International Journal of Medical and Health Research
www.medicalsciencejournal.com
ISSN: 2454-9142
Received: 09-11-2021, Accepted: 25-11-2021, Published: 10-12-2021
Volume 7, Issue 12, 2021, Page No. 26-30

Validation of opening minds scale for health care providers (OMS-HC)

Dapap D D[1*], Audu M D[2]

[1] Lecturer, Department of Psychiatry, College of Medicine and Health Sciences Bingham University Teaching Hospital, Jos Plateau State, Plateau State, Nigeria

[2] Lecturer, Department of Psychiatry, Jos University Teaching Hospital, Plateau State, Nigeria

Abstract

Background: Mental illness stigma acts as a major barrier that may results in disparities in access, treatment, and outcome. Scales designed to assess stigmatising attitudes towards those with mental illness among health care providers are necessary to evaluate programs designed to reduce that stigma.

Objectives: The aim of this study was to evaluate the internal reliability and external validity of the Opening Minds Scale for Health Care Providers (OMS-HC)) among health staff in a Tertiary Healthcare Centre.

Materials and Method: 308 participants from the Jos University Teaching Hospital answered a self-administered questionnaire, i.e Community Attitudes towards the Mentally Ill (CAMI) scale, and the opening mind scale for Health care providers (OMS-HC). Coefficient alphas were computed to obtain internal consistency estimates of reliability for the CAMI subscales and OMS-HC. Correlations of OMS-HC scores with CAMI scores were calculated and compared to evaluate concurrent validity.

Results: The result showed internal consistency of OMS-HC, The cronbach's alpha was 0.985 reflecting high level of internal consistency within the 20 item scale. The concurrent validity scores were: 0.983 and 0.990 for Pearson and spearman correlation coefficient respectively (P<0.001).

Conclusion: The findings from our study showed a good and strong correlation between OMS-HC and the chosen gold standard (CAMI). Hence OMS is valid and reliable, suitable for clinical and research purposes.

Keywords: mental illness, stigma, healthcare providers, concurrent validity

Introduction

Stigma, a tattoo or brand in Greek (from the verb stizein) was a distinguishing mark burn or cut into the flesh of slaves or criminals by the ancient Greeks so that others would know who they were and that they were less valued members of society [1]. Although the Greeks did not use the term 'stigma' in relation to mental illness, stigmatizing attitude about the illness were already apparent in the sense that mental illness were associated with concept of shame, loss of face and humiliation[1]. The stigma of mental illness presents an important challenge to health care providers. Stigma held by health care providers towards patients with mental illness may results in disparities in access, treatment, and outcome [2, 3]. Ultimately this leads to the inability of a person with mental illness to recover. Recovery is a process which occurs when people with mental illness discover, or rediscover, their strengths and abilities for pursuing personal goals and develop a sense of identity that allows them to grow beyond their mental illness [4, 5].

Some scholars have developed frameworks for examining stigma. Goffman [6] identified three types of stigma: 1. 'Abominations of the body' (e.g. physical deformities); 2. 'Blemishes of individual character' (e.g. mental health problems, unemployment, crime), and 3. 'Tribal stigma' or 'tribal identities' (e.g. race, religion, etc.). Many African societies believe that psychiatric illness is either the outcome of an abominable familial defect or the 'handiwork of evil machinations' (demons, evil spirits). Therefore, these negative beliefs result in psychiatric patients being seen as outcasts and people that should be quarantined [7].

In the literature, it has been shown that attitudes towards people with mental illness can be measured using stereotypes such as: 'people with mental illness are dangerous,' and 'people with mental illness do not recover' [8, 9]. As well as a desire for social distance because of the aforementioned stereotypes [10]. Stigmatizing attitudes can also be measured in the form of emotional reactions towards people with mental illness. Finally, not disclosing that one has a mental illness, because of the dimensions described above, can lead to self- stigma and may also be an indicator of mental illness related stigma [9, 11]. For example, those who would disclose that they had a mental illness may not think that mental illness is something to be ashamed of and may therefore be less stigmatizing. This has been described in the literature where some refuse to be diminished by stigma and becoming more active participants of change in health care [10].

A large gap was shown in the area of surveys used to measure the attitudes of health care providers because they do not have items that relate specifically to the role of the health care provider [12]. A new measure of stigma intended for healthcare providers is pertinent because stigma among health care providers differs from other kinds of stigmas held by various other groups. For example, it has been reported that people with mental illness have poorer physical health in part because medical professionals wrongly associate the physical symptoms experienced by the person with mental illness to the mental illness itself [13-16].

The OMS-HC was developed to determine the degree of

stigma held by healthcare providers towards those with mental illnesses [17, 18]. The goal of the scale is to determine the efficacy and effectiveness of anti-stigma programs in efforts to diminish stigma's impact on health care provision. As noted by Kassam *et al*., [19] the OMS-HC requires greater external validation, but only few studies have compared the performance of the OMS-HC with other validated stigma scales. Our study aims to compare the performance of the OMS-HC against a chosen gold standard. i.e community attitude to mental illness scale (CAMI) [20].

Materials and Method

This is a cross sectional study on a stratified and randomly selected sample population of health workers conducted at the Jos University Teaching Hospital (JUTH). The study population comprise of all health care providers at the Jos University Teaching Hospital. We excluded administrators, health record officers, security personnel, dieticians, ward attendants because they are often not involve or minimally involved in patients management, and health staff who do not give consent.

Having a population of 1175 with a 95% confidence level and ±5% precision, it was determined that a sample of 328 participants will be adequate, calculated using appropriate formula for proportions. Following approval from the ethical committee of JUTH and permission to carry out the study, health care providers were approached and the details and objectives of the study was explained to them. The confidentiality of information given as well as the purpose of the study, which is strictly for research purposes, was stressed. Informed consent was obtained from the staff. The researchers administered the questionnaire to the consented staff within a period of two months. i.e March 26, to May 26, 2014.

We obtained two sets of data. The first set comprised demographic variables, and the second set were, responses from the Community attitude to mental illness (CAMI) scale and OMS-HC [17]. CAMI scale is a scale developed by Taylor and Dear that has been demonstrated to be reliable and valid [20]. It is a self-report scale designed to measure the negative and positive attitudes toward mental illness and mentally ill patients. The scale includes 40 items with four dimensions: These include (authoritarianism (AUTH), benevolence (BNVL), social restrictiveness (SRST) and community mental health ideology (CMHI)). The subjects were asked to rate each statement on a 5-point scale (strongly agree, agree, neither, strongly disagree, disagree). Negatively scored items were reversely scored for analysis. Community Attitudes toward Mental Illness (CAMI) questionnaire has been validated across health care providers/trainees in many parts of the world. This instrument has been used in Nigeria by Dominic *et al* [7].

The OMS-HC is a structured questionnaire containing 20 items that measure various dimensions of stigma which include, social distance, disclosure and attitude towards those with mental illness. In response to the items, A 5-point Likert scale was used and response options were 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree and 5 = Strongly agree. Scores range from 20 to 100 and a lower score indicates less stigma. Items 3, 8, 9, 10, 11, 15, 19 were reversely scored. Since the study sample is from a literate population, the English version of the questionnaires was administered to the subjects to fill themselves.

The instrument was validated using concurrent validity. The concurrent validity of a test instrument, like the tests used in psychometrics is a measure of agreement between the results obtained by the given test instrument and the results obtained for the same population by another instrument acknowledged as the "gold standard". In this method the instrument is tested against an already established and validated instrument (criterion) at the same time. The correlation between the test instrument and the criterion is referred to as the validity coefficient.

Data Analysis

Data was analysed by the use of Statistical Package of Social Sciences (SPSS) version 19.0 (SPSS 19) for Microsoft Windows Software Package. The result was presented with frequency tables, means, standard deviation and descriptive analysis. SPSS was used to analyse simple frequency distribution tables. Tests of association between some of the responses and some of the respondents' socio demographic features such as type of profession, gender, and sex was determined with the $\chi 2$ test. Descriptive statistics such as means and standard deviations was used to summarize continuous variables while categorical variables were summarized with percentages. The student t test was used to compare continuous variables. Coefficient alphas were computed to obtain internal consistency estimates of reliability for the CAMI subscales and OMS-HC. The level of significance was set at $p<0.05$.

The concurrent validity was determined by Pearson and Spearman correlation coefficient between the two sets of measurements obtained for the same target population - the measurements performed by the evaluating instrument (OMS-HC) and by the chosen gold standard instrument (CAMI).

Results

Out of the 328 questionnaires administered 308 were properly completed and returned therefore, the statistical analysis was based on 308 respondents. The respondents comprised 111 (36.0%) Doctors, 158 (51.3%) Nurses, 10 (3.2%) pharmacists, 21 (6.8%) laboratory scientists/technicians, 4 (1.3%) medical social workers, 3 (1.0%) physiotherapists and 1(0.3%) clinical psychologist.

Among these, 150(49.0%) were males and 156 (51.0%) were females. One hundred and eighty seven (61.1%) were married and 109 (35.6%) were singles. One (0.3%) of the respondents was separated and 1 (0.3%) was divorced while 8(2.6%) were widowed. Their mean age was 37.8 (standard deviation (SD) 9.5) years (range 18 - 64 years). Demographically, the respondents truly represent the study as shown in table 1.

Table 2: shows measure of internal consistency within the different subscales of open minds scale for health care providers (OMS-HC)

Examination of the internal consistency showed acceptable consistency for the complete 20-item OMS-HC and for each of its subscales. Table 2 shows that the entire scale showed a Cronbach's α score of 0.985. The Cronbach's α for 3 subscales (i.e., attitudes towards those with mental illness, attitudes towards the disclosure of mental illness, and the social distance from those with mental illness) showed αs of 0.965, 0.946, and 0.976, respectively. cronbach's alpha(α) for all 3 subscales were above 0.90, indicating satisfactory

and high levels of reliability

Table 3: shows measure of internal consistency within the different subscales of community attitude to mental illness (CAMI)

The CAMI includes four subscales authoritarianism (AUTH), benevolence (BNVL), social restrictiveness (SRST) and community mental health ideology (CMHI), Cronbach'salpha(a) were: 0.966, 0.947, 0.966, and 0.976 for the AUTH, BNVL, SRST and CMHI subscales respectively. cronbach's alpha(α) for all 4 scales were above 0.90, indicating satisfactory and high levels of reliability. The overall sample was 0.987.

Table 4: shows concurrent validity test between CAMI scale and OMS-HC items

This table shows correlation between OMS-HC scores and scores of the gold standard (CAMI). The mean OMS-HC scores was 2.738(SD+0.903), while the mean CAMI score was 2.564(SD+0.737).The correlations were: 0.983 and 0.990 for Pearson and Spearman correlation coefficient respectively. With P<0.001 showing there is a good and strong correlation between OMS-HC and CAMI scale, Hence OMS is valid

Table 1: Demographic characteristics of respondents

Demographic characteristics	No. of respondents	Percentage (%)
Age group (years)		
18-24	14	4.6
25-34	123	40.6
35-44	82	27.1
45-54	72	23.8
55-64	12	4.0
Total	303	100.0
Sex		
Male	150	49.0
Female	156	51.0
Total	306	100.0
Professional group		
Doctors	111	36.0
Nurses	158	51.3
Pharmacist	10	3.2
Lab. Scientists	21	6.8
Clinical psychologists	1	0.3
physiotherapist	3	1.0
Medical social workers	4	1.3
Total	308	100.0
Marital status		
Single	109	35.6
Married	187	61.1
Separated	1	0.3
Divorced	1	0.3
Widowed	8	2.6
Total	306	100.0
Religion		
Christianity	291	95.1
Islam	12	3.9
Traditional	3	1.0
Total	306	100.0
Highest level of education		
Certificate holder	3	1.0
Diploma	89	28.9
Higher National Diploma	18	5.8
Degree	102	33.1
Post Graduate	96	31.2
Total	308	100.0
Year of clinical experience(years)		
<1	22	7.2
1-3	41	13.4
4-6	50	16.3
7-9	47	15.4
≥10	146	47.7
Total	306	100.0

Table 2: Measures of internal consistency for OMS-HC

OMS-HC Subscale	Cronbach's alpha (α)
Attitude scale	0.965
Disclosure scale	0.946

Social distance scale	0.976
Overall sample	0.985

Table 3: Measure of internal consistency of CAMI

CAMI Subscale	Cronbach's alpha (α)
Authoritarianism (AU) subscale	0.966
Benevolence (BE) subscale	0.947
Social Restrictiveness (SR) subscale	0.966
Community Mental Health Ideology (CMHI) subscale	0.976
Overall sample	0.987

Table 4: Concurrent validity test between CAMI and OMS items

Parameters	CAMI	OMS
N	222	268
Mean	2.564	2.738
SD	0.737	0.903
Correlation coefficient (Pearson)	0.983	
Spearman	0.990	
P-value	<0.001	

Discussion

One of the objectives of the current study was to examine the internal reliability of the OMS-HC and its subscales when used with health staff from JUTH. The tests showed acceptable reliability for the 20-item scale as well as for the 3 subscales. Determining that the OMS-HC is an appropriate tool for the study of health staffs, as these health staffs often have significant contact with the mentally ill. This has important implications for health care provision because reducing stigma is an important step in increasing access to health care [21].

The initial testing of the OMS-HC scale was carried out by Kassam *et al* [19], it showed good internal consistency, Cronbach's alpha = 0.82, however it was by test-retest reliability. Modgill *et al* [17] revisited the psychometric properties and factor structure of the OMS-HC scale and sought to determine the effectiveness of the scale in measuring stigmatizing attitudes among a variety of health care providers. They found out that all versions of the scale measures and subscales had satisfactory internal consistencies ($\alpha = 0.67$ to 0.79)

Comparisons among the subscale scores on the OMS-HC can provide an indication of which aspects of stigma an intervention was most impactful at addressing [17]. For example, an anti-stigma program can target simultaneously attitudes towards help-seeking and social distance or disclosure. The OMS-HC's ability to perform these tasks is useful not only in a research context but also for development and evaluation of educational programs aimed at addressing stigma within health care settings [21].

This study also sought to compare the performance of the OMS-HC to CAMI which is the chosen gold standard commonly used to measure stigma towards those with mental health among the general population, including health care workers. It was found that the OMS-HC showed significant positive correlations with the CAMI. The correlation was observed to be very strong between OMS HC and CAMI scale, even though the OMS HC relate specifically to healthcare providers while the CAMI scale relates to the general population. Both scales showed good internal consistencies.

This finding aligns with study done by mark *et al* [21] where it was found that the OMS-HC showed significant positive correlations with the Mental Illness Clinician's Attitudes Scale (MICA), Bogardus social distance scale, and Recovery Assessment Scale (RAS). The strongest correlation observed was between MICA and OMS-HC, which is to be expected as both scales seek to measure health care providers' behavioural intent towards clients with mental health and/or substance use issues. In addition, the OMS-HC contains several items from the MICA. Even though our study was compared against a single instrument as against their study which was compared against multiple instruments.

Conclusion

The findings of the current study suggest that the OMS-HC is an appropriate tool for measuring stigma towards patients with mental illness among Healthcare Providers. The findings of the current study also demonstrated a good and strong correlation between OMS-HC and the chosen gold standard (CAMI). Hence OMS is valid.

Limitations

Some of the stigma items are vulnerable to social desirability bias. Secondly Concurrent validity is regarded as a fairly weak type of validity because the benchmark test (e.g CAMI) may have some inaccuracies and, if the new test (e.g OMS-HC) shows a correlation, it merely shows that the new test contains the same problems.

Conflicting interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

1. Simon B, Fink PJ (ed), Tasman A (ed). Shame, stigma mental illness in Ancient Greece Washington D.C: American psychiatric press (1st ed), 1992, 1-236.
2. Phelan JE, Basow SA. College students' attitudes toward mental illness: An examination of the stigma process'. Journal of Applied Social Psychology,2007:37(12):2877-2902.
3. Birch S, Lavender T, Cupitt C. The physical healthcare experiences of women with mental health problems: Status versus stigma. Journal of Mental Health,2005:14(1):61-72.
4. Mueser KT, Corrigan PW, Hilton DW. Illness Management and Recovery: A Review of the Research. Psychiatr Serv,2002:53:1272-1284.
5. Corrigan PW. How stigma interferes with mental health care. Am Psychol,2004:59:614-625.
6. Goffman E. Stigma: Notes on the Management of a Spoiled Identity. The American journal of sociology,1963:70(5):143.
7. Dominic I U, Festus A. Stigmatizing attitude towards

the mentally ill. South African journal of psychiatry,2010:16:2.
8. Corrigan PW, Rowan D, Green A, Lundin R, River P, White K *et al*. Challenging two mental illness stigmas: personal responsibility and dangerousness. Schizophr Bull,2002:28(2):293-309.
9. Corrigan PW, Watson AC. At issue: Stop the stigma: call mental illness a brain disease. Schizophr Bull,2004:30(3):477-9.
10. Corrigan PW, Kerr A, Knudsen L. The stigma of mental illness: Explanatory models and methods for change. Applied Preventative Psychology,2005:11(3):179-190.
11. Hocking B. Reducing mental illness stigma and discrimination - everybody's business. Med J,2003:178(9):S47-S48.
12. Kassam A, Glozier N, Leese M, Henderson C, Thornicroft G. Development and responsiveness of a scale to measure clinicians' attitudes to people with mental illness (medical student version). Acta Psychiatr Scand,2010:122:153-61.
13. Owen J, Sayce L. Disability Rights Commission: Equal treatment-Closing the gap (Report No1). Learning disability practice, 2006, 9(8).
14. Felker B, Yazel JJ, Short D. Mortality and medical co-morbidity among psychiatric patients: a review. Psychiatr Serv,1996:47:1356-1363.
15. Harris EC, Barraclough B. Excess mortality of mental disorder. Br J Psychiatry,1998:173:11-53.
16. Jones S, Howard L, Thornicroft G. Diagnostic overshadowing': worse physical health care for people with mental illness. Acta Psychiatr Scand,2008:118:169-173.
17. Modgill G, Patten SB, Knaak S, Kassam A, Szeto AH. Opening Minds Stigma Scale for Health Care Providers (OMS-HC): examination of psychometric properties and responsiveness. BMC Psychiatry,2014:14(120):1-10.
18. Patten SB, Remillard A, Phillips L, Gardner DM. Effectiveness of contact-based education for reducing mental illness-related stigma in pharmacy students. BMC Med Educ,2012:12(120):1-9.
19. Kassam A, Papish A, Modgill G, Patten S. The development and psychometric properties of a new scale to measure mental illness related stigma by health care providers: the Opening Minds Scale for Health Care Providers (OMS-HC). BMC Psychiatry,2012:12(62):1-12.
20. Taylor SM, Dear MJ. Scaling community attitude towards the mentally ill. Schizophrenia Bulletin,1981:7(2):225-40.
21. Mark M, Heather S, Scott BP, Emily KL, Sireesha JB, Robert EM *et al*. Examining the application of the Opening Minds Survey in the Community Health Centre Setting. Can J Psychiatry,2018:63(1):30-36.