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A self-reported study: Health and mental health status among MSM in a district of North-West province

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Abstract

From youth to adulthood, men who have sex with men (MSM) experience a variety of challenges, including anxiety and depression. Their challenges are aggravated by their mental health condition, as they frequently suffer from depression, and yet they need to make informed decisions regarding their health without any limitation on access to health services. This study adopted a descriptive cross-sectional design using a quantitative approach. A sample of N=221 MSM aged 18-44 years old was recruited using a respondent-driven sampling technique (RDST). A structured, anonymous questionnaire was used to assess the mental health of the MSM. The online questionnaire data was entered into Excel and imported into Stata version 13.0 for analysis. The response rate was 92%. The findings of our study indicate that 46.61% of the respondents had mild to severe depression, while 53.39% did not experience depression. Contributing factors that lead the MSM to experience depression include their loss of respect in the community because they are MSM (p = 0.069), their families feeling ashamed of them (p = 0.068), and their experience of physical abuse (p = 0.006). Not being treated like other people in the health facility and in the community contributes to their not feeling that they belong (p = 0.250). The findings suggest that young MSM are at risk of developing depression and of being infected with HIV. The need has arisen to get more MSM to access health services and psychological support, since they are the most vulnerable key population.

Keywords: Depression, District, Mental health status, Mental health symptoms, Mental health, MSM, Self-reported health.

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Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Institutional Review Board Statement: The Ethical Committee of the Sefako Makgatho Health Sciences University, South Africa has granted approval for this study on 11 November 2021 (Ref. No. SMUREC/H/222/2021:PG).

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1. Introduction

Mental health is essential for an individual's well-being because it allows everyone to deal with stress, use their abilities, thrive in school and work, and contribute to society [1]. Additionally, it gives everyone the ability to make decisions, develop connections, and have a positive impact on the world [1]. However, a person with a mental illness often has a problem with and struggles to do the day-to-day basics, starting when the person first experiences the symptoms of the disease itself [2].

MSM's mental health is important, like that of any other person. It seems like MSM are disproportionately burdened by poor mental health [3, 4], such as different mental health problems such as depression, distress, trauma, and substance abuse [5], which predispose them to poor lifestyles like alcohol dependency and substance use [6-8] and unsafe sexual practices [9]. Moreover, MSM experience the greatest number of psychological problems; therefore, the risk of their engaging in unsafe sexual behaviours is greater, as is the risk of HIV infection [10].

MSM often do not receive the same treatment as others, and there is increased stigma and discrimination among MSM in many different parts of the world [11], contributing to low self-esteem. Despite recent advancements in the pursuit of equal rights for everyone, irrespective of their sexual orientation, there remains a persistent occurrence of stigma and violence towards MSM, resulting in psychological trauma [12]. Social stigma is prominent among men who have sex with men (MSM) in Sub-Saharan Africa, and it may increase human immunodeficiency virus (HIV) and sexual transmitted illness (STI) risks through its relationship with depression [13].

MSM are aware of and knowledgeable about the services that are available in various health facilities, but due to unwelcoming behaviour and attitudes towards health by health care workers, they have limited access to clinics [14-16]. Moreover, healthcare workers frequently and consistently violate their patients' rights, such as privacy and confidentiality, by making inappropriate comments [17]. Additionally, MSM participants described the unacceptable behaviour of the health workers they encountered after disclosing their sexuality, including intentional and unintentional breaches of confidentiality and generally poor treatment [18].

A lack of confidentiality is a major factor motivating MSMs who uptake health services to feel uncomfortable disclosing their sexuality. It is important, therefore, that patients feel that the information disclosed in the counselling session as well as the results of the test itself are confidential. Communities still attach sexuality to HIV, and MSM would therefore like to feel that they will not be exposed to their peers and that they can access private and confidential medical care as and when they require it [19]. Some MSM-friendly hot spots, drop-in centres, private pharmacies, and MSM-friendly health institutions were preferred outlets [20].

2. Methods

2.1. Participants

A quantitative descriptive cross-sectional design was used in this study. The study used a structured, anonymous questionnaire to assess the effects of both stigma and discrimination on the mental health of the MSM. The study included MSM, including gays and bisexuals aged 18 years and older, both HIV-negative and HIV-positive.

Table 1 summarizes the study's gender identities and sexual orientations. MSM refers to men who have sexual intercourse with other men; gay refers to men who are sexually or romantically attracted only to those of their own sex or gender; bisexual refers to men who are sexually or romantically attracted to both males and females, or to more than one gender, and after-nine refers to all participants who present as straight or heterosexual until 9 p.m.

Table 1.
Explanation of gender identities and sexual orientations of the study participants.

Concepts	Explanation
MSM	This represents all men who have sexual intercourse with other men.
Gay	This represents men who are sexually or romantically attracted only to those of one's own sex or gender.
Bisexual	This represents men who have sexual or romantic attraction to both males and females or to more than one gender.
After-nine	This represents all participants who present as straight or heterosexual until 9 p.m.

2.2. Inclusion & Exclusion Criteria

The inclusion of this study was all men born biologically male and having sex with other men who were 18 years of age and above. Participants were either HIV-negative or HIV-positive and must have experienced stigma. The exclusion criteria were any man who was not biologically born as male, not having sex with other men, and less than 18 years of age.

2.3. Study Area and Sample Size

The study was carried out in the Rustenburg sub-district, one of the largest in the Bojanala district of South Africa's North-West Province. There are 23 health care facilities in the sub-district, as well as a lesbian, gay, bisexual, transgender, intersex, and queer (LGBTIQ) organization. All of these clinics provide MSM with primary health care services such as HIV testing and counselling, STI screening, diagnosis, and treatment, condoms, lubricants, antiretroviral therapy (ART)treatment, and youth programs. Three main health care facilities were utilized directly because they had a significant number of patients, including those who use MSM. Two hundred and twenty-one (n = 221) MSM participated in the study; this sample size enabled a response rate of 92% for the study.

2.4. Sampling Design and Selection of the Participants

A non-probability, participant-driven sampling technique (PDST) was used to obtain information from the participants when they came for consultation for different services. The technique made it easy to access information easily at a low cost and sample enough MSM participants regardless of their scarcity and visibility in South Africa due to homophobia and homoprejudice experiences in the country. Nonetheless, the study was guided by a Raosoft calculator with a total population of 500, a confidence level of 95%, a margin error of 5%, and a 50% response distribution. A minimum representative sample of 218 was determined. The sample was to be buffered with 10%, which made the sample size 240.

An online link containing the questionnaire was given to the first 10 respondents, who passed the link to other interested respondents, and the survey continued to circulate through this referral system. The highlighted problem was that there were males who were willing to engage but did not satisfy the criteria since they were not MSM. They were excluded since the inclusion criteria were clearly stated.

2.5. Data Collection and Analysis

Data collection took place after SMUREC approval, using a structured anonymous questionnaire. To mitigate the potential transmission of COVID-19, the questionnaire was administrated through Google Chrome forms. Subsequently, an online link was generated to facilitate access to the questionnaire in both English and Setswana languages. This approach eliminated the necessity for a traditional paper-based survey and enhanced the overall accessibility of the questionnaire. The domains in the questionnaire included the socio-demographic information of the respondents, relationship patterns, sexual practice, STI or HIV health-seeking patterns, stigma and discrimination experiences, and a depression symptom screening tool (Patient Health Questionnaire PHQ-9) [21].

2.6. Pre-Testing

The study conducted a pre-testing of the questionnaire, and it commenced after receiving permissions from the North-West Province Department of Health and from the Rustenburg sub-district. The pre-testing of the questionnaire took place at health facilities in the Rustenburg sub-district. The facility managers were informed prior to the presentations, and the aim of the study was clearly defined. Consent forms were given to those who agreed to complete the questionnaires. The consent forms were collected online, as the questionnaire was accessible through the link and had been completed anonymously.

During the pre-test, none of the participants who received questionnaires asked for clarification, which suggests that it was well understood. That was true of both the English and the Setswana versions. Most of the participants filled out the questionnaire well and commented in the comments section. All questions were in sequential order, and the participants preferred to answer English questionnaires. No adjustments were needed to the questionnaire before using it as the final version.

2.7. Data Analysis

The data were captured into a Microsoft Excel spreadsheet and imported into Stata version 13 for further analysis. In univariate analysis, numeric variables are summarised by measures such as the mean, mode, median (50th percentile), standard deviation, and range. Tables are used to display and present the results. In bivariate analysis, categorical variables are analysed using frequency tables, which show counts and proportions, and the results are displayed using tables. Logistic regression was used to determine the effects of self-reported health on respondents' mental health and to report odds ratios with 95% confidence intervals. A model was built using the purposeful selection of covariates with significance at a relaxed p-value of less than 0.25. A p-value of less than 0.25 was used instead of 0.05 to allow potential variables that showed promise of significance to be included.

3. Results

Two hundred and twenty-one (n = 221) MSM participated in the study. The proposed sample size for the study was n = 240, but n = 19 participants either did not meet the inclusion criteria or were hard to find, given the respondent-driven sampling used to recruit participants. The peer-driven chain-referral sampling method was found to be useful for reaching hidden populations, such as MSM. The final sample size enabled a response rate of 92%. The demographic characteristics of the respondents are presented in the table below.

The mean age for the sample was 26 years, with a minimum age of 18 years and a maximum age of 44 years, with a standard deviation of 4.19.

Table 2 shows that the largest proportion of participants (55.20% ; n = 112) were in the age group 26-30 years, followed by those in the age group 22-25 years (23.08%; n = 51). In terms of marital status, 92.76% (n = 205) of the participants were single, which was the majority, while 4.07% (n=09) were married and 3.17% (n =7) were cohabiting or partnering. The majority of the participants in the study were African (82.18%; n = 183), followed by the coloureds with 11.31% (n = 25), the whites 4.98% (n =11) and the Indians 0.90% (n = 2). The number of participants who had reached the matric level was n=110 (49.77%), which was followed by the number of participants who had received tertiary education (37.10%; n = 82), and secondary education (7.24%; n = 16). Only n =13 (5.88%) had received only primary education. Most of the participants were earning an income between the range of R0-R1000 with 32.13 % (n = 71). This included the unemployed. Despite the fact that 37.10% of the participants had received tertiary education, unemployment remained at a high rate. Most participants in the study (82.81%; n = 183) self-reported their sexuality as gay, while 13.57% (n = 30) were bisexual, and lastly, 3.62% (n = 8) were "after-nine".

Table 2.
Socio-demographics.

Variables	Frequency	Percentage
Age category		
18- 21 yrs.	15	6.79
22-25 yrs.	51	23.08
26- 30 yrs.	112	55.20
31-44 yrs.	33	14.93
Marital status		
Single	205	92.76
Married	9	4.07
Cohabiting/Partnering	7	3.17
Race		
African	183	82.81
White	11	4.98
Coloured	25	11.31
Indian	2	0.90
Education		
Primary	13	5.88
Secondary	16	7.24
Matric	110	49.77
Tertiary	82	37.10
Income		
R0-R1000	71	32.13
R1000-R5000	38	17.19
R5000-R10000	63	28.51
R10000-More	49	22.17
Self-reported sexuality		
Gay	183	82.81
Bisexual	30	13.57
After nine*	8	3.62

Note: These are all participants who present as straight/heterosexual until 9 p.m.

Table 3.
Health characteristics.

Variable	Frequency	Percentage (%)
Current perception of health		
Excellent	82	37.10
Very good	86	38.91
Good	52	23.53
Poor	1	0.45
Human immunodeficiency virus status		
Negative	145	65.61
Positive	21	9.50
Unknown	55	24.89
Human immunodeficiency virus disclosure		
Yes	114	56.58
No	107	48.42
Taking Antiretroviral drugs		
Yes	22	9.95
No	199	90.05
Human immunodeficiency virus-related hospitalisation		
No hospitalisation	212	95.93
One hospitalisation	09	4.07
Human immunodeficiency virus		
Has had STIs	72	36.18
Given money for sex	32	16.08
Injection use	3	1.51
Has had multiple sex partners	61	30.65
None	31	15.58

Table 3 shows that most of the participants regarded their current state of health as very good (38.91%; n = 86). The number of participants who were HIV negative was n = 145 (65.61%), and the number of participants who had been tested for HIV and confirmed to be HIV-positive was n=21 (9.50). The number of participants who had not yet tested their HIV status was n = 55 (24.89%). Most of the participants had disclosed their status to their close relatives (56.58%; n = 114) regardless of whether the results were negative or positive, and only 48.42% (n = 107) were not able or ready to disclose their HIV status to their close family. The majority of the participants that answered the survey said they were not taking antiretroviral drugs (ARVs) (90.05%; n =199), while only 9.95% (n = 22) were taking ARVs. Most participants in the study had not been hospitalised for HIV (95.93%; n = 212), and only a few had been hospitalised once for HIV (4.07%; n = 09). The number of participants who had STIs was n = 72 (36.18%), and the number of participants who had had multiple sex partners was n = 61 (30.65%). Some of the participants had been given money for sex (16.08%; n = 32), a minority had used injections (1.51%; n = 3), and lastly, 15.58% (n = 31) were not at risk of contracting HIV. 60% (n = 19) neither agreed nor disagreed.

Table 4.
Mental health screening.

Little interest or pleasure in doing things		
Variable	**Frequency**	**Percentage**
Not at all	157	71.04
Several days	47	21.27
More than half the time	14	6.33
Nearly every day	3	1.36
Feeling down, depressed, or hopeless		
Not at all	126	57.01
Several days	93	42
More than half the time	2	0.90
Nearly every day	0	0
Trouble staying asleep or sleeping too much		
Not at all	145	65.61
Several days	63	28.51
More than half the time	10	4.52
Nearly every day	3	1.36
Feeling tired or having little energy		
Not at all	142	64.25
Several days	66	29.86
More than half the time	13	5.88
Nearly every day	0	0
Poor appetite or overreacting		
Not at all	163	73.30
Several days	43	19.46
More than half the time	11	4.98
Nearly every day	5	2.26
Feeling bad about yourself or that you are a failure or have let yourself or your family down		
Not at all	178	80.54
Several days	33	14.93
More than half the time	6	2.71
Nearly every day	4	1.81
Trouble concentrating on things, such as reading the newspaper or watching TV		
Not at all	193	87.33
Several days	19	8.60
More than half the time	4	1.81
Nearly every day	5	2.26
Moving or speaking so slowly that other people could notice		
Not at all	210	95.02
Several days	8	3.62
More than half the time	2	0.90
Nearly every day	1	0.45
Or the opposite, being so fidgety or restless that you have to move around		
Not at all	190	85.97
Several days	30	13.57
More than half the time	1	0.49
Nearly every day	0	0

Little interest or pleasure in doing things		
Variable	**Frequency**	**Percentage**
Thoughts that you would be better off dead or hurting in some way		
Not at all	188	85.07
Several days	29	13.12
More than half the time	3	1.36
Nearly every day	1	0.45
Feeling nervous, anxious or on edge		
Not at all	134	60.63
Several days	72	32.58
More than half the time	13	5.88
Nearly every day	2	0.90
Not being able to stop or control worrying		
Not at all	136	60.63
Several days	70	31.67
More than half the time	13	5.88
Several days	4	1.01
Worrying too much about different things		
Not at all	120	54.30
Several days	81	36.65
More than half the time	15	6.79
Nearly every day	5	2.26
Trouble relaxing		
Not at all	171	77.38
Several days	42	19.00
More than half the time	4	1.81
Nearly every day	4	1.81
Becoming easily annoyed or irritable		
Not at all	127	57.47
Several days	63	28.51
More than half the time	28	12.67
Nearly every day	3	1.36
Feeling afraid as if something awful might happen		
Not at all	152	68.78
Several days	59	26.70
More than half the time	10	4.52
Nearly every day	0	0

Table 4 shows that most of the participants with little interest or pleasure in doing things 28.96% (n=64). The number of participants who were feeling down, depressed, or hopeless was 42.9% (n=95). Some of the participants answered the survey saying that they are having trouble staying asleep or sleeping too much (34.39%; n=76). Participants who were feeling tired or had little energy were 35.74 (n= 79). Minorities who were having poor appetite or overreacting were 26.7% (n=59), and those who were feeling bad about themselves, that they are a failure, or that they had let failure or let their families down were 19.45% (n=43). Additionally, the number of participants who felt so fidgety or restless that they had to move around was 14.6(n=31).

Table 5.
Mental health scores.

Mental health scores	
0-4	Normal or minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20 and above	Severe depression

Kroenke, et al. [22] was the very first self-report "Patient Health Questionnaire (PHQ)" designed for use in primary care that diagnoses specific disorders using criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)[23].

The mental scoring for depression is shown in Table 5. 0-4 means normal or minimal depression, 5-9 represents mild depression, 10-14 signifies moderate depression, 15-19 represents moderately severe depression, and 20+ denotes severe depression.

Table 6 summarizes the participants' mental health rating interpretations. This means that there were 118 participants with normal or minimal depression (53.39%), 59 with mild depression (26.70%), 24 with moderate depression (10.8%), 11 with moderately severe depression (4.98%), and 9 with severe depression (4.70%).

Table 6.
Mental health scoring interpretation table for participants.

Total score	Frequency	Percentage
0 - 4	118	53.39
5-9	59	26.70
10-14	24	10.8
15-19	11	4.98
20 above	9	4.70

Table 7 outlines the score that participants obtained after taking out the questionnaire, indicating that the majority of participants have mild depression with a range score of 5-9 and 26.70%, followed by moderate depression with 10.8% and a score of 10-14.

Table 7.
Outcome of mental health.

Outcome	Frequency	Percentage
Not depressed	118	53.39
Depressed	103	46.61

Table 8 presents the outcome of stigma and discrimination towards MSM. The ratio of participants with mild to severe depression was 46.61% (n=103), while 53.39% (118) participants scored 0-4 and had no depression. The results indicate that depression is real, and 46.61% is scientifically a large number, that requires intervention.

Table 8.
Logistic regression.

Mental health	Odds ratio	p>[z]	95% conf	Interval
Families staying with MSM feel ashamed	1.895	0.068	0.953	3.765
MSM having HIV are disgusting	0.855	0.673	0.415	1.763
MSM deserve to be punished	0.496	0.028	0.266	0.925
MSM should have their own queue	0.805	0.443	0.462	1.400
MSM do have same freedom as others	1.055	0.840	0.622	1.790
MSM face rejection	0.902	0.736	0.507	1.614
MSM face verbal abuse	1.071	0.836	0.555	2.068
MSM face physical abuse	3.229	0.006	1.394	7.481
Men dating MSM lose respect	0.510	0.069	0.247	1.052
MSM face neglect	1.159	0.684	0.567	2.371
MSM not treated same as others	1.401	0.250	0.836	2.350
MSM not participating in social event	1.166	0.650	0.599	2.270
MSM not treated the same as others	0.866	0.596	0.509	1.473

Multivariate analysis showed that the odds of having mental health were almost twice as likely among the MSM whose families are ashamed of staying with the MSM person (OR = 1.8; CI:0.954-3.766). Mental health problems were three times more likely to occur among the MSM who faced physical abuse (OR - 3.2; CI: 0.415 - 1.763). The association between MSM faces, physical abuse, and depression is statistically significant. Based on the output from the table (based on univariate logistic regression) and using the cut-off point of p-value of less than 0.25, the following variables are significant: Families staying with MSM feel ashamed (p - value 0.068), and an odd ration of 1.89; men dating MSM lose respect (p - value 0.069), an odd ration of 0.51 and MSM not treated same as others (p - value 0.25) with an odd ratio of 1.40 are significant.

4. Discussion and Conclusion

The finding that 46.61% of the participants suffer from stigma-linked depression is significantly high and reveals the extent of the mental health problem. This concurs with similar studies conducted in Southern Africa, where the prevalence of screening positive for depression among MSM ranges from 44% to 58% [11, 24, 25].

This study indicates that 21.27% of the participants have little interest in or take little pleasure in performing routine daily activities that might make them happy. This finding is consistent with those of Stojisavljevic, et al. [12] who found that stigma and discrimination present great challenges to MSM, who find it difficult to cope and organise their personal day-to-day activities.

Other critical factors related to depression were rejection (42.08%), verbal abuse/teasing (58.83%), physical abuse (29.42%), and neglect (34.84%). Additionally, MSM are stigmatised because of their sexual orientation, which causes them

to avoid expressing their important problems and leads to their becoming isolated and lonely. They also face discrimination, abuse, lack of social support, and frequent stressful situations [26]. Moreover, another study by Saalim, et al. [27]indicated some of the stigma manifestations of MSM in Ghana as being gossiped about and ousted, intrusive questioning and verbal abuse, gestures that are judgmental, and religious, societal, and cultural shaming and blaming.

The results indicate that 46.61% of MSM participants in the study had depression, according to the screening tool used to score them. In several studies conducted in Southern Africa [11, 24, 25], the prevalence of depression among MSMs ranges between 44%-58%, which indicates a public health problem. Again, Sun, et al. [28] have highlighted that there is a high prevalence of several mental health issues, such as depression, anxiety, suicidal behaviors, and alcohol dependence, among Chinese MSM. However, other Chinese studies indicated that MSM's depressive symptoms differed due to HIV status, and some depressive symptoms ranged from 26.8% [29] to around 53.3% [30]. A meta-analysis conducted by Xiao, et al. [31] stated that depression is common among MSM living with HIV and is more likely to happen than in MSM who do not have HIV, with a total of 43%.

In conclusion, the findings of this study suggest that stigma and discrimination are the most significant factors associated with HIV risk and depression. HIV remains a disease of public health interest even now among the key population as the epidemic has entered its third decade. It is evident that psychological stressors and poor mental health increase the risk of HIV infection. Moreover, it is critical to integrate mental health screening into HIV primary care.

5. Limitations of the Study

There are various limitations to this study. The study was explicitly focused on MSM experiences in one community in a South African province, the Northwest Province (Rustenburg sub-district), and thus may not be generalizable to the entire country. Because MSM is a covert target, the participants were recruited using a PDST. As a result, they are not a random sample. The COVID-19 pandemic offered an important obstacle to the study, which had to opt for an online poll rather than a self-administered questionnaire.

Participants' replies were based on their own personal experiences and encounters with health care facilities; hence, their accuracy cannot be measured. As a result, the participants' knowledge and understanding of HIV-related topics cannot be considered correct or incorrect. The responses represented the subjective experiences of the individuals.

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