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Attitudes Towards the Mentally Ill: A Comparative Study Between Medical Officers and Nurses in the Ahmedabad City of Gujarat

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Abstract

Context: Medical Officers (MO) and nurses are the most important contact of health-care for all patients, including Mentally Ill persons. Therefore, it is important to analyze their attitudes towards MI.

Aims: To assess and compare the attitudes of MO and nurses on the community attitude toward the mentally Ill (CAMI) scale.

Settings and Design: The study was cross-sectional and census sampling was used to collect data.

Methods and Material: The study was conducted on 67 MO and 85 nurses of 74 urban primary health centers in Ahmedabad. The questionnaire comprised socio-demographic data and the CAMI scale.

Statistical analysis: The frequency of each item and mean (SD) of all subscales were calculated for both groups. T-test and ANOVA were applied to compare socio-demographic data with the CAMI scale.

Results: Mean (SD) of authoritarianism (AU), benevolence (BE), social restrictiveness (SR), and Community Mental Health Ideology (CMHI) subscales were 24.97 (±3.14), 36.69 (±33.69), 21.61 (±3.76), 38.52 (±3.74) respectively for MO and 29.13 (±3.87), 35.51 (±4.17), 23.64 (±4.36), 36.01 (±4.37), respectively for nurses (p-value is <0.05 in AU, SR and CMHI). Joint families, rural areas, lower education and higher income are associated with higher stigma.

Conclusion: Although we found NA among nurses as compared to MO, it is highly prevalent in both groups. This requires widespread mental health educational programs by tertiary care hospitals and psychiatrists under the District Mental Health Program.

Key Messages: MO and nurses displayed stigmatizing attitudes toward MI in ample questions of the CAMI scale, especially in AU and SR subscales. This necessitates training them under DMHP.

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Introduction

According to the District Mental Health Program (DMHP), Medical Officers (MO) and nurses of Primary Health Care (PHC) centers (which are supposed to

be trained by the district psychiatrist) should provide basic mental health services to Mentally Ill (MI) people in rural areas. As we have ample PHCs and adequate staff at these places, the infrastructure is ready to deliver mental health services even in rural areas.[1] However, there is still lacune of mental health literacy among MO and nurses.[2,3] Hence, we conducted this study to assess and compare their attitudes towards MI on community attitude towards the mentally Ill (CAMI) scale.[4] We also compared different socio-demographic variables with CAMI subscales.

Subjects and methods

Ahmedabad Municipal Corporation (AMC) provided us with a list of 74 urban PHCs of the Ahmedabad district to spread awareness amongst the MO and nurses regarding mental illness. All the MO and nurses of these PHCs were invited to "Arogya Bhavan" of AMC to receive this training during August 2021. All authors of the present study with other faculties of the psychiatry department, also went there to give basic training regarding mental illness. Data collection from MO and nurses was done regarding their attitudes before training. After a proper explanation regarding the study, written informed consent was taken. The data collection was 'census' because we included all MO and nurses of these 74 PHCs. Our study was cross-sectional; the institutional ethics committee approved it.

Study instruments

This included socio-demographic data and the CAMI scale.

CAMI scale

CAMI is a 40-item Likert scale with good reliability and high internal consistency; Taylor and Dear developed it.[4] It has four subscales designed to measure attitudes towards the MI: authoritarianism (AU), benevolence (BE), social restrictiveness (SR) and community mental health ideology (CMHI). There are ten questions in each subscale, out of which half are positively worded and the other half are negatively worded. The response format for each question is in a strongly agree/agree/neutral/disagree/strongly disagree manner. To evaluate responses, they were converted to numbers from words. For positive-worded 'Pro-questions,' strongly agree would be five and strongly disagree would be one. For negative worded 'Anti-questions,' it would be converted oppositely. A higher mean suggests a negative attitude (NA) in the AU and SR subscales and a positive attitude (PA) in the BE and CMHI subscales as the scale was developed in that way. The range of the mean is one to fifty. If a mean score of all ten questions in any subscale is near 25, it would suggest a mixed response. There is no cut-off score in the original scale which suggests PA or NA.[5,6] We define them arbitrarily.

Statistical analysis

We analyse the data by using Microsoft Excel 2019 and Jamovi. The frequency of various socio-demographic data was calculated. Attitudes on CAMI subscales were also assessed by analyzing their frequency. The Kolmogorov-Smirnov test, along with the histogram, was used to check the normality of socio-demographic data for each category of the CAMI subscale. The mean and standard deviation (SD) of the total score of each subscale were calculated amongst both groups. We applied an independent sample T-test to compare the mean between the two groups. We applied multiple independent sample T-tests to compare socio-demographic data like age, gender, family type and locality with CAMI subscales. We applied an ANOVA test to compare socio-demographic data like education and income with CAMI subscales (*p-value* less than 0.05 is considered statistically significant). We excluded data with missing entries.

Results

A total of 75 responses from MO and 90 responses from nurses were received. However, eight and five responses from MO and nurses, respectively, were discarded because of incomplete forms. Therefore, we analyzed 67 responses from MO and 85 responses from nurses. The mean age of MO (37.57) is more than compared of nurses (27.62) (Table 1).

MO showed a PA as compared to nurses in all the questions of the AU subscale. (Table 2) In BE subscale, MO showed PA on five items and NA on two items as compared to nurses. (Table 3) MO showed a PA as compared to nurses in eight out of ten ques-

Table 1: Socio-demographic characteristics of both the groups

Variables	*characteristic*	*MO (N=67)*	*Nurses (N=85)*
Gender	Female	37 ((55.2%)	71 (83.5%)
	Male	30 (44.8%)	14 (16.5%)
Marital Status	Single Married Divorced	16 (23.9%)	30 (35.3%)
	Separated	51 (76.1%)	53 (62.4%)
		0	1 (1.2%)
		0	1 (1.2%)
Education	Profession or Honors	13 (19.4%)	12 (14.1%)
	Graduate or Post-graduate	54 (80.6%)	17 (20%)
	Intermediate or Diploma	0	56 (65.9%)
Income in rupees	>126360	31 (46.3%)	9 (10.6%)
	63182-126356	25 (37.3%)	15 (17.6%)
	47266-63178	8 (11.9%)	19 (22.4%)
	31591-47262	3 (4.5%)	17 (20%)
	18953-31589	0	8 (9.4%)
	6327-18949	0	15 (17.6%)
	<6323	0	2 (2.4%)
Family type	Nuclear	29 (43.3%)	22 (25.9%)
	Extended/joint	38 (56.7%)	63 (74.1%)
Locality	Urban	67 (100%)	68 (80%)
	Rural	0	17 (20%)
Age	Mean (SD)	37.57(10.4)	27.62 (4.34)

MO (67) and nurses' (85) attitudes toward the mentally ill on the CAMI subscales

Table 2: Attitude on the AU subscale

Items	*MO (%)*	*Nurses (%)*
As soon as a person shows signs of mental disturbance, he should be hospitalized. (Strongly Agree/Agree) (Pro)	4.48	44.71
Mental illness is an illness like any other. (Strongly Disagree/Disagree) (Anti)	35.82	50.59
There is something about the mentally ill that makes it easy to differentiate them from normal people. (Strongly Agree/Agree) (Pro)	26.87	62.35
Less emphasis should be placed on protecting the public from the mentally ill. (Strongly Disagree/Disagree) (Anti)	44.78	55.29
Mental patients need the same kind of control and discipline as a young child. (Strongly Agree/Agree) (Pro)	65.67	70.59
The mentally ill should not be treated as outcasts of society. (Strongly Disagree/Disagree) (Anti)	4.48	9.41
The best way to handle the mentally ill is to keep them behind locked doors. (Strongly Agree/Agree) (Pro)	0	5.58
Mental hospitals are an outdated means of treating the mentally ill. (Strongly Disagree/Disagree) (Anti)	41.79	52.94
One of the main causes of mental illness is a lack of self-discipline and willpower. (Strongly Agree/Agree) (Pro)	37.31	45.88
Virtually anyone can become mentally ill. (Strongly Disagree/Disagree) (Anti)	1.49	10.59

tions in the SR subscale. (Table 4) MO showed a PA as compared to nurses in all the questions of the CMHI subscales. (Table 5)

The Mean (SD) of AU, BE, SR, and CMHI subscales were 24.97 (±3.14), 36.69 (±33.69), 21.61 (±3.76), 38.52 (±3.74), respectively for MO and 29.13 (±3.87), 35.51 (±4.17), 23.64

(±4.36), 36.01 (±4.37), respectively for nurses. Overall, we found a statistically significant PA toward MI among MO compared to nurses in AU, SR, and CMHI (*p-value* is <0.05). Overall findings also suggest a more stigmatizing attitude in AU and SR subscales as compared to BE and CMHI subscales in both groups (Table 6).

Table 3: Attitude on the BE sub-scale

Items	*MO (%)*	*Nurses (%)*
More tax money should be spent on the care and treatment of the mentally ill. (Strongly Agree/Agree) (Pro)	11.94	25.88
The mentally ill are a burden on society. (Strongly Disagree/Disagree) (Anti)	86.57	96.47
The mentally ill have for too long been the subject of ridicule. (Strongly Agree/Agree) (Pro)	82.09	63.53
Increased spending on mental health services is a waste of tax money. (Strongly Disagree/Disagree) (Anti)	86.57	89.41
We need to adopt a far more tolerant attitude toward the mentally ill in our society. (Strongly Agree/Agree) (Pro)	94.03	77.65
There are sufficient existing services for the mentally ill. (Strongly Disagree/Disagree) (Anti)	35.82	16.47
Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for. (Strongly Agree/Agree) (Pro)	28.36	28.24
The mentally ill do not deserve our sympathy. (Strongly Disagree/Disagree) (Anti)	89.55	88.24
We have the responsibility to provide the best possible care for the mentally ill. (Strongly Agree/Agree) (Pro)	98.51	88.24
It is best to avoid anyone who has mental problems. (Strongly Disagree/Disagree) (Anti)	85.07	68.24

Table 4: Attitude on the SR subscale

Items	*MO (%)*	*Nurses (%)*
The mentally ill should be isolated from the rest of the community. (Strongly Agree/ Agree) (Pro)	2.99	1.18
The mentally ill are far less of a danger than most people suppose. (Strongly Disagree/ Disagree) (Anti)	43.28	65.88
A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered. (Strongly Agree/Agree) (Pro)	0.0	4.71
No one has the right to exclude the mentally ill from their neighbourhood. (Strongly Disagree/Disagree) (Anti)	5.97	83.53
I would not want to live next door to someone who has been mentally ill. (Strongly Agree/ Agree) (Pro)	10.45	9.45
Mental patients should be encouraged to assume the responsibilities of normal life. (Strongly Disagree/Disagree) (Anti)	0.0	11.77
Anyone with a history of mental problems should be excluded from taking public office. (Strongly Agree/Agree) (Pro)	10.45	20
The mentally ill should not be denied their individual rights. (Strongly Disagree/Disagree) (Anti)	11.94	14.12
The mentally ill should not be given any responsibility. (Strongly Agree/Agree) (Pro)	14.93	27.06
Most women who were once patients in a mental hospital can be trusted as babysitters. (Strongly Disagree/Disagree) (Anti)	16.42	35.29

Table 5: Attitude on the CMHI subscale

Items	*MO (%)*	*Nurses (%)*
The best therapy for many mental patients is to be part of a normal community. (Strongly Agree/Agree) (Pro)	89.55	78.82
Locating mental health facilities in a residential area downgrades the neighbourhood. (Strongly Disagree/Disagree) (Anti)	85.07	78.82
As far as possible mental health services should be provided through community-based facilities. (Strongly Agree/Agree) (Pro)	82.09	65.88
Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great. (Strongly Disagree/Disagree) (Anti)	55.22	29.41
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community. (Strongly Agree/Agree) (Pro)	80.59	75.29
Local residents have good reason to resist the location of mental health services in their neighbourhood. (Strongly Disagree/Disagree) (Anti)	73.13	67.06
Locating mental health services in residential neighbourhoods does not endanger local residents. (Strongly Agree/Agree) (Pro)	67.16	65.88
Mental health facilities should be kept out of residential neighbourhoods. (Strongly Disagree/Disagree) (Anti)	68.66	61.18
Residents have nothing to fear from people coming into their neighbourhood to Obtain mental health services. (Strongly Agree/Agree) (Pro)	91.04	83.53
It is frightening to think of people with mental problems living in residential neighbourhoods. (Strongly Disagree/Disagree) (Anti)	64.18	57.65

Table 6: Independent sample T-test to compare CAMI subscales with medical officers and nurses

Subscale	*Occupation*	*Mean*	*SD*	*P-value*
Authoritarianism	MO	24.97	3.14	<0.001
	Nurses	29.13	3.87	
Benevolence	MO	36.69	3.69	0.07
	Nurses	35.51	4.17	
Social Restrictiveness	MO	21.61	3.76	0.003
	Nurses	23.64	4.36	
Community Mental Health Ideology	MO	38.52	3.74	0.001
	Nurses	36.01	4.73	

Socio-demographic comparison with CAMI subscales

We applied multiple independent sample T-tests to compare CAMI subscales with socio-demographic data such as age, gender, family type and locality. We applied the ANOVA test to compare CAMI subscales with socio-demographic data such as education and income. On the Kolmogorov-Smirnov test and histogram plot, the CAMI subscales score was found to be normally distributed to each category of socio-demographic data. The histogram shows a normal distribution with the peak score near its mean value.

Marital status and Gender comparison with CAMI subscales:

We did not find a statistically significant difference while comparing the CAMI subscales with gender and marital status.

Family type comparison with CAMI subscales

We found a higher mean in the extended/joint family (mean was 23.28) than in the nuclear family (mean was 21.69) in the SR subscale only and it was statistically significant (*p-value* is 0.028).

Locality comparison with CAMI subscales

We found a higher mean in a rural locality (mean was 31.29) than urban locality (mean was 26.79) in the

AU subscale only, and it was statistically significant (*p-value* is 0 <0.001).

Education comparison with CAMI subscales

We found a statistically significant difference (*p-value* is < 0.001) for the AU subscale only. We found the highest mean in the intermediate/post-high-school diploma group and the lowest in the graduate/post-graduate group.

Income comparison with CAMI subscales

We found a statistically significant difference in all groups except in the BE subscale. The *p-values* in AU, SR, and CMHI subscales were 0.005, 0.05 and 0.025, respectively. As income increases, the mean in the AU and SR subscales decreases and increases in the CMHI subscale.

Discussion

Several studies in India and all over the world suggested stigmatizing attitudes toward MI.[7,8,5] MO and nurses could be valuable resources to remove the stigma and improve mental health due to their work with PHCs. Therefore, it is important to assess their attitudes toward MI.[6] Therefore, we conducted this study. We analyzed data from 67 MO and 85 nurses using the CAMI scale. As of now, as per our best knowledge, we haven't seen such a study on comparison between MO and nurses using the CAMI scale in India.

"The AU subscale assesses whether participants admit colorful symptoms of internal illness as a major incarnation of psychiatric disorders, to understand its occasion and how to bear MI person in the community." Here, a high mean suggests a higher stigma. In our study, we found a lower mean in MO (24.97) as compared to nurses (29.13) and it was statistically significant (*p-value* is < 0.001). This means that nurses have NA toward MI and they believe that MI requires coercive handling.

The BE subscale measures kind and altruistic views toward MI. A high mean value suggests that we should be more empathetic toward MI and government should spend more money to help them. In our study, we found a higher mean in MO (36.69) as compared to nurses (35.51) which is not statistically significant (*p-value* is 0.07). The overall finding shows that MO and nurses have a more sympathetic view toward MI.

The SR subscale assesses the belief that MI are hostile; therefore, they should be avoided as babysitters, government servants, neighbors, and in general as a responsible person. A higher mean in this category indicates that there should be restrictions for MI and they should be devoid of any personal rights. In our study, we found a lower mean in MO (21.61) as compared to nurses (23.64), which is statistically significant (*p-value* is 0.003). This suggested that nurses have less social openness towards MI. However, the overall finding shows that both (MO > nurses) have a good social openness towards MI and they do not perceive MI as a threat to society.

The last category of CMHI concerns principles of community psychiatry which has the basis of deinstitutionalisation. A high mean suggests PA toward MI and acceptance of them in the community. We found a higher mean in MO (38.52) as compared to nurses (36.01) which is statistically significant (*p-value* is 0.001). The overall finding shows that both (MO > nurses) have a PA toward MI.

Based on the above results, we believe that MO has more PA in comparison to nurses on CAMI subscales. However, it was statistically significant only in AU, SR, and CMHI subscales. Although MO showed PA, there are certain questions in AU and SR subscales on which NA is highly prevalent amongst both groups. Despite having compulsory psychiatry terms during undergraduate training and compulsory psychiatry rotation during an internship, the stigma toward MI is still there. This depicts that conventional medical education is not sufficient to improve the stigma against MI.[9,10] Therefore, we need to propose various other strategies during clinical psychiatric posting. "It requires a combined approach of knowledge, contact and paying attention to the process."[11] Knowledge is usually achieved by self-reading and taking lectures by a psychiatrist or clinical psychologist during a student's educational years and psychiatric posting. Accurate knowledge can enhance mental health literacy. However, alone, it is not sufficient.[12,13] There is also emerging

evidence that psychoeducation regarding the biological nature of mental illness and its neurological basis may exacerbate the stigma by suggesting the chronic and irreversible nature of mental illnesses.[10,14] Therefore, apart from knowledge, there is a role of direct contact with the actual patients.[9,10,12] There are two methods for direct contact. "The first is 'patient presentation' or 'one-time contact-based educational intervention." It is a type of presentation in which patients themselves share their life stories of different phases of mental illness. Although this is a good strategy, alone, it is still a weak technique.[10,11,13] Other factors also play a significant role in contact strategies, such as the patient's status and the recovery the patient has achieved at the time of contact. Therefore, it may not be a real representation of day-to-day psychiatric practice.[10,15] The second one is 'clinical correlates,' in which there is a small group of around four to six students. One of the psychiatrists mentored this group to take teaching sessions. The students would be allowed to interact with MI in front of the psychiatrist. It helps to build confidence in students regarding how to work with MI people. Here, attention should be paid to the 'process', the third and most important component, while the students are working with MI. This 'process technique' would provide an opportunity for students to ask any doubts regarding mental illness to their mentored psychiatrist. This will help to correct the

misconception which was aroused because of the previously explained two strategies. Therefore, this process strategy would help to reduce stigma as well as increase the confidence of upcoming doctors in treating MI. To epitomize over, it is not only the one strategy but a combination of all three would help to reduce smirch against MI. Therefore, during routine psychiatric posting, a psychiatrist should involve all three strategies."[11]

To date, almost all studies show PA in nurses who have additional qualifications in psychiatry as compared to those who do not have such qualifications.[16,17] Apart from this, even those nurses who have good exposure to psychiatric patients during their routine tenure also displayed PA as compared to those who did not have such exposure. Therefore, special attention should be paid to psychiatric lectures, interaction with MI and discussion regarding any doubts during nursing tenure.[18,19]

We did not find any statistically significant difference while comparing gender with the CAMI scale. This is like a study conducted in southeast Ethiopia.[20] However, it is in contrast with the one study published in south India, which suggested that females have a higher stigmatizing attitude toward MI in all CAMI subscales except in the SR subscale.[21] Another study conducted on Italian students suggested that females have a more humanitarian attitude toward mental illness in all CAMI subscales.[22]

We did not find any statistically significant difference while comparing marital status with the CAMI scale. This is consistent with the study conducted in South India.[21]

In our study, we found nuclear family shows more PA on the SR subscale. Our findings are inconsistent with one study that suggested a joint family has more NA on the SR subscale.[23]

While comparing locality with the CAMI scale, we found a statistically significant difference for the AU subscale only. A PA in this subscale is in favor of urban locality, which suggests that the urban population has a less stigmatizing attitude toward MI. One of the similar studies conducted in southeast Ethiopia suggested that stigma is higher in rural populations compared to urban populations in all subscales.[20]

Various publications to date show education has mixed responses to stigma. Some studies show that it can improve stigma and others are contradictory to this finding.[20,24,25] In our study, while comparing different groups of education with CAMI subscales, we found a statistically significant difference for the AU subscale only. We found the highest mean in the intermediate/post-high-school diploma group and the lowest in the graduate/post-graduate group. This suggests that higher education leads to a lesser stigmatizing view toward MI.

While comparing different groups of income with CAMI subscales, we found a statistically significant difference in all groups except in the BE subscale. As income increases, the mean in the AU and SR subscales decreases, and the mean of the CMHI subscale is increased. This suggests that as income increases, there is a reduction in stigma against MI. This is in contrast with two other studies in which

they found higher income is more associated with stigma.[20,21] We believe that people with higher incomes have better education and, therefore, have better knowledge regarding mental illness. This would be the possible reason for lesser stigma in the higher education group in our study.

Limitations of the study

We took MO and nurses sampling data from the Ahmedabad district only; the study might have more generalisability if more districts were involved. The current study was cross-sectional; a qualitative study with focused group discussion would help more to understand stigmatizing views toward MI.

Conclusion

Overall, MO shows more PA as compared to nurses. However, it is statistically significant only in AU, SR and CMHI subscales. Although both the groups displayed empathetic, kind, accepting attitudes towards MI in the community by displaying a good result on certain questions of the CAMI scale, there are a few items on which they both have stigmatizing attitudes as well. Mental health educational programs by tertiary care hospitals and psychiatrists under the DMHP can change negative and conflicting attitudes that may exist in both groups. Therefore improving mental health delivery.

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