



Stigmatization of mental illness among health workers in JOS University Teaching Hospital

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Abstract

Background: It has been suggested that those more knowledgeable about mental illness are less likely to endorse negative or stigmatizing attitudes. The objectives of the study was to determine stigma toward mental illness among health care providers and to determine their knowledge and beliefs about mental illness.

Materials and Method: The investigation was a descriptive and cross-sectional study on a stratified and randomly selected sample population of 308 Health workers at the Jos University Teaching Hospital. Questionnaires were used to elicit responses from the respondents, using the Community Attitudes towards the Mentally Ill (CAMI) scale. Information was also obtained on Knowledge and beliefs about possible causes of mental illness.

Results: The result of the study showed that stigmatizing attitudes to the mentally ill are widely held even among health care providers. Although the respondents appeared to be knowledgeable about the possible role of psychosocial and genetic factors in causation of mental illness, 3.8% of them believed that mental illness could be caused by witches/wizards, 3.4% thought it could be a consequence of Devine punishment or curse.

Conclusion: This study offers insights into how health care providers regard people with mental illness that may be helpful in designing appropriate training or re-training programs in Nigeria and other low-income African Countries.

Keywords: mental illness, stigma, healthcare providers, knowledge, believe

Introduction

The word “stigma” originated in ancient Greece as the marking or ‘branding’ of slaves ^[1]. It has come to mean the labelling, discrimination and rejection of people who are socially and behaviourally different ^[2]. People with mental illness fall into the category of ‘different,’ because the symptoms of the various mental illnesses may interfere with their ability to fulfil society’s expectations. Society expects us to “think and act rationally and in a meaningful fashion” as well as to be actively and adequately involved in our family, community, work, and other social relationships ^[1].

People with mental illness as a whole are portrayed as violent and dangerous people that have severely disturbed thought processes and therefore have unpredictable behaviour and should be feared ^[3]. The media and cinema have facilitated this portrayal of the mentally ill by depicting them in various distasteful ways. Horror movies about ‘psycho’ killers that have escaped from mental institutions are a prime example. The public, including many health care providers, believe that mental illness is related to the persons own failings, such as weakness of character and morals, laziness, and lack of discipline and self-control ^[3]. These beliefs and portrayals cause discrimination leading to adverse effects on employment, income, and housing and in effect, self-esteem and self-concept ^[4].

The stigma towards people with mental illness by healthcare providers results in disparities in access, treatment, and outcomes ^[2, 5, 6]. 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 ^[7, 8].

Women with psychiatric illness face stigmatization in the area of reproductive care, including decreased instruction regarding parenting skills, breastfeeding, and increased feelings of powerlessness and depersonalized care ^[9]. Healthcare providers may hesitate to fully assess the physical status of a patient with a mental illness due to discomfort with the patient’s symptomatology or diagnosis ^[10].

In the area of research, abundant evidence from Western countries indicates that people with mental illness are stigmatized and discriminated against not only by the general public but by health professionals as well¹¹. Although few studies have been conducted in Africa, the few that have been conducted suggest that the experience of stigma by people with mental illness may be common, and thus contradict common assertions about stigma and mental illness in Africa ^[12], which is believed to be less severe.

Poor community knowledge of causes and the presentation of mental disorders have sometimes been advanced as reasons for stigmatising attitudes ^[13]. The propensity of psychiatric patients to cause injury or harm to others and to property is one of the strong stereotype beliefs the Nigerian public holds towards psychiatric patients ^[14-16]. The psychiatric patients, in the minds of the Nigerian public, is responsible for their illness, especially when

it is an alcohol and/or substance-related problem. Moreover, it is the belief of most people in Nigerian society that psychiatric illnesses are afflictions caused by supernatural forces and, as such, require care by traditional and syncretic religious healers, rather than orthodox care [15]. The health workers are not left out. It is expected that these seeming health care givers who acquire knowledge –medical, cultural and social pains of the mentally sick, however studies have shown that despite the impressive medical knowledge of the illness by health workers, they still harbour deeply rooted cultural beliefs and traditional social acts to dislike the mentally sick [15]. This belief denies them the sympathy and understanding traditionally bestowed on the sick in African society [15, 16]

Generally, misconceptions about psychiatric patients being under the control of evil spirits (and therefore being dangerous) are the main motivations behind the inglorious, long and persistent use of physical restraints and endorsing of segregating attitudes by society towards them [16]. Health workers are not completely free from these unfavourable beliefs and attitudes towards psychiatric patients [15, 17-19]. Studies have revealed that Health workers expressed fears about treating psychiatric patients within a general hospital environment and preferred segregation of the wards and the patients if treated within such a setting [19].

Although health care providers are thought to hold attitudes that are positive, compassionate and encouraging towards people with mental illness, this is often not the case, they diagnose and treat people with mental illness differently. Health care providers may be ignorant about the possible outcomes of people with mental illness. Often this may be due to inadequate training [20]. There are a number of studies on stigma and mental illness in Nigeria, but no study has been done in Jos and its environs about the subject.

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. 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 involved 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 $\pm 5\%$ 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 one month i.e in April 2014.

We obtained two sets of data. The first set comprised demographic variables, and the second set was, responses derived from the CAMI scale²¹, a self-report inventory for measuring public attitudes towards the mentally ill. The CAMI includes four subscales (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). Participants were also asked about Knowledge and beliefs about Mental illness, questions derived from a previous Nigerian study [15].

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 χ^2 test. Descriptive statistics such as means and standard deviations was used to summarize continuous variables while categorical variables was 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. The level of significance was set at $p < 0.05$.

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).

Knowledge and beliefs of Health Staff about Mental illness

Participants' responses to questions on possible causes and belief of mental illness are shown in Table 1.

The most commonly cited cause of mental illness was hard drugs (22.2%). Others included traumatic life events (18.8%) and genetic inheritance (18.7%). Majority of respondents 224 (78.0%) believed that mental illness could be curable and drug treatment (orthodox) 254 (43.6%) was the most cited preferred treatment by respondents. However in terms of cultural belief most respondents 142 (40.2%) believed it is associated with witches/wizard and a taboo.

Attitudes towards the mentally ill

The distributions of responses for the 4 CAMI subscale items were varied for tables (2-5) and were stigmatizing for measures of authoritarianism, which elicited the most negative attitudes.

In table 2, it was observed that even though respondents agreed/strongly agreed that mental illness is an illness like any other 179 (61.3%), it was generally agreed/strongly agreed 195 (65.2%) that it is easy to tell persons with mental illness from

normal people.

Two hundred and seventeen (65.4%) of respondents disagreed/strongly disagreed with the statement that mental hospitals were an outdated means of treating the mentally ill, reflecting the view that mentally ill persons could be a threat to public safety. One hundred and sixty nine (55.3%) also disagreed/strongly disagreed with the statement; less emphasis should be placed on protecting the people from the mentally ill. Still reflecting the view that mentally ill persons could be a threat and danger to the society. One hundred and fifty four (50.6%) agreed/strongly agreed that as soon as a person shows signs of

mental disturbance he should be hospitalized.

In table 3: The respondents could be seen as having strongly benevolent attitudes towards the mentally ill.

The distribution of responses on the social restrictiveness scale, (Table 4) shows that although 194(66.4%) disagreed/strongly disagreed to the statement; the mentally ill should not be given any responsibility, 151(51.9%) of them disagreed/strongly disagreed to the statement: most women who were once patients in a mental hospital can be trusted as baby sitters

Table 5 showed that respondents shows positive attitude towards community mental health ideology.

Table 1: Knowledge and beliefs of health staff

Variables	No.of respondents	Percentage (%)
Cause(s) of mental illness		
Heredity	201	18.7
Hard drugs	244	22.7
Poverty	64	5.9
Stress	154	14.3
Physical abuse	134	12.4
Traumatic events	202	18.8
Curse/Punishment	37	3.4
Witches/Wizards	41	3.8
Signs and symptoms		
Violence	218	18.2
Irrational acts	223	18.7
Dirty/uncleaness	191	16.0
Inappropriate behavior	227	19.0
Loss of contact with reality	207	17.3
Shamelessness	129	10.8
Preferred treatment modalities		
Drug treatment (orthodox)	254	43.6
Native treatment (unorthodox)	11	1.9
Psychotherapy	206	35.4
Prayers	99	17.0
To keep behind locked doors	9	1.5
Don't know	3	0.5
Curability of mental illness		
Curable	224	78.0
Incurable	49	17.1
Don't know	14	4.9
Cultural beliefs		
Evil doer	87	24.6
Normal ill health	102	28.9
Witches/wizard and taboo	142	40.2
Ostracize	22	6.2

Table 2: Frequencies, means and standard deviations for the items of the Authoritarianism (AU) subscale. Figures in bracket indicates percentages.

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
One of the main causes of mental illness is a lack of self-discipline and will power	98(33.2)	98(33.2)	22(7.5)	64(21.7)	13(4.4)	3.21	1.26
The best way to handle the mentally ill is to keep them behind locked doors	179(60.1)	86(28.9)	11(3.7)	13(4.4)	9(3.0)	1.61	0.97
There is something about the mentally ill that makes it easy to tell them from normal people	20(6.7)	52(17.4)	32(10.7)	156(52.2)	39(13.0)	3.47	1.12
As soon as a person shows signs of mental disturbance, he should be hospitalised	20(6.6)	85(28.0)	45(14.8)	105(34.5)	49(16.1)	3.26	1.21
Mental patients need the same kind of control and discipline as a young child	40(13.2)	86(28.4)	50(16.5)	97(32.0)	30(9.9)	2.97	1.24
The mental illness is an illness like any other	24(8.2)	69(23.6)	20(6.8)	112(38.4)	67(22.9)	3.44	1.30
The mentally ill should not be treated as outcasts of society	21(7.1)	18(6.1)	12(4.1)	101(34.1)	144(48.6)	4.11	1.18
Mental hospitals are an outdated means of treating the mentally ill	112(38.9)	105(36.5)	25(8.7)	31(10.8)	15(5.2)	2.07	1.17
Less emphasis should be placed on protecting the people from the mentally ill	58(19.0)	111(36.3)	33(10.8)	83(27.1)	21(6.9)	2.67	1.25
Virtually anyone can become mentally ill	13(4.3)	36(12.0)	20(6.6)	154(51.2)	78(25.9)	3.82	1.08

Table 3: Frequencies, means and standard deviations for the items of the Benevolence (BE) subscale

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
The mentally ill have for too long been the subject of ridicule	11(3.7)	37(12.5)	50(16.8)	126(42.4)	73(24.6)	3.72	1.08
More tax money should be spent on the care and treatment of the mentally ill	12(4.4)	44(16.3)	63(23.3)	106(39.3)	45(16.7)	3.47	1.09
We need to adopt a far more tolerant attitude toward the mentally ill in our society	10(3.3)	9(3.0)	12(3.9)	169(55.4)	105(34.36)	4.15	0.88
Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for	22(7.9)	61(21.9)	42(15.1)	90(32.4)	63(22.7)	3.40	1.27
We have a responsibility to provide the best possible care for the mentally ill	7(2.3)	18(6.0)	9(3.0)	134(44.4)	134(44.4)	4.23	9.34
The mentally ill don't deserve our sympathy	161(57.5)	61(21.8)	22(7.9)	22(7.9)	14(5.0)	1.81	1.18
The mentally ill are a burden on society	80(27.7)	82(27.8)	43(14.6)	63(21.4)	27(9.2)	2.58	1.33
Increased spending on mental health services is a waste of tax money	179(58.9)	91(29.9)	12(3.9)	6(2.0)	16(5.3)	1.65	1.03
There are sufficient existing services for the mentally ill	82(27.1)	145(47.9)	22(7.3)	38(12.5)	16(5.3)	2.21	1.31
It is best to avoid anyone who has mental problems	134(46.4)	103(35.6)	19(6.6)	21(7.3)	12(4.2)	1.87	1.09

Table 4: Frequencies, means and standard deviations for the items of the Social Restrictiveness (SR) subscale

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
The mentally ill should not be given any responsibility	60(20.5)	134(45.9)	47(16.1)	36(12.3)	15(5.1)	2.36	1.10
The mentally ill should be isolated from the rest of the community	127(42.2)	126(41.9)	19(6.3)	24(8.0)	5(1.7)	1.85	0.97
A person would be foolish to marry another person who has suffered from mental illness, even though he seems fully recovered	88(29.4)	143(47.8)	34(11.4)	27(9.0)	7(2.3)	2.07	0.99
I would not want to live next door to someone who has been mentally ill	83(28.0)	130(43.9)	48(16.2)	29(9.8)	6(2.0)	2.14	1.00
Anyone with a history of mental problems should be excluded from taking public office	82(27.2)	117(38.9)	44(14.6)	46(15.3)	12(4.0)	2.30	1.14
The mentally ill should not be denied their individual rights	19(6.4)	21(7.1)	9(3.0)	127(42.9)	120(40.5)	4.04	1.14
Mental patients should be encouraged to assume the responsibilities of normal life	16(5.5)	23(7.9)	14(4.8)	151(51.7)	88(30.1)	3.93	1.08
No one has the right to exclude the mentally ill from their neighbourhood	14(5.3)	15(5.7)	21(8.0)	123(46.6)	91(34.5)	3.99	1.06
The mentally ill are far less of a danger than most people suppose	13(4.4)	78(26.6)	54(18.4)	109(37.2)	39(13.3)	3.28	1.13
Most women who were once patients in a mental hospital can be trusted as babysitters	39(13.4)	112(38.5)	94(32.3)	32(11.0)	14(4.8)	2.55	1.01

Table 5: Frequencies, means and standard deviations for the items of the Community Mental Health Ideology (CMHI) subscale

Items	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community	21(7.1)	39(13.2)	40(13.6)	152(51.5)	43(14.6)	3.53	1.11
The best therapy for many mental patients is to be part of a normal community	22(7.6)	32(11.1)	33(11.4)	149(51.6)	53(18.3)	3.62	1.34
As far as possible, mental health services should be provided through community based facilities	13(4.4)	32(10.8)	22(7.4)	165(55.7)	64(21.6)	3.79	1.04
Locating mental health services in residential neighbourhoods does not endanger local residents	22(7.4)	78(26.1)	56(18.7)	107(35.8)	36(12.0)	3.19	1.17
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	10(3.8)	45(17.0)	42(15.8)	126(47.5)	42(15.8)	3.55	1.07
Mental health facilities should be kept out of residential neighbourhoods	42(14.3)	99(33.8)	45(15.4)	74(25.3)	33(11.3)	2.85	1.26
Local residents have good reason to resist the location of mental health services in their neighbourhoods	42(14.3)	89(30.3)	54(18.4)	81(27.6)	28(9.5)	2.88	1.23
Having mental patients living within residential neighbourhoods might be good therapy but the risks to residents are too great	35(11.7)	90(30.1)	57(19.1)	96(32.1)	21(7.0)	2.93	1.71
It is frightening to think of people with mental problems living in residential neighbourhoods	32(11.0)	97(33.2)	53(18.2)	89(30.5)	21(7.2)	2.90	1.17
Locating mental health facilities in a residential area downgrades the neighbourhoods	79(27.3)	115(39.8)	47(16.3)	30(10.4)	18(6.2)	2.28	1.16

Discussion

The findings of this study indicate that stigmatizing attitudes to the mentally ill are widely held even among health care providers. These findings support earlier observations that stigmatizing views about mental illness are not limited to uninformed members of the general public, but includes people working in the health sector, and even those in contact with the mentally ill [13, 15]. Some of the reasons why health workers stigmatized people with mental illness may be based on greater knowledge of mental disorders, on the other hand negative attitudes to mental illness may be fuelled by notions of causation that suggest that affected people are in some way responsible for their illness, and by fear [16]. This study revealed that respondents 134(45.7%) are more comfortable helping a person who has a physical illness than a person who has a mental illness; and is consistent with results from studies conducted by Druss *et al* [22] which revealed that. Healthcare providers have been shown to be less likely to refer patients with comorbid mental illness diagnoses to specialists for physical health evaluations.

In this study respondents 169 (55.3%), disagreed with the

statement; "less emphasis should be placed on protecting the people from the mentally ill", depicting the mentally ill as a source of threat and danger to the society. This result corroborates earlier studies done by Gureje *et al* [16] where as many as 96.5% believed that people with mental illness are dangerous because of their violent behaviour. Most would not tolerate even basic social contacts with a mentally ill person, 82.7% would be afraid to have a conversation with a mentally ill person and only 16.9% would consider marrying one. Their study had higher percentage of respondents depicting mentally ill as dangerous, however their study was done on the general population while the present study focused on Health workers. This also supports the study done by Link *et al* [23], which showed that all of the mental disorders from major depression (33%) to cocaine dependence (87%) were believed to substantially increase the risk of violence. However their study was carried out in the general population.

Anthony *et al* [24] conducted a study on attitudes towards people with a mental disorder: a survey of the Australian public and health professionals, with the aim of comparing the Australian public's attitudes towards people who have been treated for a

mental disorder with the attitudes of general practitioners (GPs), psychiatrists and clinical psychologists. The result showed that the public rated positive outcomes as more likely and negative outcomes as less likely than did the GPs and the psychiatrists. The clinical psychologists also rated positive outcomes as more likely and negative outcomes as less likely than did the GPs, and they rated negative outcomes as less likely than did the psychiatrists. They opined that it is possible that these more negative attitudes are realistic, being based on greater knowledge of mental disorders. However, professional attitudes may be biased by greater contact with patients who have chronic or recurrent disorders.

However the findings in this current study contrast with study done by Georgina *et al* [25] in which their results revealed generally positive attitudes towards people with mental disorders among health care providers, even though their study had smaller sample size compared to this present study. Their study also included mental health professionals who are more likely to have favourable responses towards clients i.e. 58 mental Health professionals and 60 non-mental Health professionals.

The finding that drug misuse can cause mental illness in this study is consistent with previous reports [13, 15]. Dominic *et al* [13] reported in their study that misuse of drugs ranked highest as a perceived cause of mental illness and was endorsed by about 89.4% of study participants. In this study, misuse of drugs also ranked highest, endorsed by 22.7% of the participants. This disparity may be due to the fact that administrative staff without medical training were included in their study. Relatedly Ewruhujapor [15] reported in his study that hard drugs ranked highest as a cause of mental illness and endorsed by 62.94% of respondents, even though he used a larger sample size (500) compared to this study (308). Even though cases of mental illness may actually be due to hard drugs, in some cases, the drugs may act as a precipitating factor in an already mentally ill patient. This high level of endorsement of hard drugs as a cause of mental illness by participants in the various studies may be due to the fact that these mentally ill patients are more susceptible to psychoactive substance use because of their level of reasoning, and also some of them may self-medicate to help them relief the symptoms they are experiencing. The general public including Health care providers may mistake hard drugs as a major cause of their illness, not knowing that the patient has been suffering with one form of mental illness or the other before using the psychoactive substance.

Although the respondents appeared to be knowledgeable about the possible role of psychosocial and genetic factors in causation of mental illness, 3.8% of them believed that mental illness could be caused by witches/wizards, 3.4% thought it could be a consequence of Devine punishment or curse. Contemporary analysis of the concept of mental illness in Africa suggests that most Africans believed that the disorder is caused by activities of enemies, spirits, magical practices of sorcerers, curses and witchcraft²⁶ as seen in this present study.

In this study the belief seems to be less compared to a study carried out by Dominic *et al* [13] where by 52.5% and 44.0% believed witchcraft and possession by evil spirits are important causes of mental illness. It may also be due to the fact that administrative staffs without medical training were included in their study. In a study published in the British Journal of

Psychiatry by Gureje *et al* [16], researchers examined mental illness stigma in Nigeria. They explained that although stigma for those with mental illness exists in Nigeria, the level of stigma was unknown. Poor knowledge of causation was common, compared to this study where respondents appeared to be knowledgeable about causation of mental illness. This could be due to the fact that their study was in a general population as against Health workers in this study

Relatedly, Jos University Teaching Hospital, a multi-ethnic and thus, a mini Nigeria, the different ethnic groups, culturally believed that these sick persons were evil doers either as witches or wizards. These beliefs as archaic and orthodox as they are, are strongly and deeply held by these respondents (64.8%) in this 21st century. Cultural misconceptions about mental illness have been known to affect help seeking behaviour, illness stereotypes and organizational structure put in place for treatment of people with mental illness [23].

Conclusion

The stigmatizing attitude recorded in this study is less compared to previous study conducted by Dominic *et al* in Nigeria where 78% of respondents reflected the view that mentally ill persons could be a threat to the public safety, with 51% of respondents opposed to having mentally ill in their neighbourhood. The reason could be due to inclusion of administrative staff who are non-clinical staff in their study, but excluded in our study.

Limitation of the Study

1. Some of the stigma items are vulnerable to social desirability bias.
2. Sample size for some of the professional groups were too small (e.g Medical social workers, Physiotherapist and Clinical Psychologist) to give a reliable statistical analysis

Conflicting interest: All authors have no competing interest regarding this work to declare

References

1. Falk G. Stigma: how we treat outsiders. Amherst, NY: Prometheus Books, 2001, 32-40.
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. Ross CA, Goldner EM. Stigma, negative attitudes and discrimination towards mental illness within the nursing profession: A review of the literature. *Journal of Psychiatric and Mental Health Nursing*,2009;16:558-567.
4. Markowitz FE. The effects of stigma on the psychological well-being and life satisfaction of persons with mental illness. *Journal of Health and Social Behavior*,1998;39(4):335-347.
5. Corrigan PW, Rowan D, Green A *et al*. Challenging two mental illness stigmas: personal responsibility and dangerousness. *Schizophr Bull*,2002;28(2):293-309.
6. De Hert M Correll C, Bobes J *et al*. Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care. *World Psychiatry*,2011;10(1):52-77.

7. Mueser KT, Corrigan PW, Hilton DW. Illness Management and Recovery: A Review of the Research. *Psychiatr Serv*,2002;53:1272-1284.
8. Corrigan PW: How stigma interferes with mental health care. *Am Psychol*,2004;59:614-625.
9. 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.
10. Phelan M, Stradins L, Morrison S. Physical health of people with severe mental illness. *British Medical Journal*,2001;322(7284):443.
11. Kapungwe A, Cooper S, Mayeya J *et al*. Attitudes of primary health care providers towards people with mental illness: *Afr J Psychiatry*,2011;14:290-297.
12. Shibre T, Negash A, Kullgren G *et al*. Perceptions of stigma among the family members of individuals with schizophrenia and major affective disorders in rural Ethiopia. *Social Psychiatry and Psychiatric Epidemiology*,2001;36:299-303.
13. Dominic IU, Festus A. stigmatizing attitude towards the mentally ill. *South African journal of psychiatry*,2010;16:2.
14. Binitie A. Attitude of educated Nigerians to mental illness. *Acta Psychiatrica Scandinavica*,1970;46:27-46. doi: 10.1111/j.1600-0447.1970.tb02128.x.
15. Ewruhjakpor C, Knowledge. beliefs and attitudes of health care providers towards the mentally ill in Delta State, Nigeria. *Ethno Med*,2009;3:19-25.
16. Gureje O, Lasebikan V, Oluwanuga OE, Olley BO, Kola L. Community study of knowledge and attitude to mental illness in Nigeria. *Br J Psychiatry*,2005;186:436-441. doi: 10.1192/bjp.186.5.436.
17. Minas H, Diatri H. Pasung: physical restraint and confinement of the mentally ill in the community. *Int J Mental Health Syst*,2008;2:8. doi: 10.1186/1752-4458-2-8.
18. Odejide AO, Olatawura MO. A survey of community attitudes to the concepts and treatment of mental illness in Ibadan, Nigeria. *Nigerian Med J*,1979;9:343-347.
19. Aghukwa NC. Attitude of health workers to the care of psychiatric patients. *Ann Gen Psychiatry*,2009;8:19.
20. Hodges B, Inch C, Silver I. Improving the psychiatric knowledge, skills, and attitudes of primary care physicians, 1950–2000: a review. *Am J Psychiatry*,2001;158:1579-1586.
21. Taylor SM, Dear M. Scaling community attitudes toward the mentally ill. *Schizophrenia Bulletin*,1981;7:225-24.
22. Druss BG, Bradford DW, Rosenheck RA, Radford MJ, Krumholz HM. Mental disorders and use of cardiovascular procedures after myocardial infarction. *Jama*,2000;283(4):506-511.
23. Link B, Phelan J, Bresnahan M, Stueve A, Pescosolido B. Public conceptions of mental illness: Labels, causes, dangerousness, and social distance. *American Journal of Public Health*,1999;89:1328-1333.
24. Anthony FJ, Ailsa EK, Patricia AJ, Helen C, Scott H. Attitudes towards people with a mental disorder: a survey of the Australian public and health professionals, *Australian and New Zealand Journal of Psychiatry*,1999;33:77-83
25. Georgina G, Kate K P, John W. Attitudes towards mental disorders and emotional empathy in mental health and other healthcare professionals; *Psychiatric Bulletin*,2011;35:101-105. doi: 10.1192/pb.bp.110.029900
26. Adebowale TO, Ogunlesi AO. Beliefs and knowledge about aetiology of mental illness patients and their relatives. *African Journal Med Science*,1999;28:35-41.