A Simple approach for improving the Knowledge and Attitude of Primary Health Workers towards Mental illness in a Rural Community in Southeast Nigeria

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SUMMARY

Background: An adequate knowledge of mental illness causation, treatment modalities and positive attitude to the mentally ill among health workers is paramount to the development of mental health services in any community. The effects of information and education intervention on the knowledge and attitude of primary health care workers towards mental disorders were evaluated in this study.

Methods: A parallel experimental study design with an educational intervention involving a study and control group (50 participants each) was undertaken among primary health care workers in a rural community in Igbo-Etiti Local Government Area of Enugu State, in southeastern Nigeria. Pre- and post-intervention data was collected using a pre-tested, semi structured and self-administered questionnaire. A 5-point Likert scale ranging from "totally disagree" to "totally agree" (1-5) was used to score attitudinal subscales.

Findings: At baseline only 11 (22.0%) workers each in the study and control groups respectively agreed that mental illness arose wholly from medical causes while 36 (72.0%) & 35 (70.0%) workers believed in the dual aetiology of traditional and medical factors. The belief in medical aetiological factors rose significantly to 21 (42.0%) in the study group post-intervention. However the preferred mode of treating mental illness for the study and control groups respectively at baseline was orthodox medicine 25 (50.0%) &15 (30.0%), orthodox/alternative medicine 22 (44.0%) & 33 (66.0%) but there was no significant difference post-intervention. There were no significant difference in the mean attitude subscales of the study and control groups respectively at base line, stereotyping (3.8 & 3.8), separatism (2.8 & 3.0), stigmatisation (2.7 & 3.0) pessimistic prediction (2.6 & 2.8), restrictiveness (2.1 & 2.4) and benevolence (1.3 & 1.4). Post-intervention, a statistically significant change in attitude was observed with P-values of 0.00 in all attitudinal subscales between study and control groups.

Interpretation: The result of this study suggests that information and education intervention improved health workers knowledge of mental illness causation and attitude towards the mentally ill in the study community. The simple intervention could be replicated in other rural communities in Nigeria and Africa to aid the development of community mental health services.

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INTRODUCTION

Good mental health permits the optimal physical, intellectual and emotional development of the individual while mental disorder is a pathological state which interfers with this development and results in various kinds of deviant behaviours. [1, 2] The main aetiological factors for mental illness are genetic, socio-cultural, psychological, organic and sometimes idiopathic.[3-6] The major symptoms include sleeplessness, restlessness, irritability, inability to concentrate, memory loss, jealousy, obsessions, compulsion, depression, fears, anxiety and disturbances of sexual performance.[7]

Traditionally, mental illness had been ascribed to supernatural influences such as evil spirits, witchcraft and sorcery [2, 7]. These beliefs, which reflect lack of knowledge influence society's attitude to mentally ill patients, which in most cases is that of fear, shame, embarrassment, discrimination, isolation and sometimes, outright hostility and cruelty [8]. Attitudes to the mentally ill would vary from positive to negative depending on whether we are victims, relatives or just onlookers, but more importantly on how many facts we know about mental illness [9]. Negative attitude has been reported not only in the general public, but also among the health care personnel including physicians [9, 10-12]. Stigmamatization affects not only the individual sufferer, but his family, career, the community at large, and even the mental health worker. Thus, mental problems have remained a hidden burden, as a result of the associated stigma. [8]

Thus, there is the urgent need to improve the knowledge and attitude of health workers towards mental illness causation, recognition of early signs and referral practices [8,13]. This can be achieved through provision of relevant information, education and communication which is capable of removing misconceptions, ignorance and prejudice about mental health and disease[14,15]. it would also lead to greater acceptance of mentally ill patients by the health workers in general and the community at large. This study determines the effects of providing simple

accurate information on the knowledge, treatment preference and attitude of primary health workers towards mental illness in a rural community in south east Nigeria. The baseline study in this community reported a primary healthcare workforce with traditional belief about mental disorder, treatment preferences and a negative attitude towards the mentally ill. [16]

METHODS

Background

The study was carried out in Igbo-Etiti Local Government Area (LGA) of Enugu State, in Southeastern Nigeria in 2004. This community occupies a land area of 25,000 sq km and had an estimated population of 190,404 in 2002 with a literacy rate of 61.1%.[18] The residents of Igbo-Etiti L.G.A. are of the Ibo ethnic group in southeastern Nigeria and are mostly Christians. However before the advent of western civilization, the believe in supernatural forces such as gods, evil spirits, witchcrafts and sorcery as causes of many ailments especially mental disorders were strong in this community. There were 25 registered private-for-profit health facilities in the area as well as native doctors, and faith based healers. Government health facilities found in this LGA include one Cottage hospital, one Comprehensive Health Centre, and 12 Health Centres / Health Posts. The PHC workers included graduates of schools of health technology, nurses and midwives, laboratory technicians, pharmacy technicians, and record officers.

Study design & population

The study was an educational intervention with a quasi-experimental design. There was a baseline study which was followed by an educational intervention and then a post-intervention study. The data collection instrument was a pre-tested, semi-structured questionnaire with close ended questions. The study population consisted of a study and a control group composed of PHC workers in the LGA under study. Individual informed oral consent was obtained from participants before enrolment into the study.

Using a simple random sampling method Igbo Etiti LGA was chosen from a list of the 17 LGAs in Enugu State, Nigeria. All the 100 PHC workers on the employment list of the LGA with basic training in community health were recruited for the study. The PHC workers' qualifications and designations were then verified with the help of the PHC coordinator of the LGA. The PHC workers were assigned into the experimental or control group using simple random sampling technique. They were asked to form a single line and then each to pick a piece of folded paper from a bag containing 100 folded papers on which was either written an alphabet "C" or "E" denoting control and experimental groups respectively. This exercise resulted to 50 participants in each group.

The intervention was conducted by two of the researchers while the pre- and post- intervention data collection was organized by one of the investigators and a trained interviewer. The data collectors were blinded to the grouping of the participants and did not participate in the intervention.

Procedures

Each group was then taken to a different conference room in the LGA headquarters and the questionnaire was used to elicit baseline information from all participants. Information collected included the respondents' socio-demographic characteristics, knowledge of the causes of mental illness, preferred places and forms of treatment recommended to patients with mental disorders. Their attitudes towards the mentally ill were determined using a modified version of the questions used in a Chinese community[14]. The questionnaire was self administered but was cross-checked son the spot for completeness before collection.

The educational intervention took place the same day. The experimental group was given an article to read entitled "Mental illness: facts and myths" which included excerpt from the WHO News letter of March 2001 [3].This two-page article, (available on request) defined mental illness, the types, causes, treatment options, myths of the disorder, and the common problems faced by the mentally ill. The article further described the stigmatization and stereotyped attitudes that are associated with mental illness and explained how to maintain and promote good mental health in the society. The control group on the other hand, read a two-page Bible story entitled "Joseph: from slavery to the throne" which had nothing to do with mental illness [17]. Each group was given 2 hours to study and digest the information and thereafter, a one hour explanation of the article was given to each group. After a half hour break, a question and answer session which lasted for about an hour was held. The post–intervention data were immediately collected using the same questionnaire applied during the baseline study. Each questionnaire was again cross-checked on the spot for completeness before collection.

Data analysis

Data was entered and analysed using the Statistical Package for Social Sciences (SPSS) and programme for Epidemiologist (PEPI) soft wares. The questions on knowledge of the causes of mental illness and treatment preferences with multiple answers were scored one point each and analyzed as such. Questions on attitudes were analysed in groups based on the 6 – subscales of attitude; separatism, stereotyping, restrictiveness, benevolence, pessimistic prediction and stigmatization. The answers a – e for each component question of the subscale was scored on a 1 – 5 Likert scale as follows; totally disagree = 1, almost totally disagree = 2, sometimes agree = 3, almost totally agree = 4 and totally agree = 5. A mean score was calculated for each of the 6 – subscales of attitudes for all the respondents. Chi-square and student t-tests were applied to test the significance of the differences between the baseline and post – intervention data from the study and control groups.

RESULTS

All the primary health care (PHC) workers, 50 each in the study and control group consented and participated in the study. Seventy three of them were females and 76 were between 26 & 40 years of age. Two-thirds (66) of the workers were community health extension workers while 25 were environmental health officers. Table 1 shows that the study and

control groups were similar with respect to their mean age, sex composition and job designation.

At baseline, the aetiological factors for and mental illness reported by the study and control groups respectively were all incorrect for 6.0% & 8.0% of the workers, all correct for 22.0% workers in each group but included both correct & incorrect answers for the majority of respondents, 72.0% & 70.0% of the workers respectively. There were no significant differences in the knowledge of mental disorder causation between the study & control groups at baseline. (X^2=0.16, df=2, p=0.925) The incorrect causes of mental illness most frequently mentioned by the study and control groups respectively were native charm (52.0% & 46.0%), evil spirit possession (48.0% & 60.0%) and poisoning by enemies (38.0 & 50.0%) while stress (78.0% & 66.0%), substance abuse (72.0% & 80.0%) and hereditary (62.0% in each group) were the most commonly listed correct causes. Post intervention, the study group responses on the causation of mental disorders improved significantly when compared to the control group (X^2=15.2, df = 2, p=0.001). There were incorrect responses from 0.0% & 6.0% workers, correct responses from 42.0% & 10.0% workers and both correct/incorrect responses from 58.0% & 84.0% workers in the study and control groups respectively. See Table 2 for details.

Pre-intervention, the preferred methods of treating mental disorders for the study & control groups respectively were orthodox medicine only (50.0% & 30.0% workers), a combination of orthodox and alternative medicine (44.0% & 66.0% workers) and alternative medicine only (6.0% & 4.0% workers) but these differences were not statistically significant, (X^2=4.9, df=2, p=0.086). A similar pattern of treatment choice was respectively reported post–intervention among the study and control group; orthodox medicine only (60.0% & 44.0% workers), both orthodox & alternative medicine (40.0% & 56.0% workers), (X^2= 2.56, df=1, p=0.109).

Table 3 shows the details of the attitudinal scores for the study and control groups. Pre-intervention, the attitude subscale "stereotype" had the highest mean score of 3.8 each for the study and control groups, followed in descending order by "separatism", "stigmatization", "pessimistic prediction", "restrictiveness" and "benevolence" which had the lowest mean scores of 1.3 & 1.4 respectively. There were no significant differences in the attitudinal scales of the study and control groups at baseline. Post-intervention, the control group maintained the baseline pattern but the study group improved significantly (p=0.000) in all attitude subscales, with the highest mean score of 3.9, now for "benevolence" followed by decreasing mean scores of 2.4 to 1.3 for stereotyping, pessimistic prediction, separatism, stigmatization, and restrictiveness.

Table 1: Initial Characteristics of Participants

	Study No (%)	Control No (%)	P-value
Sex:			
Female	38 (76.0)	35 (70.0)	0.488
Male	12 (24.0)	15 (30.0)	
Mean Age ± SD	35.3±7.6	37.3±8.3	0.212
Designation / Cadre:			
Nursing cadre	35 (70.0)	37 (74.0)	0.656
Non-nursing cadre	15 (30.0)	13 (26.0)	
Total	**50**	**50**	

Nursing cadre includes community Health Extension Workers, community Health officers, Nurses and midwives.
Non-nursing cadre are the Environmental Health Officers, Pharmacy and Laboratory Technicians.

DISCUSSION

At baseline, the study and control groups were

Table 2: Causes of Mental Illness as Reported by PHC Workers

	Pre-Intervention			Post-Intervention		
	Study No. (%)	control No. (%)	x^2 P-value	study No. (%)	control No. (%)	x^2 P-value
Incorrect causes:						
Native charm	26 (52.0)	23 (46.0)	0.548	14 (28.0)	24 (48.0)	0.039
Evil spirit possession	24 (48.0)	30 (60.0)	0.229	20 (40.0)	36 (72.0)	0.001
Poisoning by enemies	19 (38.0)	25 (50.0)	0.227	15 (30.0)	21 (42.0)	0.211
Witchcraft	17 (34.0)	14 (28.0)	0.517	13 (26.0)	16 (32.0)	0.509
Punishment from gods	12 (24.0)	14 (28.0)	0.648	14 (28.0)	21 (42.0)	0.142
Correct causes:						
Stress	39 (78.0)	33 (66.0)	0.181	44 (88.0)	36 (72.0)	0.046
Alcohol & drug abuse	38 (76.0)	44 (88.0)	0.118	48 (96.0)	43 (86.0)	0.080
Hereditary	31 (62.0)	31 (62.0)	0.999	33 (66.0)	28 (56.0)	0.308
Poverty	15 (30.0)	4 (8.0)	0.005	33 (66.0)	6 (12.0)	0.000
Physical illness	14 (28.0)	10 (20.0)	0.349	33 (66.0)	16 (32.0)	0.001
Summary of causes:						
Incorrect causes only	3 (6.0)	4 (8.0)	0.925	-	3 (6.0)	0.001
Correct causes only	11 (22.0)	11 (22.0)		21 (42.0)	5 (10.0)	
Correct & Incorrect causes	36 (72.0)	35 (70.0)		29 (58.0)	42 (84.0)	

Table 3: Attitude of PHC Workers towards Mental Patients

Attitude	Pre- Intervention			Post- Intervention		
	Study	Control Mean±SD	P-value Mean±SD	Study	Control Mean ± SD	P-value
Stereotyping	3.8 ± 1.3	3.8 ± 1.5	0.99	2.4 ± 1.0	4.0 ±1.5	0.000
Separatism	2.8 ± 1.3	3.0 ± 1.4	0.472	1.8 ± 0.8	2.9 ± 1.5	0.000
Stigmatization	2.7± 1.5	3.0 ± 1.7	0.344	1.4 ± 0.7	3.0 ± 1.6	0.000
Pessimistic prediction	2.6 ± 1.5	2.8 ± 1.5	0.515	2.0 ± 1.0	2.8 ± 1.6	0.000
Restrictiveness	2.1 ± 1.4	2.4 ± 1.5	0.307	1.3 ± 0.7	2.3 ± 1.6	0.000

comparable with regards to age, sex, job designation and even with the variables under study: mental illness causation, preferred treatment modality and attitude to the mentally ill. Prior to the educational intervention, only 11 workers each in the study and control groups believed wholly in the medical causes of mental illness. The majority held tight to the old traditional beliefs as well as to medical factors as causes of mental illness. With the educational intervention, the knowledge in the medical causation of mental illness of the study group improved significantly but many PHC workers still believed that mental disorders can be caused by both medical and traditional factors.

These findings compare favourably with past surveys done in other countries and among the Yoruba tribe of Nigeria, where information, education and communication led to a better knowledge of the aetiology of mental disorders among health care workers.[18-21]

Half of the study and control group would recommend alternative medicine for mental illness at baseline and the intervention was unable to influence significantly the workers preferences for alternative medical care. This may mean that additional education is needed to fully convince these health workers that the long acknowledged traditional remedies may not be the best for treatment of the mentally ill. Another explanation for the study result may be that the non availability of psychiatric health facilities in the study area may have hindered their personal evaluation of orthodox medical care for psychological illnesses. Similar research finding was reported by Odejide and Olatawura [18] who found that formal and non formal educated health workers showed the same preference for native healers and prayer houses as choice of treatment facility for the mentally ill.

Attitudes scores are usually very difficult to change and in most cases require long term intervention but this simple intervention was able to change significantly (p=0.000) the attitude of these PHC workers to mental illness. It would be interesting to find out if this change could be maintained over a long period. Previous studies, had reported that when people are educated about mental illness through provision of accurate information, they show more favourable and understanding attitudes towards the mentally ill. Other researchers have also found that individuals who have prior contact with the mentally ill are less likely to endorse prejudicial and stigmatizing attitudes towards the mentally ill. [14, 22-25]

The result of this study suggests that information and education intervention have improved health workers knowledge of mental illness causation and attitude towards the mentally ill in the study community. The process is a simplified way of integrating mental health into the main stream of health and development and the effect may result to an improvement in the lives of the mentally ill. Further research is needed to see whether the observed positive changes in knowledge and attitude are long lasting. It is recommended that this study be expanded to other rural communities in Nigeria and Africa.

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