

Knowledge and attitudes regarding mental illness among non-psychiatric physicians working in public hospitals in the Eastern province of Rwanda

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ABSTRACT

INTRODUCTION: The occurrence of mental illness has been common throughout the world and the care for mental health disorders has been a growing public health concern. Unfortunately, the treatment gap is huge between high-income countries (HICs) and low-income countries (LICs) and is particularly inadequate among non-specialist mental health professionals.

The aim was to assess the existing knowledge and attitudes regarding mental illness among medical doctors working in public hospitals

METHODS: A quantitative cross-sectional study was conducted in public hospitals in the Eastern Province of Rwanda. The study enrolled medical doctors working as clinicians. A self-completed questionnaire was used to assess their knowledge and attitudes regarding mental illness.

RESULTS: Most of the participants reported having sufficient knowledge (81.90 %) and a positive attitude (87.40%). The study also found a strong correlation between knowledge and attitudes ($P=0.000$). Age and specialist years of experience have been found to have the most significant correlation with attitude ($P=0.048$), ($P=0.023$) as well as with knowledge level since respective P -values are ($P=0.006$) and ($P=0.003$).

CONCLUSION: Globally, physicians assessed reported to have enough knowledge and positive attitudes regarding mental illness. However, further studies targeting non-medical health professionals are still needed to identify the broader picture of mental health literacy.

Keywords: Mental Disorder, Knowledge, Attitudes, Physician, Health Literature, Rwanda

INTRODUCTION

The occurrence of mental illness is common worldwide, and the care for affected individuals has been a growing public health concern [1,2]. Contemporary studies reported that these disorders are significant as global reports on disease burden indicate that neurological mental

disorders have 10.4 % DALY (Disability Adjusted Life Year). Substance use disorders take the largest of 71.4% of DALY. Mental health for almost one third (28.5%) of YLD (Years lived with Disability), ranging them as the leading cause of YLD [3,4,5]. Further studies estimated that prevalence rates of mental disorders that do not include neurological conditions among adults range between 12.2%

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and 48.6% and that a 12-month prevalence rate ranges from 8.4% and 29.1% [1]. Additionally, it is projected by experts that by 2030, depression which is a major mental disorder worldwide, will take the third place among leading causes of disease burden in LICs (Low-Income countries) while it will be the second-highest cause of disease burden in MICs (Middle-income country) [6,7].

However, concerning this burden caused by mental illness around the world, literature reports that the treatment gap existing between LICs and HICs (High-income countries) is significantly large as it is estimated that 76 to 85 % of individuals with serious psychiatric conditions in resource-limited settings do not receive the treatment they need when compared to those from developed countries [8].

The gap in these developing countries is the consequence of scarcity of resources where access to adequate services is pronouncedly lacking in LMICs (Low to middle-income countries) [9]. Nonetheless, even in the developed countries where treatment rates are comparatively high, it is found that mental disorder care occurs lately after many years of the onset of the illness [10].

In the effort to close the existing treatment gaps, the WHO (World Health Organization) has advocated the integration of mental health care into general health services at the primary care and this had necessitated a task-shifting process to allow some health professionals who are not specialists in mental health to deliver mental health services [11,12].

This involvement of non-specialized health professionals in mental illness care in settings where resources are limited has demonstrated promises. However, significant gaps have been pointed out regarding their mental health literacy which consists of knowledge, attitudes, and perceived self-efficacy [13].

Knowledge among medical doctors relating to mental health may differ depending on their background on medical training (country, quantity and quality of practice); however, similarities had been found worldwide that show inadequate knowledge regarding mental illness among them. This was highlighted in previous reports highlighting knowledge and attitude inadequacy among General P (GPs) regarding mental illness and others which showed evidence that many non-specialist professionals are not capable of identifying and listing symptoms attributable to

mental illness [14,15]. In developing countries, different studies have demonstrated important attitudes of stigmatization and discrimination towards mental illness [16,17].

Consequently, reported gaps in knowledge and poor attitudes among health professionals may negatively affect patients seeking health services and restrict the quality of care [13].

Rwanda has developed a national health policy focusing on access to care, from the primary level to the tertiary level in the last decade.

To our knowledge, there is no available data on the knowledge and attitudes among non-psychiatric professionals in Rwanda and particularly medical doctors despite their position in the management of patients in public hospitals. As such, we were motivated to conduct the research that will help to demonstrate the existing knowledge and attitude status among physicians. The findings will allow the development of additional policies to support the promotion and development of mental health literature among non-psychiatric physicians and other health professionals.

METHODS

Study Sites: The study was conducted in eight public hospitals located in the Eastern Province of Rwanda, Kibungo referral Hospital, Rwamagana Provincial Hospital and six districts hospitals: Nyagatare hospital, Kiziguro hospital, Gahini hospital, Rwinkwavu hospital, Kirehe hospital and Nyamata hospital. Rwanda district hospitals provide services consisting of a government-defined complimentary package of activities, whereas provincial hospitals, provide the complimentary package of activities and generally specialized care.

Study design: This is a quantitative cross-sectional study conducted on medical doctors working in the designated hospitals for one month, from 1st July 2020 to 31st July 2020.

The study enrolled 127 participants (GPs as well as specialists involved in clinical care in different services).

Data collection: After consenting, a self-completed questionnaire was given to each participant. It was designed to collect socio-demographic characteristics and assess knowledge and attitudes regarding mental illness. We used a modified MICA (Mental Illness Clinical Attitudes scale) scale for attitudes, which had 16 items and each was

scored with one point. Participants who scored eight points or above were considered to have positive attitudes, and those who scored less were considered to have negative attitudes. For knowledge, we used a questionnaire that has been used in previous studies [18], on which we bring some adaptations to fit with our context. It has 35 items and each item was scored with one point. Participants who scored 18 and above were considered as having sufficient knowledge, while those who scored less were considered as having insufficient knowledge.

Data analysis: Data was analyzed using SPSS 16. For tests of associations, chi-square tests were done to determine relationships between different variables. One-way analysis of variance (ANOVA) was used to assess the association between socio-demographic variables and knowledge or attitude scores. In contrast, the variables of significant association were entered into a multiple linear regression model to identify independent significant predictor variables of knowledge and attitudes scores. Significance testing for all inferential tests was set at $p < 0.05$, two-tailed, and 95% confidence levels.

This study was approved by the Institutional Review Board at the CMHS and by the ethical committees of each hospital involved in the study (IRB approval notice No 132/CMHSIRB/2020).

All enrolled participants signed a consent form that gave details and clarification for the research in both English and French.

RESULTS

One hundred twenty-seven doctors consented and participated in the study. The majority of them were male (83.5%). More than half (61.4%) were aged less than 35 years. 84.3% were general physicians and 63 % were trained in Rwanda. 90% of specialists completed their training in Rwanda. Amongst the GPs, 90 % had less than five years of experience, while 90% of specialists had less than 15 years of experience. 58.3% of participants had been previously exposed to mental health practice. A majority of the participants (81.90%) were found to have sufficient knowledge, while 87.40% were found to have positive attitudes (Table1).

Table 2 represents the distribution of level of knowledge among participants; demographic characteristics.

Table 1: Socio-demographic characteristics

Variables		N (%)
Gender	Male	106 (83,5)
	Female	21 (16,5)
Age	less than 35	78 (61,4)
	between 35 to 44	45 (35,4)
	45 and above	4 (3,2)
Marital status	Single	73 (57,5)
	Married	54 (42,5)
Medical grade	GP	107 (84,3)
	Specialist	20 (15,8)
General	abroad	47 (37)
medicine	Rwanda	80 (63)
training country		
PG training	abroad	2 (10)
country	Rwanda	18 (90)
GP experience	less than 5	90 (70,9)
	5 to 14	35 (27,5)
	15 and above	2 (1,6)
Specialist	less than 14	18 (90)
	15 and above	2 (10)
experience		
years		
Working place	RH (1)	24 (18,9)
	PH (1)	21 (16,5)
	DH (6)	82 (64,6)
Dual practice	No	78 (61,4)
	Yes	49 (38,6)
Dual practice	Public	19 (38,8)
facility	Private	30 (61,2)
Previous MH	No	53 (41,7)
	Yes	74 (58,3)
Exposure types	Short term training < 4weeks	58 (78,4)
	Long term training > 4weeks	14 (18,9)
	Mentorship by psychiatrist	2 (2,7)
Level of	Insufficient (score ≤ 17)	23 (18,1)
	Sufficient (score ≥ 18)	104 (81,9)
Level of	Negative (score < 8)	16 (12,6)
	Positive (score ≥ 8)	111 (87,4)
attitudes		

Some variables have shown a strong relationship

Table 2: Distribution of level of knowledge among social demographic characteristics

Values		Knowledge		P-value
		Sufficient	Insufficient	
		N (%)	N (%)	
Gender	Female	2 (9.5)	19 (90.5)	0.263
	Male	21 (19.8)	85 (80.2)	
Age group	Less than 35 age	20 (25.6)	58 (74.4)	0.02
	Between 35 and 44	3 (6.7)	42(93.3)	
	45 and above	0 (0.0)	4 (100)	
Marital status	Single	17 (23.3)	56(76.7)	0.078
	Married	6 (11.1)	48 (88.9)	
Medical grade	GP	21 (19.6)	86 (80.4)	0.305
	Specialist	2 (10.0)	18 (90.0)	
Medicine training country	Abroad	5 (10.9)	41 (89.1)	0.11
	Rwanda	18 (22.2)	63 (77.8)	
PG training country	Rwanda	2 (11.1)	16 (88.9)	0.884
	Abroad	0 (0.0)	2 (100)	
GP experience years	From 1 to 4	21 (23.3)	69 (76.7)	0.057
	From 5 to 9	2 (5.7)	33 (94.3)	
	15 and above	0 (0.0)	2 (100)	
Specialist experience years	From 1 to 14	0 (0.0)	18 (100)	0.002
	15 and above	1 (50.0)	1 (50.0)	
Working place	RH (1)	4 (16.7)	20 (83.3)	0.067
	PH (1)	3 (14.3)	18 (85.7)	
	DH (6)	16 (19.5)	66 (80.5)	
Dual practice	No	15 (19.2)	63 (80.8)	0.679
	Yes	8 (16.3)	41 (83.7)	
Dual practice facilities	None	15 (19.2)	63 (80.8)	0.646
	Private	6 (20.0)	24 (80.0)	
	Public	2 (10.5)	17 (89.5)	
Previous MH exposure	No	17 (32.1)	36 (67.9)	0.001
	yes	6 (8.1)	68 (91.9)	
Types of exposure	Short term training < 4 weeks	6 (10.3)	52 (89.7)	0.406
	Long term training > 4 weeks	0 (0.0)	13(100)	
	Mentorship by psychiatrist	0 (0.0)	3 (100)	
Attitudes	Positive attitudes	10 (09.0)	101 (91.0)	0.000
	Negative attitudes	13 (81.2)	3 (18.8)	
Total		23 (18.1)	104 (81.9)	

Table 3: Distribution of level of attitudes among social demographics characteristics

		Attitudes		P-value
		Positive	Negative	
		N (%)	N (%)	
Gender	Female	1 (4.8)	20 (95.2)	0,236
	Male	15 (14.2)	91 (85.8)	
Age group	Less than 35 age	12 (15.4)	66 (84.6)	0,43
	Between 35 and 44	4 (8.9)	41 (91.1)	
	45 and above	0 (0.0)	4 (100)	
Marital status	single	13 (17.8)	60 (82.2)	0,05
	Married	3 (5.6)	51 (94.4)	
Medical grade	GP	15 (14.0)	92 (86.0)	0,265
	Specialist	1 (5.0)	19 (95.0)	
Working place	RH (1)	2 (8.3)	22 (91.70)	0,719
	PH (1)	2 (9.5)	19 (90.5)	
	DH(6)	12 (14.6)	70 (85.4)	
PG training country	Abroad	0 (0.0)	2 (100)	0,930
	Rwanda	1(5.6)	17 (94.4)	
General medicine training country	Abroad	2 (4.3)	44 (95.7)	0,435
	Rwanda	14 (17.3)	67 (82.7)	
GP year of experience	From 1 to 4	14 (15.6)	76 (84.4)	0,285
	From 5 to 14	2 (5.7)	33 (94.3)	
	15 and above	0 (0.0)	2 (100)	
Specialist year of experience	From 1 to 14	1 (5.6)	17 (94.4)	0,047
	15 and above	1 (50.0)	1 (50.5)	
Dual practice	No	13 (16.7)	65 (83.3)	0,081
	Yes	3 (6.1)	46 (93.9)	
Dual practice facilities	None	13 (16.7)	65 (83.3)	0,129
	Private	3 (10.0)	27(90.0)	
	Public	0 (0.0)	19 (100)	
Previous MH exposure	No	11 (20.8)	42 (79.2)	0,019
	yes	5 (6.8)	69 (93.2)	
Exposure type	Short term training < 4 weeks	5 (8.6)	53 (91.4)	0,477
	Long term training > 4 weeks	0 (0.0)	13 (100)	
	Mentorship by psychiatrist	0 (0.0)	3 (100)	
Knowledge	Sufficient knowledge	3 (2.9)	101 (97.1)	0.000
	Insufficient knowledge	13 (56.5)	10 (43.5)	
Total		16 (12.6)	111 (87.40)	

with the level of knowledge that was statistically significant as their $P < 0.05$: those are age ($P = 0.02$), specialist years of experience ($P = 0.002$), previous exposure to mental practice with ($P = 0.001$) as well as level of attitudes with ($P = 0.000$).

The remaining respondents' characteristics showed no association with the existing knowledge (Table 2).

Table 3 represents the distribution of attitudes among participants' demographic characteristics and highlights any existing relationship. A number of characteristics showed a strong association with the level of the attitude that was statically significant as their $P < 0.05$. Those are marital status ($P = 0.04$), country for general medicine training ($P = 0.035$), years of experience as a specialist ($P = 0.047$), previous exposure to mental health practice with ($P = 0.019$) as well as the level of knowledge among participants. Other remaining

demographic characteristics were found not to have an association with attitudes.

In Table 4, variables that showed a significant association with either knowledge or attitudes scores by multivariate analysis were entered into a multiple linear regression model to identify independent significant associated variables of knowledge and attitudes scores. Only two variables were found to have a strong association with knowledge and attitudes as their P -values are less than the significance level of 5%. These were, age with ($P = 0.006$) for knowledge and ($P = 0.048$) for attitudes, specialists' years of experience with ($P = 0.003$) for knowledge and ($P = 0.023$) for attitudes. Level of knowledge and attitudes have also been identified with a strong mutual association with a P -value of ($P = 0.000$) (Table 4).

Table 4: Factors associated with knowledge and attitudes

	Coefficients	Test	P-value
Variables multiple regression analysis for knowledge			
Age	1,042	3,306	0,006
GP experience years	0,146	0,533	0,604
Specialist experience years	-1,022	-3,723	0,003
Dual practice	-1,506	-1,168	0,265
Previous MH exposure	0,293	0,265	0,796
Marital status	1,024	0,676	0,512
Level of attitude	1,059	5,405	0,000
Variables multiple regression analysis for attitudes			
Age	-0,643	-2,2	0,048
GP experience years	-0,071	-0,322	0,753
specialist experience years	0,666	2,599	0,023
Dual practice	1,103	1,068	0,307
Previous MH exposure	-0,127	-0,144	0,888
Marital status	-1,601	-1,408	0,185
Level of knowledge	0,669	5,405	0,000

DISCUSSION

This study was conducted to assess existing knowledge and attitudes regarding mental illness among GPs as well as specialists working in public hospitals located in the western province of Rwanda. Out of the 127 physicians who participated, the majority of them were general physicians (84.7%). This differs from a similar study done in Nigeria, where the majority of participants were specialists [19]. The medical education system may explain this and public health structure since medical speciality training was only developed in Rwanda in the last decade [20].

The assessment of knowledge and attitudes gave promising results as the majority of the participants showed to have sufficient knowledge (81.9%) and positive attitudes (87.4%). These findings are consistent with previous studies that reported the existence of relative knowledge and attitudes [13], while there are other reporting contrasting associations [16].

Age and specialist experience years have shown a strong association with knowledge and attitudes. Studies done previously have shown divergent findings. While some are consistent with our results, others are different. Research done in Latin American countries reported no correlation between age or the years of experience with either attitudes and knowledge [21]. In contrast, others done in Hong Kong and Australia revealed positive correlations. Reports from a study done in Taiwan revealed that physicians of younger age were more associated with good knowledge and adequate attitudes regarding depression [22]. Meanwhile, other findings in Ethiopia describe how positive attitudes were gained with increasing age [23]. This finding could be explained by the fact that a long experience in domains other than mental health discourages health professionals from becoming familiar with caring for mental health patients.

There are some limitations that we can note and that could affect the results of this study: Firstly, the use of instruments validated in other countries may not allow for measurement of culture-specific aspects of attitudes since attitudes measures cannot exclude social desirability bias or self-report bias. Secondly, the study has not used the same instruments as previous studies since we adapted with our context. This may influence the

comparison of the results with those of previous studies.

CONCLUSION

Mental illness is a great burden globally, and its management is a severe challenge. Integrating primary care has been the most promising strategy to close the significant treatment gap. Despite our study's adequate knowledge and attitudes, proactive measures should be focused on evidence-based care regarding mental health care. These findings could serve as a basis for intervention by improving mental health literature towards the less experienced.

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