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Knowledge, Attitude and Factors Associated with Mental Illness among Nurses Working in Public Hospitals, Addis Ababa, Ethiopia

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Abstract

Background: Around 30-40% of patients who are attending primary care setting have emotional problems. The majority of these were often remaining unrecognized, misdiagnosed and inappropriately managed. Improving the knowledge and attitude of the health workers especially nurses is important to overcome this problem.

Objective: To assess knowledge, attitude and associated factors of nurses towards mental illness in Addis Ababa public hospitals, Ethiopia.

Methods: Institution based cross-sectional study was conducted from April 12 to May 12, 2014. The data was collected from 423 Nurses using structured Knowledge and attitude questionnaire for health workers, which is designed by National Institute of Mental Health and Neurosciences. Participants were selected by using systematic random sampling methods. Data was entered using Epi-info 7 and analysis was conducted using SPSS 20. Bivariate and Multivariate logistic regression analysis was performed to identify variables which have significant association with knowledge and attitude towards mental illness. The level of significance association was determined by AOR with 95% confidence interval and P-value ≤0.05.

Results: A total of 400 participants were participated with a response rate of 94.5%, 50% were females. The average age was 31 ± 6.6 years.50% and 44.2% of nurses have adequate knowledge and Favorable attitude towards mental illness respectively. There was significant association between knowledge and profession, working department and taking training. Also sex, educational status, profession, institute of graduation and work experience of respondents were significantly associated with attitude at p<0.05.

Conclusion and recommendation: About half of nurse's appear to have adequate knowledge and less than half of participant have favorable attitude. These unfavorable attitudes may cause certain problems like decrease in health care of person with mental illness. Practice based training at working areas regarding mental health problems need to be given for nurses.

Keywords: Knowledge; Attitude; Mental illness; Nurse

Background

About 450 million people suffer from mental or behavioral disorders worldwide today, mental disorder are widely recognized as a major contributor (14%) to the global burden of disease worldwide [1]. In India, prevalence rates of mental and behavioral disorders are `ranging from 9.54 to 370 per 1000 population [2]. 1 in 4 health services have at least one mental, neurological or behavioral disorder but most of these disorders are neither diagnosed nor treated. The majority of these were often remaining unrecognized, misdiagnosed, and inappropriately managed [3].

The National Institute of Mental Health (NIMH) at United States estimates that 1 in 5 people will experience some sort of mental illness in their lifetime and 1 in 4 people will know someone with mental illness. Mental illness is treatable and the symptoms of mental illness often can be controlled effectively through medication and/or psychotherapy. But sometimes the symptoms of mental illness may go into remission, and for some people it causes continuous episodes that require ongoing treatment. Untreated mental illness can disrupt an individual's personal, social, educational and work activities and in some cases it may lead to suicide. According to the World Health Organization the cost of not treating mental illness may be high both in personal and financial terms [3,4].

A further challenge that needs to be addressed worldwide is the massive gap between population needs for mental health and what is actually provided in mental health care. The treatment gap particularly pronounced in low and middle income countries (LAMICs), where commonly over 75% of people with mental disorders receive no treatment or care at all, and less than 2% of health budget is spent on mental health [5].

A study conducted in South Africa reported that, among the general public, knowledge of mental illness was low and stigma was high. Another example can be seen in Nigeria, where the first large-scale, community representative study of popular attitudes towards mentally ill, found stigma to be widespread, with most people indicating that they would not tolerate even basic social interactions with someone with a mental disorder [6].

Mental health problems are more common in developed

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world than in developing world [7]. However, Ethiopian people have suffered from mental health problem and it accounts 12.45% of burden of diseases. Substantial number of patients attending various health care settings suffers from psychiatric disturbance with figures ranging from 15%to 50%. A majority of these cases are handled by non-psychiatric where majority of them go unrecognized and are subjected to unnecessary investigation leading to inconvenience and financial loss [7,8].

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 and Health workers are not completely free from these abovementioned unfavorable beliefs and attitudes towards psychiatric patients [9].

Studies also demonstrate that health professionals have negative attitudes toward some aspects of mental illness and were less optimistic about prognosis and less positive about likely long-term outcomes when compared with the general public [10]. Health care providers have been known to stigmatize patients who use psychiatric medications or services by offering discouraging advice, disparaging remarks, and rejecting behavior. This form of discrimination may have a negative impact on patients' self-esteem and the way they seek help or adhere to prescribed medical treatments in addition, negative attitudes that manifest as apprehension or discomfort during patient interactions may lead to ineffective counseling or the lack of essential medical services [11].

Studies done so far in different countries of the world [11-19] have shown there was inadequate knowledge and unfavorable attitude of nurses towards mental illness. Also Knowledge and attitude of nurses were associated with variety of factors which were rooted with socio-demographic characteristics, type of training taken, institution of graduation, work experience and profession. Despite the increased burden of mental disorders, still there is information gap showing the knowledge and attitude of nurses towards mental illness.

Therefore the results of this study will be used as base line data for planning to improve the knowledge and attitude of nurses and for further studies on the subject area.

Methods

Study design and setting

Institution based cross sectional study was conducted among nurse working at public hospital under Addis Ababa health bureau from April 12 to May 12, 2014. Addis Ababa is a capital city of Ethiopia. It is located 2500 meter above sea level at 9.03N and 38.74E. It has a total population of 3,059,000. The city has a total of 608 health facilities (which include hospitals, health centers, health stations, health posts and private clinics). Addis Ababa is divided in to 10 sub cities and 116 woreda with an area of 540 Km^2. According to the 2010 population Census, the total population of Addis Ababa is about 3,384,569. There are 6 public hospitals under administrative city, with a total of about 2466 nurses, of which about 859 nurses were working in public hospitals under the city administration.

All nurses who have been working in all Addis Ababa public health hospitals under the Addis Ababa health bureau were considered as source population. Nurse who were available during the study period and fulfilled inclusion criteria were included in the study. Psychiatry nurses and other nurses who were unable to communicate to respond for the interview were excluded from this study.

Operational definition

Adequate knowledge: if the respondents answer correctly greater than or equal to 11 out of 15 knowledge questions (If score more than 70% of knowledge questions).

Inadequate knowledge: if the respondents answers correctly less than 11 out of 15 knowledge questions (if score less than 70% of knowledge questions).

Favorable attitude: if the respondents answers correctly greater than or equal to 7 out of 10 attitude questions (if score more than 70% of attitude questions).

Unfavorable attitude: if the respondents answers correctly less than 7 out of 10 attitude questions (if score less than 70% of attitude questions

Sample size determination and sampling techniques

Single population proportion estimate was used to determine the sample size considering the following assumptions; confidence interval (CI)=95%=1.96, margin of sample error=5%. Since there was no published study conducted in Ethiopia, proportion of knowledge, attitude of nurses towards mental illness was taken as 50%. Considering 10% non-respondent the final sample size was 423. Systematic random sampling was used to select intended study subjects from hospitals with K^{th} value of 2.

List of nurses were taken from each hospital administration then the selection of 422 nurses was performed proportionally (Table 1).

Measurements

Structured, self-administering, Amharic version questionnaire was used to collect data. Modified version of Knowledge and attitude questionnaire for health workers which is designed by National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, department of psychiatry questions was modified and used for mental illness. Questions used to assess socio demographic data and other relevant information was designed by the investigator. A total of 43 questions were asked. Data was distributed and collected by six trained psychiatric nurses and 2 health officers were recruited to as supervisors and facilitators.

The questionnaire was designed and modified appropriately. The tool was translated to local language (Amharic) to be understood by all participants and translated back to English. Facilitators and supervisors were trained before data collection**.** The questionnaire was pre tested in 5% of nurses working in outpatient and inpatient department outside the selected hospitals and based on the findings from the pretest, the questionnaire was revised and adopted.

Data processing and analysis

Data entered using EPI info version 7, then exported to SPSS

Hospitals	No. of nurses	Selected Samples
Zewditu memorial hospital	142	71
Ras desta damtewu hospital	102	52
Dagmaw Minilik general hospital	172	80
Yekatit 12 referral hospital	193	96
Gandi memorial hospital	135	67
Terunesh Beijing hospital	115	57
Total	859	423

Table 1: Number of Nurses who are proportionally allocated to be interviewed in each public hospitals of Addis Ababa administration, Addis Ababa, Ethiopia.

version 20 for analysis. Descriptive statistics was used to identify distributions of socio-demographic characteristics of study participants. Both bivariate and multivariable logistic regression analyses with 95% CI were used to see the association between each independent variables and outcome variables. Finally those variables which showed statistical significance at P<0.05 and 95% CI in the final model were reported as independently associated with Attitude and knowledge.

Ethical consideration

Ethical clearance was obtained from the Institutional Review Board (IRB) of college of medicine and health sciences, University of Gondar and from Addis Ababa administrative health bureau ethical committee. Formal permission was obtained from the medical director of each health facility and finally written consent was obtained from each participant during data collection. All participants were informed about the aims and purpose of the study, its contribution to the future development of health system; especially for mental health system in Addis Ababa as well as in the country. The right was given to the study participants to refuse or withdraw from the study at any time. For the purpose of anonymity participant's name was not used at the time of data collection and all other personnel information kept entirely confidential.

Results

Socio-demographic characteristics

Out of 423 respondents intended to be included on the study, complete data were obtained from 400, making a response rate of 94.5%. Out of the total 400 respondents, 266 (66.5%) were females. The mean age of the respondents was 31 ± 6.6 years. Regarding marital status, 224 (56%) were never married and 154 (38.5%) were married. The major ethnic group was Amhara 179 (44.8%) followed by oromo103 (25.8%). A greater proportion of the respondents were Orthodox in religion 248 (62%) followed by Muslim 52(13%). Concerning the educational status of respondents 205 (51.2%) had first degree and 195 (48.8%) had diploma.

Work experience and area of graduation

Out of the total respondents, 159 (39.8%) had work experience of zero to five year and followed by 192 (48%) with work experience of greater than 15 years. Regarding their area of graduation 269 (67.2%) (Figure 1).

Training

From the total respondents, 205(51.2%) ever took training about mental illness and the rest 195(48.8%) reported that they did not took training. Among respondents who took training, the dominant type of training reported to be theory only 36% (Figure 2).

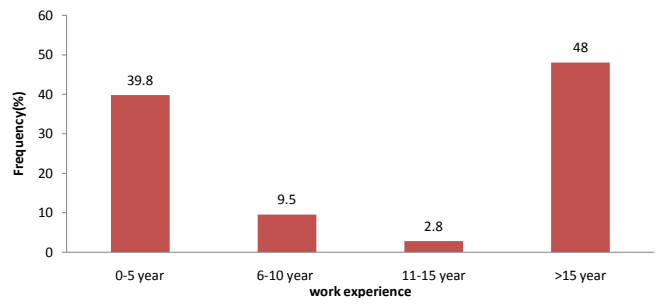

Figure 1: Work experience of respondents of Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2014.

Working department

As indicated by Table 2, from the total respondents, 301(75.2%) were working in adult outpatient department followed by 33(8.2%) were working in under five OPD (Figure 3).

Knowledge and attitude of nurses towards mental illness

Nurses' knowledge about mental illness was assessed by asking questions about cause, drug and manifestation of mental illness. In the same way, questions were asked to assess the presence of favorable (good) or unfavorable (bad) attitude among nurses towards mental illness. Then, the nurses were categorized as having "good" or "bad" attitude, "adequate" or "inadequate" knowledge about the issues under consideration based on their response to the questions and the definitions of the terms described under the heading 'operational definitions' in the thesis.

Based on this assessment 50% of nurses were having adequate Knowledge towards mental illness and 44.2% of the nurses were having favorable (good) attitude towards mental illness. In the contrary, 55.8% of the Nurses were having unfavorable (bad) attitude towards mental illness (Table 2).

Perceived treatment for mental illness

Of the total respondents, 81% of the respondents perceived that mental illness can be treated by modern medicine and followed by 26.5% perceived that mental illness can be treated by religious practice (Table 3).

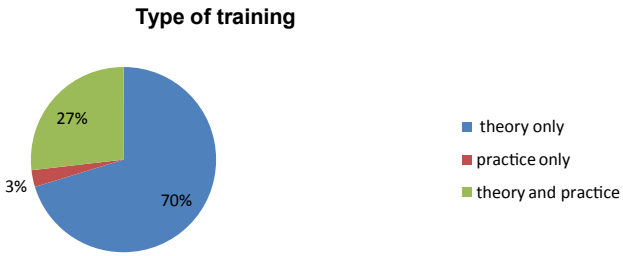

Figure 2: Type of Training on mental illness taken by respondents of Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2014.

Variables		Frequency (%)
Knowledge towards mental illness	Adequate knowledge	200 (50%)
	Inadequate knowledge	200 (50%)
Attitude towards mental illness	Favorable attitude	177 (44.2)
	Unfavorable attitude	223 (55.8)

Table 2: knowledge and attitude of nurses towards mental illness in Addis Ababa public hospitals, Addis Ababa, Ethiopia.

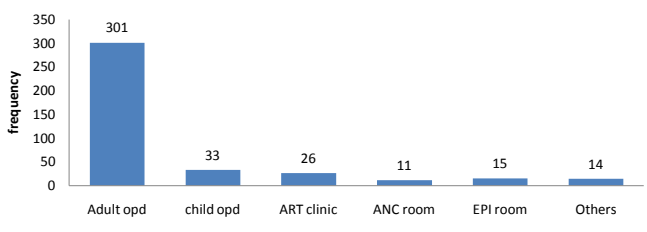

Figure 3: Working department of respondents of Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2014.

Factors associated with knowledge of nurses

In this study, both bivariate and multivariate logistic regression analysis were done to show the factors associated with knowledge on mental illness among nurses in public hospitals in Addis Ababa.

Age of the respondents, profession, working department and ever taking training are statistically significant with knowledge on mental illness in bivariate logistic regression but age of the respondent was not significant in multiple logistic regressions (Table 4).

Factors associated with attitude of nurses

This study also assessed attitude of the respondents towards mental illness. Professions, area of graduation, work experience, ever taking training and type of training on mental illness are significantly associated with attitude towards mental illness in bivariate logistic regression.

Profession, area of graduation, work experience and, ever took training are found to be significantly associated in multivariate logistic regression (Table 5).

Discussion

Two hundred (50%) health workers have inadequate knowledge and 223 (55.8%) have unfavorable attitude towards mental illness. This result has some variation from study done in Nepal, overall adequate knowledge and by and large a positive attitude [12]. Also show differences with the study done in Jimma zone about 89 of the respondents were knowledgeable about mental health problems [17]. The possible reason might be socio cultural difference, the sample size and profession difference which was 135 nurses were participated during the study done in Jimma zone.

In this study two hundred twelve (52.5%) have favorable attitude. Study done in Maldives the attitude toward the mentally ills among nurses are generally positive attitude even when the respondents took limited amount of training [13].

Concerning knowledge midwifery nurses are four times more likely to be knowledgeable than clinical nurses. Regarding working department, those who are working in under five OPD were four times more likely to be knowledgeable than those who are working in adult OPD.

Those nurses who have took training are two times more likely to be knowledgeable than those who do not took training. The study done Fiji showed that there were no difference seen between those who took further training and those who do not took further training. The variation might be due to the quality of training they took, the sample size and study technique.

Concerning attitude, female nurses were about 2 times more likely to have favorable attitude towards mental illness than males. This study show some variation from study done in chikador (18), in this study majority of the respondents were females with negative attitude.

Variables	Frequency	(%)
Mental illness can be treated by		
Traditional	23	5.8
Religious practices	106	26.5
Modern medicine	326	81.5
Others	23	5.8

Table 3: Perceived treatment of mental illness among nurses of Addis Ababa public hospital, Addis Ababa, Ethiopia, 2014 (multiple responses is possible).

Variables	Knowledge		COR (95%CI) (Crude OR)	AOR (95%CI) (Adjusted OR)
	Adequate	Inadequate		
Age in years				
18-22	4	1	0.36 (0.04-3.33)	0.13 (0.13-1.4)
23-27	47	68	2.06 (1.17-3.65)*	1.40 (0.74-2.6)
28-31	64	64	1.43 (0.82-2.48)	1.11 (0.59-2.1)
32-37	35	32	1.31 (0.68-2.49)	1.08 (0.55-2.1)
>37 (RC)	50	35	1	1
Sex				
Male (RC)	71	63	1	1
Female	129	137	1.19 (0.79-1.81)	1.72 (0.89-3.3)
Marital status				
Never married (RC)	111	113	1	1
Married	78	76	0.96 (0.64-1.44)	0.75 (0.37-1.5)
Others (Divorced, widowed)	11	11	0.98 (0.41-2.35)	0.41 (0.97-1.7)
Educational status				
First degree (RC)	105	100	1	1
Diploma	95	100	1.11 (0.75-1.63)	0.6 (0.3-1.1)
Profession				
Clinical nurse (RC)	18	173	1	1
Midwifery	15	27	1.92 (0.96-3.85)	3.9 (1.2-12.7)*
Institution of graduation				
Government (RC)	135	134	1	1
Private	65	66	1.02 (0.7-1.6)	1.04 (0.53-2.1)
Work experience				
0-5 year	75	84	1.13 (0.7-1.7)	0.81 (0.52-1.3)
5-10 year	23	15	0.66 (0.32-1.3)	0.59 (0.28-1.2)
>10 year (RC)	102	101	1:00	1:00
Working department				
Adult OPD (RC)	158	143	1	1
Under-5 OPD	14	40	2.6 (1.4-5.2)*	3.1 (1.02-9.1)*
ART	16	10	0.69 (0.30-1.57)	0.89 (0.37-2.1)
ANC	6	5	0.92 (0.27-3.08)	1.06 (0.3-3.7)
Others	6	8	1.47 (0.49-4.34)	1.16 (0.38-3.5)
Have ever took training				
Yes	121	84	0.45 (0.3-0.7)*	2.1 (1.4-3.1) *
No (RC)	79	116	1:00	1:00
Type of training				
Theory only (RC)	84	60	1	1
Practice only	3	3	1.4 (0.27-7.17)	1.59 (0.25-9.9)
Theory and practice	34	21	0.86 (0.45-1.63)	0.8 (0.38-1.57)
*Significant association RC (1): reference category				

Table 4: Bivariate and multiple logistic regression of factors associated with knowledge on mental illness among nurses in Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2014.

This variation may be due to socio cultural difference, exposure to the mental ill's.

Those nurses with first degree were about 70% less likely to have favorable attitude than diploma nurses.

Regarding profession Midwifery nurses were 5.3 times more likely to have favorable attitude towards mental illness than clinical nurses. This result may be due to they have enough training, exposed to department which help them to know better.

Those nurses graduated from private institution were two times more likely to have favorable attitude towards mental illness compared to those graduated from governmental institution.

Those nurse those with work experience 0-5 years were 3.6 more

Variables	Attitude		COR (95%CI) (Crude OR)	AOR (95%CI) (Adjusted OR)
	Favorable	Unfavorable		
Age in years				
18-22	2	3	0.9 (1.44-5.7)	0.7 (0.9-4.5)
23-27	57	58	1.34 (0.8-2.4)	1.3 (0.8-2.5)
28-31	49	79	0.84 (0.5-1.5)	0.8 (0.4-1.44)
32-37	33	34	1.32 (0.69-2.5)	1.2 (0.6-2.3)
>37(RC)	36	49	1	1
Sex				
Male	71	63	1	1
Female	129	137	1.5 (0.96-2.24)	1.99 (1.02-3.8)
Marital status				
Never married	96	128	1	1
Married	72	82	1.17 (0.8-1.76)	0.7 (0.4-1.34)
Others (Divorced, widowed)	9	13	0.92 (0.38-2.3)	0.65 (0.18-2.4)
Educational status				
First degree(RC)	82	123	1	1
Diploma)	95	100	0.7 (0.47-1.04)	0.32 (0.1-0.9) *
Profession				
clinical nurse	153	207	1	1
Midwifery	24	18	1.71 (0.87-3.4)	5.3 (1.6-17) *
Institution of graduation				
Government	105	164	1	1
Private	72	59	1.9 (1.25-2.91)*	2.2 (1.08-4.5)*
Work experience				
0-5 year	69	90	1.07 (0.7-1.64)	3.6 (1.3-10.3) *
5-10 year	23	15	2.14 (1.05-4.4)*	0.3 (0.19-4.6)
>10 year	85	118	1	1
Working department				
Adult OPD	133	168	1	1
U-5 OPD	24	24	1.05 (5.1-2.2)	0.43 (0.87-2.2)
ART	12	14	1.08 (0.48-2.4)	0.96 (0.36-2.6)
ANC	4	7	0.72 (0.21-2.5)	0.56 (0.97-3.2)
Others	4	10	0.51 (0.15-1.6)	0.42 (0.12-1.3)
Have ever took training				
Yes	80	125	1.55 (1.04-2.3)*	1.50 (0.9-2.2)
No (RC)	97	98	1	1
Type of training				
Theory only	61	83	1	1
Practice only	4	2	0.37 (0.99-31.8)	0.70 (0.4-15.3)
Theory and practice	15	40	1.96 (0.88-3.2)*	1.51 (0.3-1.86)
*Significant association RC (1): reference category				

Table 5: Bivariate and multiple logistic regression of factors associated with attitude towards mental illness among nurses in Addis Ababa public hospitals, Addis Ababa, Ethiopia, 2014.

likely to have favorable attitude towards mental illness compare to those with work experience greater than 10 years. This result showed similarity from Zambia study which showed most of health care providers (81.1%) have been working for more than four year showed good attitude and experienced in dealing with mental ill persons.

Conclusion and Recommendation

About half of nurse's appear to have adequate knowledge and less than half of respondents had favorable attitude. Profession, current working department and ever took training were significantly associated with knowledge. Sex, educational status, profession, institution they graduated from and work experience were significantly associated with attitude.

Addis Ababa health bureau have to arrange short term and refreshment trainings for nurses working in the city. Future studies (interventional) should consider the effects of on knowledge and attitude of nurses.

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