

# Medical and nursing students' attitudes to people with mental illness in Nigeria: a tale of two teaching hospitals

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**This study compared beliefs about and attitudes to mental illness among medical and nursing students at two teaching hospitals in Nigeria with very different levels of psychiatric instructional capacity. Factor analysis of responses to a 43-item self-report questionnaire identified three domains: social acceptance of people with mental illness; belief in non-superstitious causation of mental illness; and stress, trauma and poverty as external causes of mental illness, with entitlement to employment rights. Students at the hospital with a larger, functioning psychiatry department had significantly higher scores on all three factors. Culturally enshrined beliefs and attitudes about mental illness are not uncommon among medical trainees. The availability of psychiatric education and services may have a positive effect on beliefs and attitudes.**

Stigma and negative attitudes to people with mental illness are common in low- and middle-income countries (LMICs), among the general population, medical professionals and trainees (Wolff *et al*, 1996; Ogunsemi *et al*, 2008). Studies have demonstrated the presence of such attitudes in Nigeria (Gureje *et al*, 2005); they are informed and reinforced by traditional, cultural and religious beliefs about the causes of mental illness (Gureje *et al*, 2006) and have been shown to inhibit help-seeking behaviour (Segal *et al*, 2005). Furthermore, beliefs about and attitudes to mental illness among healthcare professionals can influence treatment outcomes (Schulze, 2007). Medical and nursing students are at a critical phase of attitude formation: while their beliefs and attitudes will reflect those of the larger society (Ogunsemi *et al*, 2008) they may be influenced by educational experiences and training in psychiatry (Fischel *et al*, 2008).

In Nigeria, as in other LMICs, psychiatric resources are limited and unevenly distributed (Saxena *et al*, 2006). No studies, to our knowledge, have examined the influence of the availability of psychiatric educational resources on the attitudes to and beliefs about mental illness of healthcare trainees. This study examined students' attitudes to and beliefs about mental illness in two Nigerian university medical schools with very different levels of psychiatric teaching presence. The medical

school at Ibadan, in south-western Nigeria, has been a leader in psychiatric research and education in West Africa since the 1950s. It has a fully functioning psychiatry department with over ten faculty members, a psychiatry resident training programme and a full range of in-patient and out-patient clinical services. The medical school at Owerri, in south-eastern Nigeria, had no full-time psychiatric faculty and had very basic clinical activity at the time of the survey. No psychiatric academic activities had been made available for medical and nursing students. In both universities, the blueprint is for nursing schools to conduct their psychiatric training through and in collaboration with the academic departments of psychiatry, with academic resources shared between the colleges of medicine and the nursing schools.

The differences in psychiatric resources between the two centres may relate to the funding priorities of the responsible agencies. While the University of Ibadan is a nationally funded institution, Imo State University is state funded. Furthermore, Ibadan is one of the major urban centres, and tends to attract more of the available medical specialists than do less urban centres like Owerri (Klecha *et al*, 2004). We sought to identify the influence of the presence of an active department of psychiatry on the attitudes to and beliefs about mental illness among medical and nursing students at these two universities, through survey responses.

## Methods

A team of professionals from the Department of Psychiatry of Yale School of Medicine was invited to visit both universities during November 2011 to provide a brief educational introduction to the basic principles and diagnoses in psychiatry for medical and nursing students at Owerri and to present lectures on mental health services research to the faculty at Ibadan.

A self-report assessment instrument was distributed after the introduction of the teachers but prior to any training at Owerri, and after the visit to Ibadan (which did not involve contact with students). No data were requested that would identify respondents, to preserve confidentiality and promote candid responses.

Convenience samples of medical students and nursing students from the two universities in their final years of training voluntarily participated. At

the University of Ibadan the sample comprised 51 medical students and 31 nursing students; that school represents a teaching centre with robust psychiatric educational resources. At Imo State University the sample comprised 48 medical students and 50 nursing students; that school represents an area with extremely limited psychiatric educational resources.

The questionnaire was constructed from three widely used instruments: the Fear and Behavioral Intentions toward the mentally ill scale (FABI) (Wolff *et al.*, 1996), the Community Attitudes to Mental Illness (CAMI) scale (Taylor & Dear, 1981) and a questionnaire from the Programme to Reduce Stigma and Discrimination (World Psychiatric Association, 2000). The final version was adapted for local use by adding 'witchcraft' and 'curses' as options in relation to the causation of mental illness. It consisted of 43 dichotomous questions with sub-parts. The questionnaire documented: self-reported sociodemographic characteristics and professional experience; conceptions of the cause of mental illness; possible treatment options; social distance; and social acceptance and social stigma.

Chi-square tests and analysis of variance were performed to examine potentially confounding sociodemographic differences between students from Ibadan and Owerri. Their responses were subjected to exploratory factor analysis with varimax rotation to identify uncorrelated independent factors. The optimum number of factors was determined by inspection of a scree plot and eigenvalues. Analysis of covariance was used to determine whether differences between scores from each school were statistically significant, adjusting for two potential confounds: marital status and years of education. All analyses were performed using SAS 9.1 statistical software (SAS institute Inc, Cary, North Carolina, USA). Statistical significance was evaluated at the 0.05 level.

## Results

The students at Ibadan were significantly less likely to be married ( $P < 0.02$ ) and had more years of education (16 years *v.* 14 years,  $P < 0.04$ ) (Table 1).

Three factors were identified: social acceptance of people with mental illness; non-belief in witchcraft or curses as causes of mental illness; and stress, trauma and poverty as causes of mental illness and entitlement to employment rights. Chronbach's alpha showed high levels of internal consistency for

factors 1 and 2 ( $\alpha = 0.9$  and  $0.8$ , respectively) and a moderate level for factor 3 ( $\alpha = 0.6$ ).

## Factors

Factor 1. Social acceptance of people with mental illness

These 16 items had factor loadings from 0.431 to 0.788. In order of decreasing loadings they were: Not afraid of people with mental illness; Would not be afraid to have a conversation with a mentally ill person; Would not be upset or disturbed about working on the same job with a mentally ill person; Would live with a next-door neighbour who is a former psychiatric patient; Willing to have a friend who is a former psychiatric patient; Willing to work with a former psychiatric patient; Willing to share a room with a former psychiatric patient; Not ashamed if someone from the family had been a former psychiatric patient; Would marry a person who was previously mentally ill; Would not avoid a conversation with a neighbour who was previously a psychiatric patient; Would visit a neighbour who was a former psychiatric patient; Could maintain a friendship with someone who is mentally ill; People with a mental illness could work at regular jobs; Would invite someone into my house who has suffered from mental illness; Would not mind people with mental problems living in residential neighbourhoods; Would not object to having a mentally ill person in my neighbourhood.

Factor 2. Non-belief in witchcraft or curses as causes of mental illness

These four items had factor loadings from 0.604 to 0.757. In order of decreasing loadings they were: Mental illness is not caused by witchcraft; Mental illness is not caused by someone putting a curse on you; Mental illness is not caused by possession by an evil spirit; Mental illness is not God's punishment.

Factor 3. Stress, trauma and poverty as causes of mental illness and entitlement to employment rights

These five items had factor loadings from 0.414 to 0.575. In order of decreasing loadings they were: Mental illness is caused by physical abuse; People with mental illness are far less of a danger than most people suppose; People with a mental health problem should have the same rights to a job as anyone else; Mental illness is caused by poverty; Mental illness is caused by stress.

## Comparison of scores from Ibadan and Owerri

Comparison of scores from Ibadan and Owerri showed significant differences on all three factors, with higher scores (representing more progressive attitudes) at Ibadan (all  $P < 0.0001$ ) and a large effect size (0.82) for the difference on factor 3. A significant difference was also observed on factor 1, with a moderately large effect size of 0.68. A smaller but substantial effect size of magnitude 0.55 was identified for factor 2, representing non-superstitious causation of mental illness, although only 40% of Owerri responses and 63% of Ibadan of responses endorsed such non-belief.

**Table 1**

Comparison of sociodemographic characteristics of student samples at Ibadan and Owerri, Nigeria

	Ibadan ( $n = 82$ )	Owerri ( $n = 98$ )	<i>t</i>	<i>P</i>
No. of women	62	74	2.25	0.13
No. married	3	13	5.07	0.02
Mean (s.d.) age	23.5 (0.66)	24.5 (0.61)	1.31	0.19
Mean (s.d.) years in education	16.1 (0.74)	14.1 (0.65)	-2.07	0.04

**Table 2**

Items representing largest differences in response between Ibadan and Owerri: % (no.) of students

	Ibadan	Owerri	P	Factor
People with a mental health problem should have the same rights to a job as anyone else	70 (58)	19 (17)	<0.0001	3
People with a mental illness could work at regular jobs	57 (46)	14 (14)	<0.0001	1
Mental illness is not God's punishment	45 (40)	16 (13)	<0.0001	2
Willing to work with a former psychiatric patient	51 (42)	24 (23)	0.0002	1
Mental illness is not caused by possession by an evil spirit	79 (72)	53 (43)	0.0003	2
Would not be upset or disturbed about working on the same job with a mentally ill person	63 (60)	38 (31)	0.001	1
Would not mind people with mental problems living in residential neighbourhoods	53 (50)	29 (24)	0.0001	3
Not afraid of people with mental illness	59 (56)	36 (30)	0.003	1
Mental illness is caused by stress	91 (75)	69 (65)	0.0003	3
Willing to share a room with a former psychiatric patient	40 (33)	19 (18)	0.002	1

The individual items with the largest differences between the sites included five of the 16 items (31%) in factor 1 (social acceptance), two of the four items in factor 2 (50%) (witchcraft not being a cause of mental illness) and three of the five from factor 3 (60%) (stress, trauma, poverty as causes of mental illness) (Table 2).

## Discussion

This small study showed that the students at Ibadan had significantly higher scores on all three factors, reflecting higher social acceptance of people with mental illness, less belief in witchcraft as a cause of mental illness and a greater probability of believing that stress, trauma and poverty can contribute to the onset of mental illness. While we cannot conclude without further studies that the differences observed in the two groups of students can be accounted for by the difference in the availability of psychiatric resources, it is reasonable to expect a significant positive impact from the regular clinical exposure of Ibadan students to people with mental illness and ongoing educational activities associated with the presence of fully functional psychiatric department (Corrigan, 2011).

The smallest difference between the two groups was observed in the level of non-belief in superstitious causes of mental illness. Thus, some degree of belief in witchcraft or curses as causes of mental illness is not uncommon among the students, albeit less so in the context of a relative abundance of psychiatric educational resources. This likely reflects the ongoing influence of cultural and magico-religious beliefs associating witchcraft with mental illness in much of sub-Saharan Africa and some other LMICs (Lauber & Rossler, 2007) and highlights the need to incorporate culturally relevant teaching interventions in the general psychiatric curriculum. A psychiatric clerkship curriculum for medical and nursing students based on current Western psychiatry teachings may not be adequate to address these beliefs about and attitudes to

mental illness, attitudes that could impair the psychiatric care provided by these future medical professionals. To understand these attitudes and explore areas of intervention, if any, the authors are conducting further studies to compare the attitudes of first-year students to those of graduating students and professionals from different specialties in the same institutions.

The limitations of this study include the relatively small size of the samples and the fact that their representativeness was not determined. Also, the observed differences in attitudes may reflect broader regional, cultural and religious differences that have affected both student attitudes and medical school structures. These factors may be independent of medical school faculty composition and academic offerings and need to be examined. Furthermore, this was a quantitative analysis. A complementary qualitative approach would aid interpretation of these results. Nevertheless, the data suggest that the availability of sophisticated psychiatric educational resources and services may have a positive effect on the progressiveness of beliefs about and attitudes towards people with mental illness.

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