Original Article

Caregivers' Knowledge of Etiology of Mental Illness in a Tertiary Health Institution in Nigeria

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Objective: Erroneous beliefs about causation and lack of adequate knowledge have been found to sustain deep seated negative attitudes about mental illness. Conversely, better knowledge results in improved attitudes towards people with mental illness and a belief that mental illnesses are treatable can encourage early treatment seeking and promote better outcomes. The aim of this study was to assess the awareness of the etiology of mental illness among the caregivers and to determine their knowledge on the treatment possibilities.

Methods: A cross sectional study of all consenting consecutive caregivers of mentally ill patients attending the in-, and out-patients psychiatric facilities of University Teaching Hospital, Ilorin, Nigeria was done, using a questionnaire method.

Results: Three hundred and ninety-four respondents were recruited for the study. The mean age of the respondents was 38.84 ± 14.64. Majority (244 or 61.9%) of the respondents believed drug and alcohol misuse could cause mental illness, while the belief that it could be due to 'curse' were reported by only 75 (19.0%) respondents. Male gender was associated with belief that alcohol and drug misuse, stress, genetic inheritance, physical illness, and poverty were causes of mental illnesses($p<0.05$). Higher educational status was also associated with alcohol and drug, traumatic events, stress, genetic inheritance, and physical abuse ($p<0.05$) as causes of mental illness.

Conclusion: There is a better knowledge of mental illness among caregivers than the predominant supernatural causes earlier attributed to mental illness by Nigerian communities. In order to sustain this, there is need for psycho-education.

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Introduction

Erroneous beliefs about causation and lack of adequate knowledge have been found to sustain deep seated negative attitudes about mental illness(1). Conversely, better knowledge is often reported to result in improved attitudes towards people with mental illness and a belief that mental illnesses are treatable can encourage early treatment seeking and promote better outcomes (2). In a study by Stuart and Arboleda-Flórez, it was reported that among those who have known people treated for schizophrenia, knowledge of the illness, and not mere exposure to it, was a central modifiable correlate of negative attitudes(2). Thus it can be inferred that improved general knowledge about mental illness would mean a more tolerant public.

Across culture, the knowledge about the etiology of mental illness varies and has never been most favorable worldwide (3). This has been acknowledged by the World Health Organization and World Psychiatric Association and has therefore called for greater education of the public and greater openness about mental illness (3).

The widely held beliefs about the biological causation in the Western cultures (but less so in other cultures, including Africa) include genetic damage, inborn constitutional factors, biological and metabolic imbalances, infections, drug toxicity and physical damage to the brain. In addition, in the Western countries, and gradually in other places, depression and

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schizophrenia are most often, seen by the public as caused by social environment, particularly recent stressors (4).

In some non-Western cultures, supernatural phenomena, such as witchcraft and possession by evil spirits are seen as important causes of mental disorders, beliefs that are uncommon in the West (4).

Earlier studies in Nigeria showed a predominance of belief in supernatural causation. Odejide et al (5) in a study of traditional healers and mental illness in Ibadan found that 75.5% of the traditional healers interviewed attributed mental illness to curses or a hex (an evil spell), 47.2% believed it was due to ageing, while witchcraft was believed to be the cause by 11.31%. In the same cohort, it was found that among the patients who were being treated and their relatives, despite the literacy level of the cohort (34.0% were literate and 11.6% semi-literate), 36.6% believed that their illness had supernatural causes and 50.0% attributed their illness to causes mentioned to them by the traditional healers. In a more recent study by Ohaeri and Fido 38.1% of the respondents attributed the causation of mental illness to Satan, 23.2% to natural causes, 10.6% to enemies, 10.5 to witchcraft, and 7.4% to God's will (6). The predominance of supernatural causation was still present by classification, although "Satan" is now regarded as the major cause rather than "spirits" or "lesser powers" such as witches. Similarly, a South African study that investigated community attitudes towards and knowledge of mental illness found that most cases were rather conceptualized as stress-related or due to a lack of willpower rather than as medical disorders (7).

A recent community study (8) compared two groups of respondents: those with exclusively bio-psychosocial views of causation of mental illness and those with exclusively religious-magical views. The former did not consider "possession by evil spirits" or "God's punishment" as causes of mental illness while the later did. Nine hundred and eighty-four (84.6%) of the 1163 respondents were classified as having bio-psychosocial views of causation while 179 (15.4%) had religious-magical views.

To the best of our knowledge, studies on this topic have remained scanty in Nigeria despite the fact that caregivers are likely to be the closest to and sometimes the subjects of the patients' delusion and aggression.

The broad aim of this study was to assess the knowledge of etiology of mental illness among caregivers of patients with mental illness at the University of Ilorin Teaching Hospital. The specific objectives of the study were to assess the caregivers' level of awareness about the etiology of mental illness and about treatment possibilities.

Materials and Methods

The study was carried out in The University of Ilorin Teaching Hospital, which is a tertiary center providing health services for Kwara State, one of the 36 States in Nigeria.

The study population

The respondents were caregivers of patients with mental illness attending the psychiatric out- and in-patient services of University of Ilorin Teaching Hospital, Ilorin. Caregiver is an internationally accepted term for unpaid people who care for someone requiring support due to a disability, frailty, mental health problem, learning disability or old age (9). The adopted working definition of 'caregivers' in this study refers to 'those people who were always available and supportive either emotionally or financially during the critical period of the illness and during the follow up period. The inclusion criterion for a caregiver was an age of 18 years or above.

The sample size was determined using the Fisher's formula for population size greater than 10,000. The calculated size was 384, minimum sample size for the study. Three hundred and ninety-four respondents were eventually recruited for the study. The addition of 10 respondents to the calculated sample size was to allow for replacement of

possible invalid respondents records. All 394 were eventually analyzed because all the records were valid.

Type of study and design

The study was a descriptive cross sectional survey of caregivers of mentally ill patients. The respondents responded to questionnaire that sought information on the socio-demographic characteristics and knowledge about etiology of mental illness. The questionnaire had been used in previous local and international studies (2,8).

Data collection

Research assistants who were resident doctors in the department of Behavioral Sciences, University of Ilorin Teaching Hospital, were recruited to administer the questionnaire to the respondents, having undergone one week training for its application. Inter-rater agreement was good between the lead researcher and the research assistants with a Cronbach's alpha of 0.90.

The questionnaire, having been translated to Yoruba (the local common language) through a process of back-translation by bi-lingual experts, was piloted among 20 caregivers of patients attending a private psychiatric facility in the neighborhood. This was designed to identify problems that could arise in the course of administration and potential ambiguity in translated version of the questionnaire. The questions were answered without much ambiguity and were generally acceptable to the respondents.

Data analysis

Statistical Package for Social Sciences, version 13 for Windows, was used for data analysis. Frequency distribution, cross-tabulation and chi square tests were done as appropriate putting the level of statistical significance at 5%.

Ethical approval

The approval of the teaching hospital research and ethic committee was obtained before the commencement of the study (REF:UITH/CAT189/10/2007). Similarly, the informed consent (verbal) of each respondent was sought and only those whose consent was obtained were recruited into this study.

Results

As shown in Table 1, 394 respondents satisfied the research criteria at the end of the study. Majority (204 or 50.8%) were males, married (214 or 54.3%), and had secondary school education (129 or 32.7%). The mean age of the respondents was 38.84 ± 14.64 years, and age range was 52 (18-70 years). The age distribution indicated that majority (160 or 40.6%) of the respondents, were aged 30 and below while respondents of the age 51-70 formed the least, 87 (22.1%). The majority (141 or 35.6%) of the caregivers were patients' siblings, followed by 'others' comprising uncles, aunties, friends, neighbors, religious group members, etc (132 or 33.5%).

Knowledge about the cause of mental illnesses

As shown in Table 2, majority (244 or 61.9%) of the respondents expressed the view that substance misuse could result in mental illnesses while the belief that curse could cause mental illness attracted the least response (75 or 19.0%). Table 3 indicates that 244 respondents believed that drug or alcohol misuse could be a cause of mental illnesses. There is a significant relationship between the gender of the respondents and this item; as more males significantly agreed to alcohol and drug misuse as a cause of mental illnesses ($p=0.005$).

Similarly, stress, genetic inheritance, physical illness and poverty were significantly related to the male gender as perceived causes of mental illness ($p<0.05$). Belief in curse as a cause of mental illness, though significantly related to gender, showed a more female preponderance in this study.

Table 3 indicates that belief in drug or alcohol misuse, possession by evil spirit, traumatic events, stress, genetic inheritance, physical illness, physical abuse, poverty and curse as a cause of mental illness were significantly associated with the educational level of the respondents ($p<0.05$). However,

the direction of the relationship differed; respondents with a higher educational status were more likely to believe that drug or alcohol misuse, traumatic events, stress, genetic inheritance, physical illness and physical abuse could cause mental illness while on the other hand respondents with a lower educational status would more likely endorse possession by evil spirit, God's punishment and curse as causes of mental illness.

The age distribution of the respondents was statistically significant for belief in possession by evil spirit as a cause of mental illness. Here, respondents of older age category (51-70 years) were more likely to believe in this factor as etiology of mental illness. On the other hand, younger respondents (≤30 years) were more likely to believe that traumatic events, physical illness and brain's disease are causes of mental illness. Middle-aged respondents (31-50 years) were more likely to believe in stress, genetic inheritance, physical abuse and poverty as causes of mental illness. Though not statistically significant, younger caregivers were more likely to believe that drug and alcohol misuse could cause mental illness because 38.5% of the respondents were ≤30 years of age.

Table 4 shows that 319 (81%) caregivers endorsed possible successful treatment of mental illnesses. This belief was statistically related to the educational status of the caregivers. A higher educational status would most likely make a caregiver to believe that mental illness could be successfully treated. Similar finding was found for the age group of the respondents because more respondents were in the younger age group ($p<0.05$). Two hundred and thirty-eight (60.4%) believed that mental illnesses could be successfully treated in the community. A higher educational status and younger age of respondents were significantly associated with this belief ($p< 0.05$).

Table 1. Demographic profile of the Respondents

Variables	N (%)
Gender:	
Male	204 (51.8)
Female	190 (48.2)
Age group:	
≤30	160 (40.6)
31-50	147 (37.3)
51-70	87 (22.1)
Marital status:	
Single	121 (30.7)
Married	214 (54.3)
Divorced/Separated	40 (10.4)
Widowed	18 (4.6)
Educational status:	
None	70 (17.8)
Primary	87 (22.1)
Secondary	129 (32.7)
Tertiary	108 (27.4)
Gender of the patient:	
Male	207 (52.5)
Female	187 (47.5)
Relationship of respondents to the patients:	
	36 (9.1)
Father	57 (14.5)
Mother	141 (35.8)
Sibling	13 (3.3)
Spouse	15 (3.8)
Offspring	132 (33.5)
Others	

Table 2. Knowledge of etiology of mental illnesses (proportion of respondants that answered yes to the items) and gender of the respondents

Items caregivers believed as a cause of mental illness	Gender of respondents		Total (%)	X^2	*p*
	Males N (%)	Female N (%)			
Drug or alcohol misuse	140(57.4)	104(42.6)	244(61.9)	8.051	0.005
Possession by evil spirit	42(50.0)	42(50.0)	84(21.3)	0.135	0.713
Traumatic events or shock	102(52.8)	91(47.2)	193(49.0)	1.174	0.676
Stress	112(57.7)	82(42.3)	194(49.2)	5.429	0.020
Genetic inheritance	120(55.8)	95(44.2)	215(54.6)	11.38	0.004
Physical abuse	51(46.4)	59(53.6)	110(28.0)	4.132	0.127
Physical illnesses	84(58.3)	60(41.7)	144(36.5)	8.31	0.016
God's punishment	58(51.3)	55(48.7)	113(28.7)	0.013	0.910
Brain disease	109(49.1)	113(50.9)	222(56.3)	1.46	0.227
Poverty	76(63.9)	43(36.1)	119(30.2)	9.979	0.002
Curse	30(40.0)	45(60.0)	75(19.0)	5.145	0.023

Table 3. Knowledge of etiology by educational status and age distribution of respondents

	Education level					Age distribution				
	None n=70	Primary n=87	Secondary n=129	Tertiary n=108	P value	≤30 (160)	31-50 (147)	51-70 (87)	Total n=394	p-value
Drug or alcohol misuse										
Yes	22(9.0)	61(25)	79(32.4)	82(33.6)	<0.001	94(38.5)	90(36.9)	60(24.6)	244	0.280
No	48(32)	26(17.3)	50(33.3)	26(17.3)		66(44.0)	57(38.0)	27(18.0)	150	
Possession by evil spirit										
Yes	28(33.3)	18(21.4)	35(41.7)	3(3.6)	<0.001	24(28.6)	28(33.3)	32(38.1)	84	<0.001
No	42(13.5)	69(22.3)	94(30.3)	105(33.9)		136(43.9)	119(38.4)	55(17.7)	310	
Traumatic events or shock	23(11.9)	41()21.2	83(43.0)	46(23.8)	<0.001	77(39.9)	55(28.5)	61(31.6)	193	<0.001
Yes	47(23.4)	46(22.9)	46(22.9)	62(30.8)		83(41.3)	92(45.8)	26(12.9)	201	
No										
Stress										
Yes	33(17.0)	42(21.6)	77(39.7)	42(21.7)	0.015	54(27.8)	80(41.2)	60(30.9)	194	<0.001
No	37(18.5)	45(22.5)	52(26.0)	66(33.0)		106(53.0)	67(33.5)	27(13.5)	200	
Genetic inheritance										
Yes	46(21.4)	49(22.8)	67(31.2)	53(24.6)	0.001	65(30.2)	83(38.6)	67(31.2)	215	<0.001
No	24(13.4)	38(21.2)	62(34.6)	55(30.7)		95(53.1)	64(35.7)	20(11.2)	179	
Physical illness										
Yes	15(10.4)	33(22.9)	74(51.4)	22(15.3)	<0.001	58(40.3)	40(27.8)	46(31.9)	144	0.014
No	55(22.0)	54(21.6)	55(22.0)	86(34.4)		102(40.8)	107(42.8)	41(16.4)	250	
Physical abuse										
Yes	15(13.6)	25(22.7)	48(43.6)	22(20.0)	0.017	32 (29.1)	48(43.6)	30(27.3)	110	<0.001
No	55(19.4)	62(21.8)	81(28.5)	86(30.3)		128(45.1)	99(34.8)	57(20.1)	284	
God's punishment										
Yes	23(20.4)	29(25.7)	50(44.2)	11(9.7)	<0.001	46(40.7)	40(35.4)	27(23.9)	113	0.822
No	47(16.7)	58(20.6)	79(28.1)	97(34.5)		114(40.6)	107(38.1)	60(21.3)	281	
Brain disease										
Yes	30(13.5)	50(22.5)	79(35.6)	63(28.4)	0.084	92(41.4)	69(31.1)	61(27.5)	222	0.002
No	40(23.2)	37(21.5)	50(29.1)	45(26.2)		68(39.5)	78(45.3)	26(15.1)	172	
Poverty										
Yes	17(14.3)	41(34.5)	47(39.5)	14(11.7)	<0.001	32(26.9)	44(37.0)	43(36.1)	119	0.008
No	53(19.3)	46(16.7)	82(29.8)	94(34.2)		128(46.5)	103(37.5)	44(16.0)	275	
Curse										
Yes	15(20.0)	19(25.3)	38(50.7)	3(4.0)	<0.001	30(40.0)	22(29.3)	23(30.7)	75	0.096
No	55(17.2)	68(21.3)	91(28.5)	105(32.9)		130(40.8)	125(39.2)	64(20.1)	319	

Table 4. Knowledge about treatment of mental illnesses, gender, educational status and age group of respondents

	Gender		Educational status				Age group			Total
	Male	Female	Nil	1^0	2^0	3^0	≤30 (160)	31-50 (147)	51-70(87)	
Can mental illnesses be successfully treated:										
Yes	158(49.5)	161(50.5)	45(14.1)	63(19.7)	110(34.5)	101(31.7)	141(44.2)	132(41.4)	43(13.5)	319
No	46(61.3)	29(38.7)	25(33.3)	24(32.0)	19(25.3)	7(9.3)	19(25.3)	12(16.0)	44(58.7)	75
	χ^2=3.38, p=0.066		χ^2=2 9.36, p<0.001				χ^2= 72.75, p<0.001			
Can mental illnesses be successfully treated in the community:	112(47.0)	126(52.9)		30(12.6)	79(33.2)	73(30.7)	98(41.2)	75(31.5)	65(27.3)	238
Yes	92(59.0)	64(41.0)	56(23.5)	57(36.5)	50(32.1)	35(22.4)	62(39.7)	72(46.2)	22(14.1)	156
No			14(9.0)							
	χ^2=5.36, p=0.021		χ^2=38.05, p<0.001				χ^2= 12.09, p= 0.002			

Discussion

In this study alcohol and drug misuse ranked by the caregivers as first among the possible causes of mental illnesses. This is not surprising because alcohol use has been reported to be prevalent in the Nigerian society especially among the youths (11,12), and the medical and psychiatric consequences have been well documented (21). Belief that other substances can cause mental illness has similarly been reported. A very important substance commonly used and proven to be etiologically related to major mental illnesses (schizophrenia and the mood disorders) is cannabis (13,14). The finding in this study is similar to the previous ones in that caregivers have reported drug misuse as the commonest cause of mental disorders (8,15). This wide knowledge could be regarded as good in view of the possible restraining effects on the use of illicit or psychoactive substances (8). It could, however, be damaging because use of

substances could be viewed as a moral lapse of an individual. The illnesses that result from use of such substances could therefore be seen as self-inflicted and therefore increasing the negative attitude towards the patients.

The wide belief about biological causes (brain's diseases, genetic inheritance) is also a positive finding in this study. Caregivers' greater belief in heredity factors as the causes of mental illness has been reported by other studies in Nigeria (16,18) and outside Nigeria (17,18). The wide belief by caregivers in our study about biological causes of mental illnesses could have been due to their greater contacts with psychiatric experts who increasingly try to educate and counsel patients and relatives about mental illness.

The beneficial effect of this knowledge is in non-attribution of mental illnesses to supernatural causes, which can result in the likelihood of delaying medical care and worsening the prognosis of mental illness before appropriate help is sought. In other words, belief about biological causes of mental illnesses might make relatives seek appropriate psychiatric care in the orthodox hospitals. This predominant belief about biological causes in the study is supported by the fact that fewer respondents believed about cause of mental illness as a result of possession by supernatural causes. Only about one-fifth of the respondents affirmed possession by evil spirits as a cause of mental illness and about a quarter thought God punishment was a cause while fewer (less than one-fifth) thought curse was a cause of mental illness. This differed from a study (16) where the most acceptable etiological proposition was the "supernatural" cause. Our study is, however, similar to the quoted study; both found significant association between gender and beliefs in heredity factors as a cause of mental illness by relatives of patients with mental illness.

The belief about psychosocial causation has also been reported by other studies (16, 17). In our study, about half of the respondents thought traumatic events or shock could cause mental illness, while similarly large number of respondents believed stress could cause mental illnesses. Poverty, another psychosocial factor, on the other hand, was thought to be a cause by less than a third of the caregivers.

Supernatural causes (possession by evil spirit, God punishment and curse) have been shown to be of lesser importance in this study. The study demonstrates a predominance of biopsychosocial belief of etiology of mental illness and is indicative of a better understanding of etiology among the caregivers contrary to the previous beliefs of predominant supernatural causes. The fact that higher educational status was related to the belief in the biological causes of mental illness gives a better directive in the fight against poor knowledge of etiology. Improvement in school enrolment and encouragement towards further education will go a long way at increasing people's knowledge of etiology of mental illness. Improved knowledge of etiology brings about improvement in attitudes of the public towards mental illnesses (4). Likewise, younger respondents believed in the biological causes than the older respondents. Exploratory tendency and curiosity of the younger respondents could have accounted for this finding.

The study also found that majority of the caregivers believed mental illnesses could be successfully treated. A higher educational status and younger age were good predictors of this belief among the respondents. Similarly, our study also found that majority of the study population believed mental illnesses could be successfully treated in the community. A higher educational status, younger age, as well as female gender, were important in this belief, perhaps because higher education brings about curiosity and enlightenment. This might make an educated person read and enquire more about the etiology of mental illness and treatment possibilities.

The belief that a mental illness could be treated in the community was also a positive finding in this study because attention has shifted from institutional care to community based treatment as one of the ways of reducing stigmatizing attitudes towards people with mental health problems.

Conclusion

In our study, caregivers of patients with mental illness mostly believed in the bio-psychosocial causes of mental illness rather than the predominantly supernatural causes reported in previous community studies of etiology of mental illness in Nigeria. Younger age and higher educational status were positively associated with good understanding of etiology. These findings support the need for a continuous psycho-educational input from mental health professionals in order to sustain and improve this level of awareness in the caregivers and the general public. This ultimately results in a better understanding of mental health problems and brings about a better attitude towards people suffering from mental illness.

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