care (Slade, 2010). MHQoL focuses specifically on mental and emotional well-being while recognizing the bidirectional relationship between mental and physical health. Individuals living with SMI frequently experience chronic physical conditions such as cardiovascular disease, diabetes, obesity, and metabolic disorders, partly due to lifestyle factors, medication adverse effects, and reduced access to preventive healthcare. Conversely, poor physical health may worsen psychiatric symptoms, reduce independence, and further impair quality of life (Stewart, 2007; Van Krugten et al., 2021). Unlike clinical symptom measures, MHQoL emphasizes the patient's perspective, making it central to recovery-oriented models of care and patient-centered treatment planning (Druss et al., 2011). Functional resilience refers to an individual's ability to maintain or regain meaningful personal, social, and occupational functioning despite living with a severe mental illness or experiencing ongoing psychological stress. Rather than reflecting the absence of psychiatric symptoms, functional resilience emphasizes adaptation, independence, and continued participation in everyday life. MHQoL closely aligns with this concept because it captures individuals' own perceptions of their ability to maintain relationships, perform daily activities, preserve self-esteem, and sustain hope for the future despite living with severe mental illness. MHQoL is especially relevant in the context of severe mental illness (SMI), encompassing conditions such as schizophrenia, bipolar disorder, and major depressive disorder with psychotic features, owing to the considerable impairment these disorders inflict on social and occupational functioning (Jaeschke et al., 2021). People living with SMI frequently experience lower MHQoL due to recurring symptoms, side effects of treatment, comorbid physical illnesses, and social exclusion (Berghöfer et al., 2020; Evans et al., 2007). Social exclusion refers to the process through which individuals are prevented from fully participating in social, economic, cultural, and community life because of stigma, discrimination, limited educational and employment opportunities, inadequate access to healthcare and housing, and weakened social networks. Among individuals living with SMI, social exclusion may reduce opportunities for meaningful relationships, community participation, and recovery, thereby contributing to poorer mental health-related quality of life. Social exclusion refers to the process through which individuals are prevented from fully participating in social, economic, cultural, and community life because of stigma, discrimination, limited educational and employment opportunities, inadequate access to healthcare and housing, and weakened social networks. Among individuals living with SMI, social exclusion may reduce opportunities for meaningful relationships, community participation, and recovery, thereby contributing to poorer mental health-related quality of life (Cleary et al., 2009; Rodgers et al., 2018). Psychiatric rehabilitation refers to structured interventions that support individuals living with SMI to achieve optimal functioning and community participation. These interventions include psychoeducation, social skills training, vocational rehabilitation, supported employment, family interventions, and community-based mental health services that promote independent living, recovery, and improved quality of life.

Previous studies have identified several factors associated with MHQoL among people living with severe mental illness, including medication adherence, perceived social support, stigma, social withdrawal, spirituality and religiosity, socioeconomic status, educational attainment, and gender. Understanding the relative contribution of these factors is essential for developing comprehensive interventions that improve recovery and quality of life. Positive predictors include strong family and social support systems, which serve as buffers against stress and enhance emotional and functional resilience (Defar et al., 2023; Desalegn et al., 2020). Supportive interpersonal relationships can enhance emotional well-being by providing reassurance, acceptance, and a sense of belonging during periods of psychological distress (Corrigan and Phelan, 2004; Kaggwa et al., 2023). Individuals with SMI often face social isolation, stigma, discrimination, and emotional instability, which may negatively affect their self-esteem, coping capacity, and overall quality of life if supportive relationships are absent (Corrigan and Phelan, 2004). In contrast, supportive social networks may foster resilience and improve emotional well-being by offering acceptance, encouragement, and hope throughout the recovery process (Kaggwa et al., 2023). Family members and close friends frequently assist affected individuals with medication management, transportation to health facilities, appointment reminders, and monitoring treatment progress, particularly during periods when symptoms impair judgment, insight, or motivation (Drapalski et al., 2009; Tham and Solomon, 2024). Furthermore, emotional encouragement from trusted social networks may increase individuals' willingness to seek help and remain committed to treatment despite persistent symptoms or experiences of stigma (Kaggwa et al., 2023). The importance of social support is particularly evident in low- and middle-income countries (LMICs), including Uganda, where formal mental health services remain limited in availability and accessibility. Due to shortages of mental health professionals, inadequate community-based psychiatric services, and constrained healthcare resources, families frequently constitute the primary source of long-term care and psychosocial support for individuals living with SMI.

Spiritual beliefs may help individuals interpret illness experiences within a broader framework of purpose and resilience, thereby reducing feelings of hopelessness and despair commonly associated with severe

mental illness. Religiosity and spiritual coping have been identified as important determinants of mental health-related quality of life (MHQoL), particularly in settings where religious beliefs strongly influence daily life and health-seeking behaviours (Koenig, 2009; Peres et al., 2018). Spiritual practices such as prayer, worship, meditation, and participation in religious activities may provide hope, emotional comfort, and a sense of meaning during periods of psychological distress (Koenig, 2009, 2012). In many cases, spirituality enables individuals to interpret their illness experiences within a framework of resilience and purpose, which may reduce feelings of hopelessness and emotional suffering (Peres et al., 2018). In addition, involvement in religious communities can strengthen social connectedness, promote emotional support, and foster resilience, optimism, and psychological well-being, all of which may contribute to improved MHQoL among people living with severe mental illness. Given the important role of religion in Ugandan society, examining religiosity alongside other psychosocial factors may provide valuable insights into determinants of MHQoL and inform holistic, culturally appropriate mental healthcare (Koenig, 2009). Through spiritual coping, individuals living with SMI may develop greater resilience, optimism, and emotional stability, all of which may enhance overall MHQoL (Peres et al., 2018).

Furthermore, a range of socioeconomic and clinical challenges continue to negatively affect MHQoL among people with SMI, with factors such as unemployment, low educational attainment, polypharmacy, social withdrawal, and internalized stigma being consistently associated with poorer outcomes (George et al., 2022; Priebe et al., 2010). Unemployment may contribute to reduced financial independence, diminished self-esteem, and limited social participation, thereby negatively affecting psychological well-being and overall quality of life (Priebe et al., 2010). Similarly, low levels of education may restrict access to employment opportunities, mental health information, and healthcare resources necessary for effective illness management (Sperandei et al., 2023). These socioeconomic disadvantages may increase stress, dependency, and social exclusion among individuals living with SMI (Shumye et al., 2021).

Social withdrawal represents another important factor associated with poor mental health-related quality of life (MHQoL) among people living with SMI because it reduces opportunities for interpersonal relationships, emotional support, and participation in meaningful community activities (Priebe et al., 2010). Many individuals with SMI experience difficulties maintaining social relationships due to symptoms such as anxiety, paranoia, low motivation, emotional blunting, or impaired social functioning, which may lead to progressive disengagement from family, friends, and society (Hajek et al., 2025; Khanna, 2025). Persistent social isolation may contribute to loneliness, reduced self-confidence, and diminished social skills, all of which negatively affect recovery and overall psychological well-being (Birken et al., 2023). In addition, limited social interaction may reduce access to informal support systems that are often essential for coping with stress, adhering to treatment, and maintaining daily functioning (Cohen and Wills, 1985; Yanos et al., 2001). Social withdrawal may therefore reinforce cycles of exclusion and dependency, making community reintegration more difficult for individuals living with SMI (Balenzano and Moro, 2021).

Internalized stigma may further worsen MHQoL by influencing how individuals perceive themselves and their place within society (Yanos et al., 2020a, 2020b). Internalized stigma occurs when individuals adopt negative societal attitudes and stereotypes about mental illness and apply them to themselves, resulting in feelings of shame, worthlessness, inferiority, and hopelessness (Corrigan and Watson, 2002; Drapalski et al., 2013). Individuals experiencing self-stigma may begin to believe that they are incapable of employment, relationships, or independent living, which can significantly reduce motivation and self-efficacy (Livingston and Boyd, 2010). Such beliefs often discourage individuals from seeking help, disclosing symptoms, or participating fully in treatment because of fear of discrimination, rejection, or social judgment (Corrigan et al., 2014). Internalized stigma has also been associated with depressive symptoms, poor self-esteem, reduced treatment adherence, and lower recovery orientation among people with SMI (Ritsher and Phelan, 2004). Additionally, stigma and social exclusion may operate at multiple levels, including within families, workplaces, healthcare settings, and communities, thereby creating barriers to social integration and recovery (Thornicroft et al., 2016). Individuals with SMI may experience discrimination in employment, education, housing, and interpersonal relationships, which may reinforce social withdrawal and perpetuate feelings of isolation and helplessness (Corrigan et al., 2014). In low- and middle-income countries such as Uganda, misconceptions about mental illness may further intensify stigma and contribute to delayed help-seeking, abandonment, and reduced social support for affected individuals (Kigozi et al., 2010). These experiences may significantly undermine psychological well-being and overall quality of life among people living with SMI.

Despite these challenges, stigma resistance has emerged as an important protective factor that may buffer the negative effects of discrimination and self-stigma on MHQoL (Yanos et al., 2020a). Individuals with higher stigma resistance are often better able to reject negative stereotypes, maintain a positive self-identity, and remain engaged in social and recovery-oriented activities despite experiences of prejudice (Lysaker et al., 2007). Higher stigma resistance has been associated with increased empowerment, autonomy, self-esteem, and treatment engagement among people with SMI (Yanos et al., 2020a). Consequently, interventions aimed at strengthening social inclusion and reducing stigma such as psychoeducation, peer support programs, anti-stigma campaigns, and recovery-oriented mental health services may improve MHQoL and promote long-term recovery among individuals living with SMI (Corrigan et al., 2012; Mehta et al., 2015).

Understanding the factors associated with mental health related quality of life can inform targeted interventions and help design programs that go beyond symptom control to address the broader needs of people living with SMI. Assessing MHQoL in resource-constrained settings is essential for developing culturally sensitive, patient-centered care models. It also provides valuable insights into treatment efficacy and service delivery, ensuring that mental health systems evolve in ways that reflect the lived experiences and priorities of service users (Izutsu et al., 2015; Patel et al., 2018). We hypothesized that better medication adherence, greater perceived social support, stronger religiosity, and lower internalized stigma would be associated with higher mental health-related quality of life among people living with severe mental illness.

2. Methods

2.1. Study design

This was a hospital-based cross-sectional study conducted among individuals living with severe mental illness attending the psychiatric ward at Mbarara Regional Referral Hospital between May and June 2024.

2.2. Study setting and study participants

Participants were recruited from the psychiatric ward at Mbarara Regional Referral Hospital (MRRH) in Mbarara city, southwestern Uganda. MRRH is in Mbarara city, in southwestern Uganda, approximately 270 km from the capital city, Kampala. Mbarara city is the 4th largest city in Uganda by population (97,500) according to the 2024 census conducted by the Uganda Bureau of Statistics (2024). MRRH is a tertiary referral facility in southwestern Uganda that provides outpatient and inpatient psychiatric services through its psychiatry was which offers both inpatient and outpatient mental health services (Kigozi et al., 2010). The ward manages approximately 500 patients with mental disorders who come for review each month, including individuals living

with severe mental illnesses such as schizophrenia, bipolar disorder, and major depressive disorder, as well as other psychiatric conditions requiring specialized mental health care. Services provided at the ward include psychiatric assessment, psychotropic medication management, counseling, psychoeducation, and routine follow-up care. Most of the people who access mental health services at MRRH live in surrounding villages and earn their livelihood through subsistence farming, animal husbandry, and small-scale trading, and face challenges of water and food insecurity (Mushavi et al., 2020; Tsai et al., 2012). We recruited adults who were 18 years and older with a confirmed diagnosis of SMI (schizophrenia, bipolar disorder, and depression) confirmed by a licensed psychiatrist in Uganda and had had a mental disorder for at least 6 months. A minimum illness duration of six months was selected to ensure that participants had an established diagnosis of severe mental illness and sufficient experience living with the condition to meaningfully report on mental health-related quality of life, social support, stigma, medication adherence, and related psychosocial experiences. Individuals with very recent diagnoses may still be undergoing acute assessment and stabilization, which could limit the reliability of responses regarding long-term psychosocial and quality-of-life outcomes.

2.3. Eligibility criteria and sampling procedure

A consecutive sampling technique was used to recruit study participants from the outpatient mental health clinic of the Psychiatry Ward at Mbarara Regional Referral Hospital. All individuals attending routine follow-up visits during the study period between May and June 2024 were screened for eligibility. Individuals were eligible to participate if they were aged 18 years and above, had a confirmed diagnosis of severe mental illness documented in their clinical records by a psychiatrist or qualified mental health clinician, and had been receiving mental health care for at least six months. Individuals experiencing severe active symptoms of mental illness that impaired their ability to provide informed consent or complete the interview were excluded from participation. Participants who met the inclusion criteria and consented to participate were consecutively enrolled into the study until the required sample size was achieved. Consecutive sampling was considered appropriate because it allowed recruitment of participants as they presented to the clinic, minimized selection bias, and ensured inclusion of individuals with different forms of severe mental illness receiving routine psychiatric care at the facility.

2.4. Sample size determination

The sample size was determined using the Kish Leslie formula for cross-sectional studies. Since this study aimed to assess factors associated with mental health-related quality of life among individuals living with severe mental illness, the sample size was calculated using an assumed prevalence of 50%, which provides the maximum sample size when the true prevalence of the outcome is unknown. A 95% confidence level, 5% margin of error, and 10% allowance for non-response were considered. This yielded a minimum required sample size of 422 participants, who were recruited from the outpatient mental health clinic of the Psychiatry Ward at Mbarara Regional Referral Hospital.

2.5. Enrollment procedure

After eligibility assessment, trained research assistants explained the study procedures and obtained written informed consent before enrollment into the study. Two research assistants fluent in both Runyankore and English approached individuals who met the eligibility criteria to introduce the study and request participation. After conducting informed consent procedures, the research assistants administered a questionnaire. To ensure reliability and validity, the questionnaire was translated into the local language and then back translated into English to maintain conceptual equivalence. Additionally, the questionnaire was pretested on a small sample (that was not part of the final study sample) to assess clarity, comprehension, and cultural relevance, further improving its reliability and applicability in the target population. Each questionnaire took 40 min to administer. All eligible participants who met the inclusion criteria and were invited to participate agreed to do so after receiving information about the study. Consequently, no eligible participant declined participation, resulting in a 100% response rate.

3. Study measures

Mental health-related quality of life (MHQoL) was assessed using the MHQoL questionnaire, a validated self-report instrument specifically developed to evaluate the quality of life among individuals with mental health conditions (Van Krugten et al., 2022). The MHQoL consists of two components: (1) the MHQoL-7D, which represents the descriptive system and captures the quality-of-life dimensions, and (2) the MHQoL-VAS, a visual analogue scale that reflects overall psychological well-being. The MHQoL-7D includes seven items assessing distinct dimensions of mental health and daily functioning including self-image, independence, mood, relationships, daily activities, physical health, and future outlook. Each dimension is rated on a four-point Likert-type scale, ranging from 0 (very dissatisfied) to 3 (very satisfied). The total MHQoL-7D score ranges from 0 to 21, with higher scores indicating better perceived mental health-related quality of life. The MHQoL-VAS complements the descriptive component by providing a global measure of subjective psychological well-being. Respondents indicate their overall mental health status on a horizontal visual analogue scale ranging from 0 (“worst imaginable psychological well-being”) to 10 (“best imaginable psychological well-being”). This scale captures an individual's self-perceived mental health on a continuum and allows for a more intuitive and immediate expression of well-being (Van Krugten et al., 2022). In the present study, the MHQoL-7D demonstrated good internal consistency, with a Cronbach's alpha coefficient of 0.82, indicating a high level of reliability across its seven dimensions.

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988). The MSPSS is a widely used, psychometrically sound instrument designed to measure an individual's perceived adequacy of social support from three distinct sources: family, friends, and a significant other. The scale consists of 12 items, with four items per subscale. Example items include statements such as *“I can talk about my problems with my family”* and *“I can talk about my problems with my friends.”* Respondents rate each item on a 7-point Likert scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree). Higher scores reflect a greater perceived level of social support. The MSPSS has been extensively validated across diverse populations and cultural contexts, demonstrating strong reliability and construct validity. In an Ugandan context, for instance, Nakigudde et al. (2009) reported a Cronbach's alpha of 0.83, indicating good internal consistency. In the current study, the MSPSS also demonstrated excellent internal consistency with a Cronbach's alpha coefficient of 0.93. This high reliability supports the scale's use as an effective measure of perceived social support among participants.

Internalized stigma was assessed using the Internalized Stigma of Mental Illness Scale (ISMI-29) (Ritsher et al., 2003). The ISMI-29 is a self-report instrument designed to measure the subjective experience of stigma among individuals living with mental illness. It evaluates how individuals internalize negative stereotypes, prejudices, and social rejection associated with mental illness, as well as their ability to resist such stigma. The scale contains 29 items rated on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). It is divided into five subscales that assess different dimensions of internalized stigma: alienation, stereotype endorsement (the extent to which individuals living with mental illness accept, believe, or apply negative societal attitudes and stereotypes about mental illness to themselves), discrimination experience, social withdrawal, and stigma resistance. Higher scores on the alienation, stereotype endorsement, discrimination

experience, and social withdrawal subscales indicate greater internalized stigma, whereas higher scores on the stigma resistance subscale reflect lower levels of stigma resistance; thus, the latter items are reverse-scored. The total score is obtained by summing the item scores and dividing by the number of items to obtain an overall index of internalized stigma. The ISMI-29 has been widely used and validated across diverse cultural contexts globally and within Africa among people with schizophrenia (Assefa et al., 2012; Girma et al., 2013). In the present study, the ISMI-29 showed excellent reliability, with an overall Cronbach's alpha coefficient of 0.90. The internal consistency of the subscales ranged from 0.49 for stigma resistance to 0.81 for discrimination experience, confirming the reliability of the instrument across its different domains.

Medication adherence was measured using the Adherence in Chronic Disease Scale (ACDS) (Kosobucka et al., 2018). The ACDS is a self-administered tool designed to assess adherence to pharmacological treatment among adults with chronic health conditions such as hypertension, diabetes mellitus, and cardiovascular diseases. The instrument consists of seven questions, each with five possible responses scored from one to four points depending on the degree of adherence indicated. The total score ranges from seven to twenty-eight points and is interpreted as follows: scores of twenty-six or higher indicate high adherence, scores between twenty-one and twenty-six reflect medium adherence, and scores below twenty-one indicate low adherence. The scale captures multiple aspects of adherence behavior, including patient motivation, understanding of treatment, and barriers to consistent medication use. The ACDS has demonstrated satisfactory psychometric properties in prior validation studies, with a reported Cronbach's alpha of 0.75 (Kosobucka et al., 2018). Although the Adherence in Chronic Disease Scale (ACDS) was originally developed for chronic physical illnesses, the underlying principles of long-term medication adherence are applicable across chronic disease conditions, including severe mental illness requiring continuous psychotropic medication. The scale has been used to assess adherence among individuals receiving long-term pharmacotherapy and captures behaviors relevant to sustained medication use. In the current study, the scale showed excellent internal consistency, with a Cronbach's alpha coefficient of 0.87, indicating strong reliability for assessing medication adherence in the study population.

Spirituality and religiosity were assessed using the short form of the Ironson-Woods Spirituality/Religiousness Index (SFW-SR), which consists of 22 items divided into four subscales (Ironson et al., 2002). The overall score ranges from 22 to 110, with higher scores indicating greater levels of spirituality and religiousness. The sense of peace subscale includes four items (score range 9–45) and measures the comfort, strength, and meaning that individuals derive from their beliefs, their perceived connection to a higher power, and belief in an afterlife. The faith in God subscale contains six items (score range 6–30) and assesses perceptions of God and beliefs regarding God's role in supporting recovery from illness. The religious behavior subscale has five items (score range 5–25) and evaluates engagement in religious practices such as prayer, meditation, and sharing religious convictions with others. The compassionate view of others subscale consists of two items (score range 2–10) and captures empathy and concern for others. The SFW-SR has been used in Uganda and demonstrated excellent psychometric properties, with an overall Cronbach's alpha of 0.95 (Adong et al., 2018). Subscale reliabilities were similarly strong, with Cronbach's alpha values of 0.90 for sense of peace, 0.90 for faith in God, 0.89 for religious behaviors, and 0.93 for compassionate view of others (Adong et al., 2018). The tool has also been applied in Nigeria, where it showed good reliability and validity in assessing spirituality and religiosity among adolescents (Otakpor and Akanni, 2015). In the current study, the scale showed excellent internal consistency, with Cronbach's alpha of 0.90 for the sense of peace subscale, 0.90 for faith in God, 0.88 for religious behaviors, 0.82 for compassionate view of others, and an overall Cronbach's alpha of 0.96.

4. Data analysis

Data were entered into Microsoft Excel and exported to STATA version 16 for analysis. Continuous variables were summarized using means and standard deviations when normally distributed, and medians and interquartile ranges when non-normally distributed. Categorical variables were summarized as frequencies and percentages. The normality of continuous variables was assessed using the Shapiro–Wilk test and visual inspection of histograms. The primary outcome was quality of life, measured using the Mental Health Quality of Life questionnaire (MHQoL-7D). Since the total score was normally distributed, it was treated as a continuous variable and summarized using the mean and standard deviation. To identify factors associated with quality of life, linear regression analysis was performed. Initially, bivariate analyses were conducted to explore associations between independent variables and the MHQoL-7D score. Prior to model fitting, the assumptions of linear regression were assessed. Linearity was evaluated using scatterplots, normality of residuals using normal probability plots and residual histograms, homoscedasticity using residual-versus-fitted plots, multicollinearity using variance inflation factors (VIFs), and influential observations using Cook's distance. The diagnostic results indicated that the assumptions of linear regression were adequately satisfied.

Variables with p-values <0.05 in the bivariate analysis and no evidence of multicollinearity were included in a multivariate linear regression model to determine independent predictors of mental health related quality of life. Statistical significance was set at $p < 0.05$ for all analyses.

5. Ethical considerations

The study was conducted in accordance with the Declaration of Helsinki (2013). The study received ethical approval from the Research Ethics Committee of the Mbarara University of Science and Technology (#MUST-2024-1450). Before enrollment, all eligible participants received detailed information about the study objectives, procedures, potential risks, and benefits in a language they understood. Participants were informed that participation was voluntary and that they could withdraw from the study at any time without affecting their access to routine mental health services. Capacity to provide informed consent was assessed by the research assistants in consultation with the attending mental health clinicians, and individuals experiencing severe active psychiatric symptoms that impaired their ability to provide informed consent were excluded from participation. Written informed consent was obtained from all participants prior to data collection, and confidentiality of participant information was maintained throughout the study.

6. Results

6.1. Characteristics of study participants

A total of 422 participants were recruited giving us a response rate of 100%. Participants were aged between 18 and 83 years, with a median age of 39 years (IQR: 30–49 years). The majority were women (59.0%), and 41.9% were married or cohabiting. Over half of the participants were unemployed (53.6%). The duration of mental illness since the first episode varied from 1 to 45 years, with a median of 6 years (IQR: 2–12 years) (Table 1).

6.2. Factors associated with mental health quality of life

At multivariate analysis (Table 2), being male was independently associated with a higher overall MHQoL score compared to being female ($b = 0.76$; 95% CI: 0.16–1.35; $p = 0.013$). Participants with high adherence to psychotropic medication had significantly higher MHQoL scores than those with low adherence ($b = 0.96$; 95% CI: 0.10–1.83;

Table 1
Characteristics of study participants with severe mental illness (N = 422).

Study variables	n or Mean ± SD or Median (IQR)	%
Age (in complete years)	39.0 (30.0, 49.0)	
Sex		
Female	249	59
Male	173	41
Marital status		
Single	118	28
Cohabiting/married	177	41
Divorce/separated	96	22.7
Widow	31	7.3
Employment status		
Employed	196	46.4
Unemployed	226	53.6
Education level		
No formal education	7	1.7
Primary education	142	33.6
Secondary education	143	33.9
Tertiary education	130	30.8
HIV/AIDS		
No	388	91.9
Yes	34	8.1
Hypertension		
No	404	95.7
Yes	18	4.3
Diabetes mellitus		
No		
Yes	7	1.7
Substance use disorders		
No	418	99.1
Yes	4	0.9
Mental illness diagnoses		
Major depression	75	17.8
Schizophrenia spectrum disorders[#]	123	29.1
Bipolar disorder	224	53.1
Duration of mental illness since the first episode (in years), median (IQR)	6 (2, 12)	
Number of relapses, median (IQR)	2 (1, 3)	
Number of medicines taken, median (IQR)	2 (2, 3)	
Medication adherence		
Low adherence	56	13.3
Medium adherence	121	28.6
High adherence	245	58.1
Psychological factors		
Perceived social support scale, median (IQR)		
Overall total social support score	67 (57, 73)	
Family subscale	23 (20, 25)	
Friends' subscale	21 (15, 24)	
Significant others subscale	24 (21, 26)	
Spirituality/Religiosity index, (Median, IQR)		
Overall total Spirituality/Religiosity index	96 (105, 88)	
Sense of peace subscale	39.5 (36, 43)	
Faith in God subscale	26 (24, 30)	
Compassionate view of others subscale	9 (9, 10)	
Religious behaviors subscale	22 (20, 25)	
Internalized Stigma of Mental Illness, (Mean ± SD)		
Overall total internalized stigma scale	69.23 ± 11.36	
Alienation subscale	14.73 ± 3.86	
Discrimination experience subscale	15.18 ± 3.11	
Social withdrawal subscale	11.68 ± 3.40	
Stereotype endorsement subscale	13.41 ± 3.62	
Stigma resistance subscale	14.23 ± 2.27	
Mental Health related Quality of Life, Mean ± SD		
Mental Health related Quality of Life (MHQoL – 7D)	14.98 ± 3.84	
Psychological wellbeing (MHQoL – VAS)	6.59 ± 1.77	

Others*: Seventh-day Adventist; Schizophrenia spectrum disorders#: Schizophreniform, Schizophrenia and schizoaffective disorders. IQR: Interquartile range, SD: standard deviation.

p = 0.028). Perceived social support from family and friends also showed positive associations with MHQoL. Each unit increase in family support was associated with a 0.13-point increase in MHQoL ($b = 0.13$; 95% CI: 0.05–0.22; p = 0.002), while support from friends was

Table 2
Linear regression analysis for factors associated with MHQoL among patients. with severe mental illness.

Study variables	Bivariate linear regression		Multivariate linear regression	
	b (95% CI)	p-value	*b* (95% CI)	p-value
Sociodemographic factors				
Age (in complete years)	−0.01 (−0.03 – 0.02)	0.690		
Sex				
Female	Ref		Ref	
Male	0.87 (0.13 – 1.62)	**0.022**	0.76 (0.16 – 1.35)	**0.013**
Marital status				
Single	Ref		Ref	
Cohabiting/married	0.67 (−0.21 – 1.57)	0.137	−0.21 (−0.91 – 0.49)	0.552
Divorce/separated	−0.30 (−1.33 – 0.73)	0.564	−0.30 (−1.08 – 0.47)	0.445
Widow	1.72 (0.21 – 3.23)	**0.026**	−0.15 (−1.33 – 1.03)	0.802
Religious affiliation				
Muslim	Ref			
Catholics	0.35 (−1.23 – 1.93)	0.664		
Protestant	−0.28 (−1.82 – 1.27)	0.725		
Others*	0.71 (−1.06 – 2.48)	0.431		
Employment status				
Employed	Ref		Ref	
Unemployed	−1.59 (−2.31 to −0.86)	**<0.001**	−0.53 (−1.10 – 0.04)	0.067
Education level				
No formal education	Ref			
Primary education	0.47 (−2.45 – 3.41)	0.750		
Secondary education	0.29 (−2.64 – 3.22)	0.844		
Tertiary education	0.01 (−2.93 – 2.94)	0.995		
Clinical factors				
Substance use disorders				
No	Ref			
Yes	−1.24 (−5.03 – 2.56)	0.522		
Mental illness diagnoses				
Major depression	Ref		Ref	
Schizophrenia spectrum disorders[#]	−0.14 (−1.23 – 0.95)	0.802	0.53 (−0.36 – 1.42)	0.243
Bipolar disorder	1.36 (0.37 – 2.35)	**0.007**	0.71 (−0.32 – 1.73)	0.176
Duration of mental illness since the first episode (in years)	0.01 (−0.03 – 0.05)	0.598		
Number of relapses	−0.04 (−0.14 – 0.07)	0.510		
Number of medicines taken	−0.65 (−1.15 to −0.16)	**0.010**	−0.07 (−0.61 – 0.47)	0.792
Anti-depressants				
No	Ref			
Yes	−0.72 (−1.61 – 0.17)	0.112		
Medication adherence				
Low adherence	Ref		Ref	
Medium adherence	1.33 (0.13 – 2.52)	**0.02G**	0.68 (−0.23 – 1.59)	0.144
High adherence	2.47 (1.38 - 3.56)	**<0.001**	0.96 (−0.10 – 1.83)	**0.028**
Perceived social support				
Family subscale	0.36 (0.29 – 0.41)	**<0.001**	0.13 (0.05 – 0.22)	**0.002**
Friends' subscale	0.23 (0.18 – 0.28)	**<0.001**	0.05 (0.004 – 0.10)	**0.033**

(*continued on next page*)

Table 2 (*continued*)

Study variables	Bivariate linear regression		Multivariate linear regression	
	b (95% CI)	p-value	*b* (95% CI)	p-value
Significant others subscale	0.36 (0.30 – 0.42)	**<0.001**	0.06 (−0.04 – 0.15)	0.241
Spirituality/Religiosity index				
Sense of peace subscale	0.26 (0.20 – 0.33)	**<0.001**	0.06 (−0.02 – 0.15)	0.147
Faith in God subscale	0.46 (0.37 – 0.56)	**<0.001**		
Compassionate view of others subscale	1.00 (0.73 – 1.27)	**<0.001**	−0.36 (−0.72 to −0.01)	**0.047**
Religious behaviors subscale	0.44 (0.34 – 0.54)	**<0.001**	0.13 (0.003 – 0.26)	**0.045**
Internalized Stigma of Mental Illness				
Alienation subscale	−0.48 (−0.57 to −0.40)	**<0.001**	−0.10 (−0.21 – 0.01)	0.075
Discrimination experience subscale	−0.50 (−0.59 to −0.40)	**<0.001**	−0.06 (−0.17 – 0.05)	0.300
Social withdrawal subscale	−0.56 (−0.65 to −0.48)	**<0.001**	−0.13 (−0.26 to −0.004)	**0.043**
Stereotype endorsement subscale	−0.61 (−0.71 to −0.50)	**<0.001**	−0.14 (−0.26 to −0.02)	**0.023**
Stigma resistance subscale	0.61 (0.46 – 0.76)	**<0.001**	0.16 (0.02 – 0.29)	**0.027**

$R^2 = 0.5031$.
Adjusted $R^2 = 0.4757$.
Number of observations = 422.
Root Mean Squared Error = 2.7813.
Total SS = 6211.76.
$P < 0.001$.

associated with a 0.05-point increase ($b = 0.05$; 95% CI: 0.004–0.10; $p = 0.033$). Similarly, religious behaviors, reflecting engagement in prayer and other spiritual practices, were positively correlated with MHQoL ($b = 0.13$; 95% CI: 0.003–0.26; $p = 0.045$). Higher scores on the stigma resistance subscale of the Internalized stigma of mental Illness scale were also associated with better MHQoL ($b = 0.16$; 95% CI: 0.02–0.29; $p = 0.027$). Conversely, several factors were negatively associated with MHQoL. The compassionate view of others subscale of the spirituality/religiosity measure showed a significant negative association ($b = -0.36$; 95% CI: −0.72 to −0.01; $p = 0.047$). Additionally, higher scores on the social withdrawal ($b = -0.13$; 95% CI: −0.26 to −0.004; $p = 0.043$) and stereotype endorsement [the extent to which individuals living with mental illness accept, believe, or apply negative societal attitudes and stereotypes about mental illness to themselves] ($b = -0.14$; 95% CI: −0.26 to −0.02; $p = 0.023$) subscales of the Internalized stigma of mental Illness scale were significantly associated with lower MHQoL scores (Table 2).

7. Discussion

This study examined mental health-related quality of life (MHQoL) and factors associated with MHQoL among people living with severe mental illness in southwestern Uganda. Overall, participants had a moderate level of MHQoL, with a mean MHQoL-7D score of 14.98 (SD = 3.84), representing approximately 71% of the maximum attainable score. In addition, higher MHQoL was independently associated with male sex, better medication adherence, greater perceived family and friend support, higher religiosity, and greater stigma resistance, whereas social withdrawal, stereotype endorsement, and compassionate view were negatively associated with MHQoL. This indicates a moderate to moderately high level of mental health related quality of life among participants with severe mental illness. The finding suggests that, while many individuals reported some satisfaction across domains such as mood, daily activities, and interpersonal relationships, substantial challenges to optimal well-being persist. Comparable mean scores have been reported in studies involving individuals with chronic mental disorders, both in Europe and in low- and middle-income countries, highlighting that quality of life among people with severe mental illness often remains compromised despite ongoing treatment and support (Defar et al., 2023; Enzing et al., 2022; Van Krugten et al., 2022). The moderate quality of life observed in our sample may reflect a balance between protective factors such as consistent medication use, family involvement, and social support and adverse influences, including unemployment, internalized stigma, and limited access to community-based psychosocial rehabilitation (Anyayo et al., 2021; Ndikuno et al., 2016). These determinants are consistent with broader literature on quality of life among people with severe mental illness in sub-Saharan Africa, where structural barriers and social marginalization remain major impediments to recovery and well-being (Alemu et al., 2024; Shumye et al., 2019). This differs from high-income settings, where MHQoL scores tend to be higher due to greater access to mental-health services and social welfare systems (Priebe et al., 2010; Vigo et al., 2022).

Being male was independently associated with higher MHQoL scores in our sample, a pattern that may reflect gendered differences in social roles, economic opportunity, and exposure to stressors that reduce women's quality of life in low-resource contexts (Alemu et al., 2024). Gender norms in many sub-Saharan settings constrain women's access to paid work and decision-making and increase caregiving burdens, which can worsen mental-health outcomes and lower perceived quality of life (Verity et al., 2021). Moreover, women are also more likely to experience intersecting adversities including poverty and reduced autonomy that compound symptom burden and hamper recovery, underscoring the need for gender-sensitive, empowerment-oriented services (Alemu et al., 2023).

High adherence to psychotropic medication was associated with better MHQoL in this study. This finding aligns with evidence that consistent medication use improves symptom control, reduces relapse, and supports social and occupational functioning all of which are key components of quality of life for people with severe mental illness (Desalegn et al., 2020; Miasso et al., 2024; Ogunnubi et al., 2017). On the other hand, medication non-adherence has been associated with poorer QoL, frequent relapses, and higher hospitalization rates in sub-Saharan Africa (Birhan et al., 2025; Tadesse et al., 2025). In sub-Saharan Africa, adherence is often hindered by structural and psychosocial barriers, including medication side effects, stigma, financial hardship, and irregular drug supply (Semahegn et al., 2020; Tadesse et al., 2025). These barriers not only reduce treatment consistency but also directly impair subjective well-being (Lama and Baruah, 2019; Niolu et al., 2015). Addressing adherence therefore represents a dual-impact strategy improving both clinical outcomes and broader life satisfaction (Palacio et al., 2016). Although psychoeducation was not assessed in the present study, previous research has shown that psychoeducational interventions can improve treatment adherence, enhance illness understanding, and support recovery among people living with severe mental illness. Future studies should examine whether psychoeducation contributes to improved mental health-related quality of life in the Ugandan context (Chien et al., 2015; Loots et al., 2021).

Greater perceived family support was strongly associated with higher MHQoL among our study participants. In Uganda and other low-resource contexts, families often represent the first and most consistent source of emotional, practical, and financial support for individuals with SMI (Verity et al., 2021). Family members provide daily assistance such as reminders to take medication, financial support for clinic attendance, and help in managing symptoms all of which have been shown to significantly improve treatment adherence and reduce relapse risk (Turiho et al., 2024). Family involvement-based interventions have been associated with improvements in overall quality of life among people with mental illness highlighting the role of family relationships in fostering recovery and well-being (Alinaitwe et al., 2024; Bonnín et al., 2019; Handayani, 2022). In addition, family support provides emotional

buffering against stress, enhances self-esteem, and fosters social reintegration, all of which contribute to better MHQoL (Lima-Rodriguez et al., 2022). Furthermore, families can also help mitigate the effects of stigma by offering acceptance and advocacy, which encourage patients to engage more fully in social and occupational roles (Adu et al., 2024; Karnieli-Miller et al., 2013). In low-resource settings where formal psychosocial and rehabilitation services are scarce, leveraging family networks represents a culturally appropriate and cost-effective strategy to improve long-term outcomes for individuals with severe mental illness (Turiho et al., 2024).

In this study, greater engagement in religious behaviors was significantly associated with higher MHQoL among participants with severe mental illness. Research increasingly shows that engagement in religious or spiritual practices can enhance MHQoL among individuals with SMI. A systematic review found that positive religious coping was associated with better well-being, higher treatment adherence, and improved quality of life among those with psychosis and other SMI (Westhead and Georgiades, 2025). In the Ugandan context, a study of HIV-infected adults in Mbarara found that higher spirituality/religiosity scores correlated with lower levels of unhealthy alcohol use (Adong et al., 2018). These findings suggest that faith and spirituality provide individuals with meaning, belonging, emotional support, and coping resources (Van Uden and Zondag, 2016). For persons living with SMI, who often face stigma, isolation, and disrupted social networks, religious participation can offer a supportive community context and enhance sense of purpose (Asiimwe et al., 2023). In sub-Saharan settings, where formal psychosocial rehabilitation services remain limited and mental health systems are constrained, the culturally embedded role of faith communities is particularly important (Nanji and Olivier, 2024; Ojagbemi and Gureje, 2020). In the present study, religiosity was assessed through dimensions including religious behaviours, faith in God, sense of peace, and compassionate attitudes toward others. Religious behaviours, such as prayer, participation in worship services, meditation, and engagement with faith communities, were positively associated with MHQoL. These practices may provide emotional comfort, hope, meaning, and social support, particularly in low-resource settings where formal mental health services remain limited. Similar findings have been reported from several sub-Saharan African countries, where spirituality represents an important coping resource for individuals living with severe mental illness (Abaatyo et al., 2026; Alemu et al., 2024).

Contrary to our expectations, higher scores on the compassionate view of others subscale were associated with lower MHQoL. This finding contrasts with previous studies, which have generally reported positive associations between compassion, empathy, and psychological well-being (Saslow et al., 2013). One possible explanation is that, among people living with severe mental illness (SMI), compassion toward others may be accompanied by increased emotional and cognitive demands. Individuals with SMI often experience persistent symptoms, impaired emotional regulation, limited coping resources, and treatment-related challenges that may reduce their capacity to manage additional emotional burdens (Chronister et al., 2015; Galderisi et al., 2014). Consequently, extending compassion toward others—particularly in resource-constrained settings where caregiving responsibilities are substantial and emotional support may not be reciprocated—may contribute to emotional fatigue, psychological distress, or feelings of inadequacy(Rooney, 2020; Vieira et al., 2023). Alternatively, this unexpected association may reflect unmeasured contextual or cultural influences or residual confounding. Given the cross-sectional design of this study, causal relationships cannot be established. Therefore, longitudinal and qualitative studies are needed to clarify the mechanisms underlying the relationship between compassionate attitudes and MHQoL among people living with SMI.

Higher stigma-resistance (the ability to reject or withstand internalized stigma) was associated with better MHQoL, agreeing with previous studies showing that internalized stigma undermines self-esteem and quality of life while resilience/resistance improves engagement and outcomes (Alemu et al., 2023; Asrat et al., 2018). Internalized stigma can diminish self-esteem and self-efficacy, leading to withdrawal from treatment and social isolation. Conversely, stigma resistance enhances engagement with mental health services, fosters hope, and supports recovery (Swistak et al., 2024). These cognitive and emotional processes often lead to maladaptive coping behaviors, including social withdrawal, concealment of symptoms, reduced help-seeking, and disengagement from mental health services, all of which further compromise recovery and overall quality of life (Corrigan et al., 2006, 2011; Livingston and Boyd, 2010). These processes often result in maladaptive coping behaviors, including social withdrawal, concealment of symptoms, reduced help-seeking, and disengagement from mental health services, all of which further compromise recovery and quality of life (Bathje and Pryor, 2011; Tucker et al., 2013). In contrast, stigma resistance enables individuals to critically appraise and reject negative societal stereotypes, protecting their sense of identity and self-worth (Bonfine, 2013; Shih, 2004). By fostering empowerment, hope, and a more positive self-concept, stigma resistance supports active engagement with treatment, strengthens therapeutic alliances, and encourages participation in social and occupational roles (Williams, 2018).

Higher social-withdrawal scores were associated with lower MHQoL, a finding consistent with evidence that withdrawal reduces opportunities for support, meaningful activity, and social reinforcement key drivers of quality of life (Lysaker et al., 2012). Reducing withdrawal through community reintegration, supported social activities and anti-stigma work is thus likely to improve MHQoL in this population (Janssens et al., 2024; Javidi et al.). Social withdrawal and loneliness in SMI are strongly linked to worse overall health outcomes and earlier mortality (Fulford and Holt, 2023). Studies examining schizophrenia populations have similarly demonstrated that reductions in social participation and network size are associated with poorer functioning and subjective well-being (Dionisie et al., 2023). Because social withdrawal limits opportunities for participation in networks of care, peer-support, and community reintegration, it effectively truncates the pathways through which treatment gains translate into lived quality of life (Yanos et al., 2001).

Endorsing negative stereotypes (the extent to which individuals living with mental illness accept, believe, or apply negative societal attitudes and stereotypes about mental illness to themselves) about mental illness was linked to lower MHQoL, which aligns with literature showing that stereotype internalization diminishes self-efficacy, discourages help-seeking, and worsens psychosocial outcomes (Lysaker et al., 2012). Because stereotype endorsement is a core component of internalized stigma being the degree to which a person agrees with negative societal beliefs its presence can create self-reinforcing cycles: negative beliefs reduce engagement in care, increase avoidance of social roles, and degrade life satisfaction. Targeted cognitive and empowerment-based anti-stigma interventions that challenge self-stereotyping may therefore have measurable benefits for MHQoL (Alemu et al., 2023). Individuals who accept and apply societal stereotypes such as seeing themselves as weak, dangerous, or incapable because of their illness are more likely to experience diminished self-esteem, reduced hope, and a pervasive sense of inferiority (Livingston and Boyd, 2010).

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design precludes causal inferences between the identified factors and mental health-related quality of life (MHQoL). Although significant associations were observed, the temporal direction of these relationships cannot be established (Setia, 2016). Second, all primary variables, including medication adherence, stigma, perceived social support, religiosity, and MHQoL, were measured using self-reported questionnaires administered during a single interview. Consequently, the findings may be subject to recall bias, social desirability bias, and common method bias, which could have influenced the observed associations (Althubaiti, 2016).

Furthermore, because the primary study variables were measured using self-reported questionnaires administered during a single interview, common method bias cannot be excluded, and this may have contributed to the observed associations.Third, participants were recruited from a single regional referral hospital and comprised individuals actively receiving mental health services. As such, the findings may not be generalizable to people living with severe mental illness who are not engaged in care, are managed in other healthcare settings, or reside in the community, particularly those with more severe functional impairments (Sedgwick, 2014). Fourth, although several sociodemographic, clinical, and psychosocial factors were assessed, some contextual influences, such as socioeconomic circumstances, substance use, treatment accessibility, and cultural dimensions of well-being, were measured using relatively broad indicators and may not have fully captured their complexity. In addition, unmeasured factors, including personality traits, trauma history, and duration of untreated illness, may have influenced the observed associations. Finally, the stigma resistance subscale demonstrated relatively low internal consistency (Cronbach's $\alpha = 0.49$), suggesting that findings related to this construct should be interpreted with caution because measurement error may have attenuated or inflated the observed association with MHQoL. Fifth, participants were recruited from a single regional referral hospital in southwestern Uganda. Consequently, the findings may not be generalizable to individuals living with severe mental illness in other regions of the country, those receiving care in different healthcare settings, or community-dwelling individuals who are not engaged in formal mental health services.

Despite these limitations, this study provides important insights into the determinants of MHQoL among people with severe mental illness in a low-resource African context and underscores the need for longitudinal and intervention studies to clarify causal pathways and inform recovery-oriented service design. Although some of our findings are consistent with studies conducted in high-income countries, they should be interpreted within the Ugandan context. Uganda's mental healthcare system is characterized by shortages of mental health professionals, limited community-based mental health services, and restricted access to specialized care. These structural challenges may influence treatment adherence, social support, recovery opportunities, and ultimately MHQoL among people living with severe mental illness.

8. Conclusions

This study identified medication adherence, perceived family and friend support, religiosity, and internalized stigma as factors significantly associated with mental health-related quality of life (MHQoL) among people living with severe mental illness in southwestern Uganda. Higher MHQoL was associated with being male, better medication adherence, stronger perceived social support, greater engagement in religious behaviours, and higher stigma resistance, whereas social withdrawal, stereotype endorsement, and compassionate view of others were negatively associated with MHQoL. These findings underscore the multidimensional nature of MHQoL and highlight the importance of considering clinical, psychosocial, and spiritual factors in the care of people living with severe mental illness. Although these factors may represent important targets for future interventions, the cross-sectional design of this study precludes causal inferences. Therefore, longitudinal and intervention studies are needed to determine whether modifying these factors leads to sustained improvements in MHQoL. In addition, strengthening community-based, recovery-oriented mental health services that incorporate family support, stigma reduction, and culturally appropriate approaches may contribute to improved mental health outcomes in low-resource settings.

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Holt (2014). The study received ethics approval from the research ethics committee of Mbarara University of Science and Technology (#29/03-20). The psychiatry department of MRRH granted permission to collect data from the study participants. All participants provided voluntary written informed consent at study enrolment.

Consent for publication

All participants consented to the publication of their information.

Data availability

The dataset supporting the conclusions of this article is included within the article.

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CRediT authorship contribution statement

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Declaration of competing interest

Authors have no conflict of interest to declare.

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List of abbreviations

MHQoL:	Mental health related quality of life
SMI	Severe mental illness
ACDS	Adherence in Chronic Disease Scale
SD	Standard deviation
MRRH	Mbarara Regional Referral Hospital
ISMI	Internalized Stigma of Mental Illness Scale
HRQoL:	Health-related quality of life
YLDs	Years lived with disability

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