

PREVALENCE AND FACTORS ASSOCIATED WITH STIGMA AMONG PSYCHIATRIC PATIENTS AGED BETWEEN 20 AND 80 YEARS AT NEUROPSYCHIATRIC HOSPITAL, CARAES NDERA, RWANDA

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Abstract

Background: Public stigma related to mental health illnesses (PSRMHIs) remain a major public health threat globally including in Rwanda where about 20% of its population has at least one mental health issue and at risk of PSRMHIs.

Aim: This research aimed to determine the prevalence and factors associated with mental health stigma among psychiatric patients.

Setting: Neuropsychiatric Hospital, Caraes Ndera, Rwanda

Methods: This study was a quantitative cross-sectional study.

Results: Of the 419 psychiatric patients aged between 20 to 80 years with mean age 32, 71.8 % experienced PSRMHIs. Factors associated with stigma, increase in socio-cultural norms, number of government policies, loss of schooling, and loss of spouse or relative, and poverty there is significant positive predictive increase of the log odds 4.549 at p-value of significance level of 0.001 there is a predictive likelihood of strengthening stigma with significant positive predictive causal relationship. This study found non-significant causal relationship between socio-demographic factors and stigma, suggesting that for every one unity increase in those factors, there is a decreased probability of experiencing higher level of stigma, with log odds of -0.011 at p-value of 0.976.

Conclusion: This study shows that PSRMHIs remain high among psychiatric patients, and it increases by lack of life opportunities and due to lack of community awareness on anti-discriminatory behaviors.

Contribution: The significance is to inform the government and mental health partners on the burden of stigma to revise and develop new mental health promotion programs.

Keywords: Stigma, mental health disorders

Introduction

Stigma is a social process that isolates rejects, and places blame or dishonor on a person or group of people. Stigma on a personal level is stigma experienced on an individual basis. High levels of stigma is linked to poorer quality of life, increased psychological discomfort, and reduced social functioning. The stigma associated with mental illness affects not only the sufferers themselves but also their families, close friends, and caregivers.(1). More than 70% of those suffering from

mental illness do not receive any care from medical professionals worldwide. Evidence reveals that stigma and discrimination are two factors that increase the risk that people may put off seeking care or postpone seeking it.(2) A major obstacle to getting health care is stigma. Based on the experience of mental distress or other socio-demographic characteristics, stigma and prejudice and their impact on access to care may differ. For instance, compared to those with other mental health issues, people with psychosis are more likely to be viewed as violent and unpredictable. Psychotic disorders are therefore very stigmatizing. As a result, there may be a lot of actual and projected discrimination in healthcare settings. Furthermore, substance abuse is frequently linked to high rates of institutional discrimination and public stigma, which may deter people with substance abuse issues from seeking medical attention because they worry about receiving inadequate treatment from medical professionals.(2)

The stigma associated with having a mental health problem may worsen symptoms and make recovery more difficult. Living with stigma may also make a person less likely to seek treatment, they also claim that people with mental health issues are among the least likely of any group to find work, be in long-term relationships, live in decent housing, and be socially accepted in mainstream society due to the stigma associated with mental disorders. It can be difficult for people to hear cruel, disrespectful, or dismissive words used in the context of stigma. They may feel isolated and as though no one can relate to what they are going through as a result.(3)

The stigma associated with mental illness has been identified as a significant roadblock to improving the quality of life for those with mental disorders. Numerous empirical studies demonstrate that stigma associated with mental illness is widespread among individuals who experience it globally. This stigma hinders persons with mental illness from seeking treatment, widening the treatment gap and producing poor results in both the physical and mental realms. Suicidal ideation is also influenced by the stigma of mental illness, which is mediated through social exclusion, secrecy, and prejudice. (4).

It is linked to lower help-seeking behavior, relationships problems, less work possibilities and the resultant poverty, and inferior quality healthcare, discrimination, unequal rights, and unemployment, The very same holds true for accessing the court system, housing, insurance, higher education, and health care support services. (5). All in all, stigmatizations worsen the painful effects of mental illnesses and make rehabilitation more challenging(6).

Worldwide, nearly 9 out of 10 people with a mental illness experience stigma and prejudice globally, More than 85% of them live in nations with low and medium incomes (7), More than 20% of the overall population in Rwanda suffers from mental illness, and the percentage is rising, And are affected by stigma. It includes stereotypes, prejudgment and discrimination. Despite the global target to invest in mental health services to ensure universal health coverage (8), People with mental health illnesses are prevented from accessing their basic rights as humans (5). and thus, impact negatively the quality of their lives (4).

In Rwanda, a study conducted by Kayiteshonga et al. (2022) on 19,110 general survey participants revealed that about 20.49% of them had one or more mental health disorders. Major depressive episode (12.0%) was the most common disorder, followed by panic disorder (8.1%), post-

traumatic disorder (3.6%), obsessive-compulsive disorder (3.6%), epilepsy (2.9%), psychotic disorders, and social phobia (1.3%). Antisocial personality disorder, suicidal behavior disorder, substance use disorder, and bipolar disorder were the least common disorders, each with a prevalence of less than 1%. Particularly among genocide survivors, the prevalence rates were comparatively greater. Major depressive episode (35.0%), post-traumatic disorder (27.9%), and panic disorder were the most common disorders. (26.8%) (9)

According to studies, stigma associated to mental health varies based on the study participants' demographic, cultural, geographic, and sociological traits as well as other variables like blame, stereotypes, contacts, and experiences. Mental health illnesses remain high globally. In Rwanda, 1 in 5 people live with one or more mental health disorder with only 5.3% had ever used the services in 2018. In Rwanda, quantitative studies reporting prevalence of stigma are scary. There is no study on stigma among psychiatric patients that is country-representative. Studies, however, have revealed stigmatizing beliefs about those who have mental illnesses. Additionally, those that are addressed to patients who are the rules and ideals of a society are reflected in its social structures, and many of the same elements that influence structural stigma also influence public stigma.

The lack of research on stigma interventions in low- and middle-income countries (LMICs) is consistent with the larger mental health research gap in resource-poor settings, of which Rwanda is belonging. Self-stigma develops when a person with a mental health or substance use disorder internalizes unfavorable preconceptions and the structural and societal stigma associated with these disorders. One notable public health gap in Rwanda is the absence of prevalence and factors associated with stigma among psychiatric patients. Current study identified the prevalence and determinants of the stigma in Rwanda including individual, familial, community, and contextual factors associated with stigma experience, the study was conducted at Neuropsychiatric hospital Ndera, in Rwanda.

Research Methods and Design

Research methodological approaches that were used to carry out this study and included: research design, target population, sample size, sampling technique, data collection methods, data analysis, and ethical consideration.

Study design: This study was a cross-sectional research study and used quantitative data from psychiatric patients at Ndera Neuropsychiatric Teaching Hospital during the study period.

Setting: This study was conducted at Ndera Neuropsychiatric Teaching Hospital. The hospital is a central hospital specialized to provide high quality mental health services. It receives clients from all 5 regions of Rwanda and the neighboring countries requiring advanced mental health illnesses.

Study population and sampling strategy: The target population of this research was the psychiatric patients who attended Neuropsychiatric Hospital of Caraes Nedra during study period. During this study approximately 8,029 patients who attended consultations services every month at the hospital (a monthly average number of a total number of 96,357 consultations done in the last fiscal year, 2021-2022) was enrolled into the study. This study used primary data collected

from adult from stable and collaborating outpatients department (OPD) and recovering hospitalized patients aged from 20 to 80 years old (10).

This study collected data from 419 patients. This sample size was determined using the Yamane formula for a finite population (11).

$$n = \frac{N}{1+N(e)^2} \text{ Assuming:}$$

N: population size (8,029),

e: margin of error held at 5%

$$n = \frac{8,029}{1 + 8,029 (0.05)^2}$$

$$n = \frac{8,029}{1 + 20.0725}$$

$$n = \frac{8,029}{1+20.0725} = 381$$

Therefore, current study collected data from 381 patients. However, to adjust missing or incomplete responses, 10% of the sample size was added; equivalent approximately 38 people. Thus, 419 neuropsychiatric patients were recruited to take part in this study.

Data collection: We collected data for this study using a questionnaire with closed-ended, multiple-choice questions. The questions were adopted from the Stigma-9 Questionnaire (STIG-9) (12). The questionnaire captures participants' rating on statements about experienced types of stigma and beliefs about how community considers him/her.

Data analysis: Collected row data was managed and analyzed using SPSS Version 23. For prevalence, descriptive statistics was established in tables and described while Pearson correlation and ordinal logistic regression was computed to establish association and causal relationship between independent, dependent and intervening variables and odds ratio at p value of 0.05 was used to interpreted the findings.

Due to lack of normal distribution of our data, we used non-parametric ordinal regression to determine strength and direction of factors associated with stigma among the study participants. Non-parametric ordinal regression was used because it does not rely on the assumption of normality and can provide reliable results even when the data distribution is skewed or not normally distributed. Ordinal regression estimates parameters, expresses how a change in the independent variables will affect the dependent variables. The significance of this test in study is that it identifies causal relationship, the strength of the effect of independent variables on dependent variable; it further forecast the effect of cause and can predict future trends, although in this study no fixed predications were done.

The normality test on data generated were statistically not distributed normally are therefore fits in ordinal nonparametric analysis. The model was significant by P-Value of 0.001, with model bringing in predictors (intercept) that exerts influence on the stigma. Predictors (factors) has significant influence on stigma. There is significant relationship between dependent and independent variables.

The Pearson and Deviance is non-significant; therefore, the observed data is of good fit with non-significant level of 1, P-Value is greater than 0.05. Therefore, we deduce that this model fits the data very well.

Ethical considerations: Ethical permission was sought from the Mount Kenya University (MKU) Institutional Review Board (IRB) with approval letter No: MKU/ETHICS/23/01/2024(1). Moreover, prior to data collection, we obtained permission of conducting this study from the Director General of Caraes Ndera Neuropsychiatric Teaching Hospital (Letter No: 0146/NNPTH/ER.CPD.QI/2024).

Results

This chapter presents the findings according to the objectives of this study. Analysis and the findings are discussed in comparison with other studies in literature.

Demographic characteristics of the study participants

A total of 419 psychiatric patients admitted at Ndera psychiatric University teaching hospital participated in the study. Larger proportion of them were males (66.3%, n=147), aged between 30 and 39 years, Single (53.7%), having primary education (41.3%), and catholic religion (48.9%). Table 1 provides detailed information about demographic characteristics of the participants.

Table 1: Demographic characteristics of the study participants

Variables	Frequency	Percentages
Age of patients in group		
20-29	133	31.7
30-39	147	35.1
40-49	94	22.4
50-59	25	6
60-69	13	3.1
70-80	7	1.7
Gender		
Male	278	66.3
Female	141	33.7
Marital status		
Single	225	53.7
Married	103	24.6
Divorced	68	16.2
Widow	23	5.5
Level of education		
informal	8	1.9
Primary	173	41.3
Secondary	159	37.9

University	79	18.9
Religion		
Catholic	205	48.9
Adventist	41	9.8
Muslim	36	8.6
Others	137	32.7
Total	419	100

Source: Primary data, (2024)

Prevalence of Stigma among psychiatric patients

The table 4.2 above, indicates that majority of respondents 71.8% experience stigma compared to 28.2 % of respondents who did not exhibit stigma. The classification was based likert scale using STIG-9 questionnaire, which is a 4-point likert scale, the scores ranged from 0 to 27 and those with scores from 0 to 3 were considered not experiencing stigma and from 4 up to 27 were considered experiencing stigma. 71.8 % were found by taking the number of respondents who have status of stigma present (301) divided by the total number of study participants (419) and the results were presented in the Table 2 provides details on prevalence of stigma among participants.

Table 4. 2: Prevalence of Stigma among psychiatric patients

Stigma status	Frequency	Percent
0-3: Stigma absent	118	28.2
4-27: Stigma Present	301	71.8
Total	419	100.0

The table 4.3 below, present the occurrence of stigma among psychiatric patients according to age, gender, marital status, level of education and religion of the study participants that experience stigma.

Factors associated with stigma among psychiatric patients

Current findings show that for every one unit increase on gender, there is a predicted decrease of 0.178 in log odds of falling at higher on the stigma at P-Value of 0.332. In the course of independent variables increases, there is increased probability of falling at higher level on the dependent variable. Therefore, gender status, are positive predictors on the development of stigma. Secondly, considering marital status, for every one-unit change in marital status, there is a predicted positive increase of 0.646, 0.747 and 0.892 in log odds of falling at higher on the stigma at P-Value of 0.094, 0.066 and 0.037 respectively.

Thirdly, religion association shows for every one-unit change in Muslim belief, there is a predicted negative decrease of -0.003 log odds of falling at higher on the stigma at P-Value of 0.992.

Additionally, regarding participants' education, for every one-unit change in education from primary to secondary level, there is a predicted negative decrease of -0.057 and -0.138 log odds of falling at higher on the stigma at P-Value of 0.812, And 0.569 respectively.

Lastly, considering age as a factor, for every one-unit increase in age, there is a predicted positive increase in log odds of falling at higher on the stigma at non positive significant P-Value of 0.025; 0.014; 0.020; 0.050; 0.046 respectively. Table 3 provides further information about the association.

Table 3: Ordinal regression estimates for demographic factors associated with stigma among psychiatric patients

Variables	Estimates	95 % CI		P-value
		Lower	Upper	
Age of patients in group				
20-29	1.569	0.196	2.943	0.0250
30-39	1.712	0.342	3.082	0.014
40-49	1.653	0.265	3.041	0.020
50-59	1.503	-0.002	3.007	0.050
60-69	1.673	0.031	3.316	0.046
70 and above	0			
Gender				
Male	0.178	-0.182	0.538	0.332
Female	0			
Marital status				
Single	0.646	-0.111	1.403	0.094
Married	0.747	-0.051	1.545	0.066
Divorced	0.892	0.052	1.731	0.037
Widow	0			
Level of education				
informal	1.779	0.498	3.060	0.006
Primary	-0.057	-0.529	0.414	0.812
Secondary	-0.138	-0.614	0.338	0.569
University	0			
Religion				
Catholic	0.287	-0.095	0.669	0.141
Adventist	0.134	-0.487	0.755	0.673
Muslim	-0.003	-0.650	0.644	0.992
Others*	0			0.332

*Others include: Different protestant sects

Table 4 deduces that for every one unit increase in factor in the independent variables (age, gender, education, religion, marital), there is predictive decrease of that value in log odd of falling at higher level on the dependent variable (stigma). As the course of independent variables such as age, gender, education level, marital, religion increase there is decreased probability of falling at higher

level on stigma, analysis shows that, for every one unit increase independent variables, there is also significant negative predictor decrease of the log odds -0.011 at non-significant p-Value of 0.976.

It indicates that for every unit increase on socio-cultural and economic variables, there is significant positive predictive on stigma. For instance, increase in socio-cultural norms, government policy, loss of schooling, and loss of spouse or relative, poverty there is significant positive predictive increase of the log odds. 4.549 at p-Value of significance level of 0.001

Table 4: Parametric Estimates of Stigma and independent variables

Variables	Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Stigma	-2.187	0.645	11.492	1	0.001	-3.452	-0.923
Socio-demographic factors	-0.011	0.362	0.001	1	0.976	-0.72	0.698
Stigma	3.436	0.335	105.186	1	0.001	2.779	4.093
Socio-cultural and Economic factors	4.549	0.246	342.368	1	0.001	4.067	5.031

Link function: Logit.

Discussion

The current study sought to determine prevalence and associated factors influencing stigma among psychiatric patients attending Ndera Neuropsychiatric Teaching hospital, the study's specific objectives included determining prevalence and factors associated with stigma.

Prevalence of stigma among psychiatric patients

The prevalence of respondents experiencing stigma were 71.8% compared to 28.2 % of respondents who did not exhibit stigma. And this suggests that, majority of psychiatric patients experience stigma. In this study the participants were asked the questions using STIG-9 questionnaire which is a 4-point likert scale, the scores range from 0 to 27 and those with scores from 0 to 3 were considered not experiencing stigma and from 4 up to 27 were considered experiencing stigma. 71.8 % were found by taking the number of respondents who have status of stigma present (301) divided by the total number of study participants (419) and the results were presented in the Table 4.2.

Of 301 who experience stigma, males are more (207) than female (94), the stigma is more prevalent in youth (98 respondents) falling in age group of 20-30 compared to (4 respondents) in age group of 70-80 who experiences stigma, and is more prevalent among single and unmarried (156 respondents) compared to (19 respondents) who are widow.

Stigma is more prevalent among catholic believers (147 respondents) and other relevant beliefs (102), It is more prevalent among respondents who attended primary (121) and respondents who attended secondary (116 respondents).

The study findings highlighted higher prevalence of stigma 71.8% among patients attending Ndera Neuropsychiatric Teaching hospital and this finding is not far from the similar study done in Ethiopia (Tesfaw et al., 2020) which highlighted stigma as 62.6 % and in Nepal which highlighted stigma as 97.4% (Shanta Maharjan et al, 2019)

Factors Associated With Stigma among Psychiatric Patients

Stigma was significantly observed among respondents aged between 20 and 30 years. This study deduced that youth group experience stigma (167 respondents) more than any other age group in the study and this is supported by the findings of (13) ; (Shumet *et al.*, 2021). who found that stigma was more significant among adolescent psychiatric patients receiving mental health treatments. And why these results? it is because of social perception, Persons in the 20 to 30 age group may be particularly vulnerable to stigma due to societal perceptions and stereotypes about mental health. This age range often encompasses young adulthood, a period marked by transitions, identity formation, and social pressures, which can contribute to heightened vulnerability to stigma.

Developmental stage, Young adults in this age group they may be navigating challenges such as entering the workforce, pursuing higher education, or starting families, which can exacerbate stress and contribute to mental health concerns, Thus increase the stigma among them. Access to services, young adults may encounter barriers to accessing mental health services, including stigma-related barriers such as fear of judgment or discrimination. This could result in delayed or inadequate treatment, further perpetuating stigma within this age group.

This study found that male respondents experiences stigma more compared to females (207/419 respondents) and these findings are not far from the findings of (Shanta Maharjan et al, 2019) who found significant Prevalence (54.44%) of stigma among male psychiatric patients admitted at Nepalese teaching hospital, concluding that male experience stigma than females. In addition, male respondents experiencing stigma in this study is not surprise and this is further supported by various studies, for instance study done by (Maharjan, S., & Panthee, B. , 2019), found that men psychiatric patients experience stigma than females in general hospital outpatient clinic in Austria.

And why these results? because gender Stereotypes, Societal norms and expectations surrounding masculinity may contribute to increased stigma among male respondents. There can be cultural pressures for men to appear strong, self-reliant, and emotionally stoic, which can deter them from seeking help for mental health issues or openly discussing their experiences, leading to heightened stigma.

Help-Seeking Behavior, Research suggests that men are less likely than women to seek help for mental health concerns. This reluctance may be driven by stigma, fear of judgment, or concerns about appearing vulnerable. As a result, male respondents are more likely to experience stigma or avoid seeking support altogether, which can exacerbate their experiences of stigma.

Perceptions of Mental Health, Gendered perceptions of mental health may influence how stigma is experienced. Men may face unique challenges in acknowledging and addressing mental health issues due to cultural norms that discourage emotional expression or prioritize physical health over mental well-being. This contributes to feelings of shame or inadequacy, further perpetuating stigma.

Intersectionality, Stigma experiences can intersect with other social identities, such as sexual orientation, or socioeconomic status. For male respondents who belong to marginalized group, additional layers of discrimination or prejudice may compound stigma.

Overall, the finding that male respondents experience stigma more compared to females highlights the need for gender-sensitive approaches to addressing mental health stigma. Interventions should aim to challenge traditional gender norms, promote inclusive and supportive environments for men to seek help, and foster open dialogue about mental health across genders.

Analysis considered independent variables and found a relationship between socio-cultural norms, local government policy, loss of schooling and development of stigma, suggesting that variables such as loss of spouse or relative, loss of opportunities, loss of self-esteem, and poverty does contribute not too much to the development of stigma, this results is supported by the study done Ibrahim Norhayati (2019) who found influence of literacy on stigma (Norhayati Ibrahim et al, 2019) and (Shumet *et al.*, 2021) in a study done in 2021 who found an association of stigma with Unemployment, low educational status.

On the other hand, this study found strong positive cause relationship between local government policies, socio-cultural norms, loss of schooling and deployment of stigma. For this study found that every unity change on local government policies, there is significant positive predictive increase of the log odds. 4.549 at p-Value of significance level of 0.001. However, these findings are supported by the study of (14) and his college whose findings identified strong influence of societal and culture regulations on development of stigma among patients diagnosed of mental illness. For instance, the current contextual mental health policy has significant causal effect on development of stigma among psychiatric patients attending Ndera Neuropsychiatric Hospital.

Furthermore, this study deduced strong causal relationship between socio-cultural norms and development of stigma, suggesting that every unit change in socio-culture norms, there predictive likelihood of strengthening stigma at p-Value of significance level of 0.001, however, these findings are in agreement with study findings of (Ran, M. et al, 2021); Zhang, Z (2019) and his colleague who stressed strong causal relationship of culture and stigma on the study on stigma of mental illness and cultural factors in Pacific Rim region .

And to understand more these, Local government policies can play a significant role in shaping attitudes and practices related to mental health within communities. Policies that perpetuate discrimination, lack adequate funding for mental health services, or fail to address systemic inequalities can contribute to the deployment of stigma. For example, policies that stigmatize certain mental health conditions or restrict access to resources, services and support can reinforce negative stereotypes and attitudes towards those diagnosed with mental health disorders.

Socio-cultural norms encompass a wide range of beliefs, values, and behaviors shared within a society or community. These norms can influence how mental health is perceived, discussed, and treated. In Rwandan culture, there may be strong taboos surrounding mental illness, leading to silence, shame, and ostracism. Socio-cultural norms that prioritize conformity, emotional suppression, or rigid gender roles can exacerbate stigma by discouraging individuals from seeking help or expressing their experiences.

Understanding the causal relationships between these factors can inform targeted interventions aimed at addressing stigma and promoting mental health equity. Efforts to combat stigma should involve multi-sectoral approaches that engage local governments, community leaders, educational institutions, and cultural influencers. By addressing root causes such as discriminatory policies, entrenched norms, and educational barriers, stakeholders can work towards creating more inclusive, supportive environments that prioritize mental health and well-being for all.

Conclusion

This study aimed at determining prevalence and factors associated to stigma among psychiatric patients. Objectively, this study found prevalence to be as higher as 71.8 % and is more prevalent in male than in females, while youth age group 20-30 experience stigma more than adults.

With regard to the associated factors, government policy, cultural and societal norms have been found to contribute significantly to the development of stigma among patients diagnosed with mental illness.

Therefore, for prevalence the study underscores an urgent need to establish stigma reduction and anti-stigma programs, raising mental health awareness. for associated factors, the study findings also underscore the importance of revisiting the existing policy regarding mental health as key tool to prevent stigma among psychiatric patients, but also establishing community based preventive strategies could significantly reduce the levels of stigma among patients diagnosed of psychiatric conditions. Furthermore, conducting on-going and regular behavioral educational campaigns and interventions at facility and community level to influence societal and cultural positive change and challenging harmful socio-cultural norms towards stigmatization among the patients diagnosed of psychiatric conditions could substantively prevent stigma.

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Competing Interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

Emile conceptualized and developed the study protocol, led data analysis, and drafted the manuscript. Emile oversaw data collection. Dr Okova contributed in review of the study protocol, results, and manuscript. All Authors contributed in the submitted manuscript.

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Data availability

Authors declare that data are available from Emile upon written request

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