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Original Research Article

Attitudes of Primary Healthcare Workers towards Mental Health – An Interventional study in rural Belagavi, Karnataka

Article History:

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Abstract: **Introduction:** Individuals with mental illness face stigma, prejudice and discrimination from public and healthcare professionals. Research on primary healthcare workers' attitude towards people with mental illness is limited in India. The study aimed to assess the attitude of primary healthcare workers toward individuals with mental illness and evaluate the effectiveness of mental health education programs in improving their perceptions.
Methods: This interventional study included primary healthcare workers (N=150) working in primary health centers of rural Belagavi. Participants attitude toward mental illness were assessed using the Attitude Scale for Mental Illness (ASMI) questionnaire before and after the mental health education training program to measure changes in attitude. ASMI questionnaire measures attitudes across six subscales: benevolence, separatism, stereotyping, restrictiveness, pessimistic prediction and stigmatization.
Results: Our findings showed primary healthcare workers overall attitude towards mental health significantly improved after the training ($p<0.001$). Post-training, benevolence increased significantly towards individuals with mental illness ($p<0.001$). However, separatism, stereotyping and restrictiveness also increased, indicating a rise in certain negative attitudes. While the intervention did not significantly impact pessimistic prediction.
Conclusion: Psychiatric training is effective in improving the attitudes of primary healthcare workers toward mental illness to some extent, particularly in benevolence. However, the increase in negative attitudes suggests the need to revise the current psychiatry training program to provide more holistic care to the individuals with mental illness.

Keywords: Attitude, mental health, primary healthcare workers, health education

INTRODUCTION

Mental illness is a debilitating condition that affects individuals emotional, psychological and social well-being.[1] It is estimated that about 15% of Indian population experience some form of mental disorders like schizophrenia, depression, substance use disorders, anxiety disorders, bipolar disorder and neurodevelopmental disorders.[2] Individuals with mental illnesses often experience discrimination, stigma, and prejudice from general public and healthcare professionals.[3]

Despite the availability of various community-based rehabilitation centers, cost-effective pharmaceuticals,

and psychological treatments, nearly 90% of individuals in low- and middle-income nations are not receiving adequate mental healthcare.[4] The scarcity of mental health professionals, particularly in rural areas, further limits psychiatric care access to most people.[4] In low-income countries like India, integrating mental health services into primary healthcare enables primary healthcare workers to identify, refer, and support individuals with mental health disorders.[5]

Several studies have examined the influence of psychiatry training on medical students' attitude towards mental illness from different regions and cultures, yielding varied findings.[6-8] However, studies on community health workers have shown inadequate understanding and awareness of mental disorders.[9, 10] Community health workers with a better mental health knowledge would provide appropriate treatment and care for affected individuals. Hence, the present study was intended to assess the primary healthcare workers' attitude towards people with mental illness and determine the effectiveness of health education intervention in improving their perceptions.

METHODS

The interventional study was conducted at Primary Health Centers (PHC) Belagavi taluk between July 2024 to December 2024. Necessary permission was obtained from the Taluk Health Office of Belagavi. A pilot study was conducted after obtaining Institutional Ethical clearance and required modifications were made. All the participants provided informed written consent before their enrollment in the study.

Participants

We selected participants using proportionate sampling. List of primary health workers in the PHC was taken and every 3rd person from the list was selected for the training. If the 3rd person was not available the immediate next person was called for the meetings. Anyone willing to attend the training was also encouraged to listen in on the meetings. The study included all the permanent healthcare workers working in PHCs of Kinaye and Vantamuri in Belagavi district. Medical officers, pharmacists, laboratory technicians, clerical staff and any employee with medical knowledge working in the PHCs were excluded from the study. A total of 150 primary healthcare workers participated in the study.

Procedure

Participants were briefed about the study and Categorical variables were presented as frequency tables and continuous variables as mean ± SD. Normality of variable was checked using Shapiro Wilk test and QQ plot. If the data followed normal distribution, we used parametric tests. Friedman test was used to compare the change in attitude over time. Pairwise Wilcoxon test with Bonferroni adjustment was used for post hoc analysis. P-value less than or equal to 0.05 indicates statistical significance.

informed written consent in the language they understand was taken. After taking the consent a questionnaire was circulated via WhatsApp as a Google form and those without smart phones were given temporary access to the PHC computer to fill the questionnaire. Based on pilot study findings, required modifications were done in pretest and post-test Attitude Scale for Mental Illness (ASMI) questionnaire. Participants were then instructed to provide socio-demographic information to the investigator after filling of pretest questionnaire. The participants then underwent mental health education training program which included a power point presentation with explanation of mental health disorders and warning signs by a professional. They were also shown videos of psychiatric patients and what the right way is to behave with them during mania episodes. After the training their attitude towards mental health was reassessed by circulating post- test questionnaire similar to pretest and data was collected.

Assessment

Demographic data, including age, sex, marital status, education status, place of residence, and employment were collected. We used ASMI, a self-report instrument to assess participants attitude towards mental illness. The scale usually consists of 34 items divided into six broad sub-scales including benevolence, or paternalistic and sympathetic views, separatism, or attitude to discrimination, stereotyping, or the degree of social distance maintained from the mentally ill, restrictiveness, or perception of the mentally ill as a threat to society, pessimistic prediction, or level of prejudice towards mental illness, stigmatization, or discriminatory behavior towards those with mental illness.11 Participants were asked to express their level of agreement with each item using a 5-point Likert scale, ranging from 1 (totally disagree) to 5 (totally agree).

Statistical analysis

The sample size was calculated using G*Power vX.X. A previous study reported a decrease in community attitude score towards mental illness scores regarding social restrictiveness from baseline (24.65 ± 4.31 to 26.54 ± 3.77).4 Based on these values, with an alpha level of 0.01, a beta level of 0.05, and an assumed effect size of 0.25 (small to medium), the required sample size was 124 participants. Accounting for 20% attrition rate, we increased sample size to 150 participants.

Data was analyzed using statistical software R v4.4.1.

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RESULTS

Table 1 shows positive change in attitudes toward mental illness over time. Initially, most participants strongly agreed with negative statements, such as linking mental illness to lower IQ, strange behavior, or inability to marry or have children, recover, or work. However, after the intervention, there was a noticeable increase in the number of participants who disagreed with these views.

Supportive attitudes also increased, believing that family and community support can help with recovery and that individuals with mental illness can work or return to normal life after treatment. However, still few misconceptions persisted, such as difficulties in forming friendships or achieving workplace success.

Table 1. Attitude Scale for Mental Illness (ASMI) Responses at Pretest, Post-test, and Follow-up.

Questions	Responses	Pretest	Post test	Follow-up
People with mental illness have a lower IQ	Totally agree	73 (48.67%)	14 (9.33%)	42 (28%)
	Almost totally agree	27 (18%)	8 (5.33%)	4 (2.67%)
	Sometimes agree	24 (16%)	32 (21.33%)	26 (17.33%)
	Almost totally disagree	18 (12%)	36 (24%)	31 (20.67%)
	Totally disagree	8 (5.33%)	60 (40%)	47 (31.33%)
All people with mental illness have some strange behavior	Totally agree	50 (33.33%)	16 (10.67%)	16 (10.67%)
	Almost totally agree	34 (22.67%)	46 (30.67%)	46 (30.67%)
	Sometimes agree	44 (29.33%)	32 (21.33%)	32 (21.33%)
	Almost totally disagree	11 (7.33%)	22 (14.67%)	22 (14.67%)
	Totally disagree	11 (7.33%)	34 (22.67%)	34 (22.67%)
It is not appropriate for a person with mental illness to get married	Totally agree	63 (42%)	37 (24.67%)	37 (24.67%)
	Almost totally agree	19 (12.67%)	15 (10%)	15 (10%)
	Sometimes agree	40 (26.67%)	23 (15.33%)	23 (15.33%)
	Almost totally disagree	10 (6.67%)	25 (16.67%)	25 (16.67%)
	Totally disagree	18 (12%)	50 (33.33%)	50 (33.33%)
Those who have a mental illness cannot fully recover	Totally agree	35 (23.33%)	14 (9.33%)	23 (15.33%)
	Almost totally agree	10 (6.67%)	6 (4%)	6 (4%)
	Sometimes agree	48 (32%)	26 (17.33%)	25 (16.67%)
	Almost totally disagree	21 (14%)	36 (24%)	32 (21.33%)
	Totally disagree	36 (24%)	68 (45.33%)	64 (42.67%)
Those who are mentally ill should not have children	Totally agree	48 (32%)	3 (2%)	3 (2%)
	Almost totally agree	6 (4%)	8 (5.33%)	8 (5.33%)
	Sometimes agree	33 (22%)	36 (24%)	36 (24%)
	Almost totally disagree	23 (15.33%)	21 (14%)	21 (14%)
	Totally disagree	40 (26.67%)	82 (54.67%)	82 (54.67%)
There is no future for people with mental illness	Totally agree	35 (23.33%)	6 (4%)	6 (4%)
	Almost totally agree	9 (6%)	4 (2.67%)	4 (2.67%)
	Sometimes agree	13 (8.67%)	15 (10%)	15 (10%)
	Almost totally disagree	24 (16%)	27 (18%)	27 (18%)
	Totally disagree	69 (46%)	98 (65.33%)	98 (65.33%)
People with mental illness can hold a job	Totally agree	14 (9.33%)	23 (15.33%)	23 (15.33%)
	Almost totally agree	7 (4.67%)	49 (32.67%)	45 (30%)
	Sometimes agree	29 (19.33%)	52 (34.67%)	50 (33.33%)
	Almost totally disagree	59 (39.33%)	14 (9.33%)	21 (14%)

	Totally disagree	41 (27.33%)	12 (8%)	11 (7.33%)
The care and support of family and friends can help people with mental illness to get rehabilitated	Totally agree	82 (54.67%)	99 (66%)	89 (59.33%)
	Almost totally agree	28 (18.67%)	31 (20.67%)	30 (20%)
	Sometimes agree	32 (21.33%)	11 (7.33%)	22 (14.67%)
	Almost totally disagree	4 (2.67%)	5 (3.33%)	5 (3.33%)
	Totally disagree	4 (2.67%)	4 (2.67%)	4 (2.67%)
Corporations and the community should offer jobs to people with mental illness	Totally agree	28 (18.67%)	55 (36.67%)	50 (33.33%)
	Almost totally agree	18 (12%)	53 (35.33%)	48 (32%)
	Sometimes agree	35 (23.33%)	30 (20%)	29 (19.33%)
	Almost totally disagree	11 (7.33%)	8 (5.33%)	19 (12.67%)
	Totally disagree	58 (38.67%)	4 (2.67%)	4 (2.67%)
After a person is treated for mental illness, they can return to their former job position	Totally agree	38 (25.33%)	34 (22.67%)	34 (22.67%)
	Almost totally agree	24 (16%)	72 (48%)	72 (48%)
	Sometimes agree	38 (25.33%)	34 (22.67%)	34 (22.67%)
	Almost totally disagree	11 (7.33%)	4 (2.67%)	4 (2.67%)
	Totally disagree	39 (26%)	6 (4%)	6 (4%)
The best way to help those with a mental illness to recover is to let them stay in the community and live a normal life	Totally agree	36 (24%)	79 (52.67%)	79 (52.67%)
	Almost totally agree	78 (52%)	24 (16%)	24 (16%)
	Sometimes agree	19 (12.67%)	30 (20%)	30 (20%)
	Almost totally disagree	5 (3.33%)	8 (5.33%)	8 (5.33%)
	Totally disagree	12 (8%)	9 (6%)	9 (6%)
After people with mental illness are treated and rehabilitated, we still should not make friends with them	Totally agree	15 (10%)	6 (4%)	6 (4%)
	Almost totally agree	9 (6%)	5 (3.33%)	5 (3.33%)
	Sometimes agree	37 (24.67%)	14 (9.33%)	23 (15.33%)
	Almost totally disagree	22 (14.67%)	16 (10.67%)	11 (7.33%)
	Totally disagree	67 (44.67%)	109 (72.67%)	105 (70%)
It is possible for anyone to have a mental illness	Totally agree	16 (10.67%)	7 (4.67%)	7 (4.67%)
	Almost totally agree	18 (12%)	87 (58%)	87 (58%)
	Sometimes agree	85 (56.67%)	42 (28%)	42 (28%)
	Almost totally disagree	8 (5.33%)	6 (4%)	6 (4%)
	Totally disagree	23 (15.33%)	8 (5.33%)	8 (5.33%)
We should not laugh at the mentally ill even though they act strangely	Totally agree	75 (50%)	10 (6.67%)	10 (6.67%)
	Almost totally agree	27 (18%)	104 (69.33%)	104 (69.33%)
	Sometimes agree	17 (11.33%)	21 (14%)	21 (14%)
	Almost totally disagree	20 (13.33%)	10 (6.67%)	10 (6.67%)
	Totally disagree	11 (7.33%)	5 (3.33%)	5 (3.33%)
It is harder for those who have a mental illness to receive the same pay for the same job	Totally agree	28 (18.67%)	31 (20.67%)	31 (20.67%)
	Almost totally agree	32 (21.33%)	15 (10%)	15 (10%)
	Sometimes agree	57 (38%)	37 (24.67%)	37 (24.67%)
	Almost totally disagree	15 (10%)	38 (25.33%)	38 (25.33%)
	Totally disagree	18 (12%)	29 (19.33%)	29 (19.33%)
After treatment it will be difficult for the mentally ill to return to the community	Totally agree	11 (7.33%)	24 (16%)	24 (16%)
	Almost totally agree	41 (27.33%)	13 (8.67%)	12 (8%)
	Sometimes agree	64 (42.67%)	46 (30.67%)	50 (33.33%)
	Almost totally disagree	17 (11.33%)	32 (21.33%)	30 (20%)
	Totally disagree	17 (11.33%)	35 (23.33%)	34 (22.67%)

People are prejudiced towards those with mental illness	Totally agree	15 (10%)	29 (19.33%)	29 (19.33%)
	Almost totally agree	25 (16.67%)	43 (28.67%)	43 (28.67%)
	Sometimes agree	84 (56%)	49 (32.67%)	49 (32.67%)
	Almost totally disagree	17 (11.33%)	11 (7.33%)	11 (7.33%)
	Totally disagree	9 (6%)	18 (12%)	18 (12%)
It is hard to have good friends if you have a mental illness	Totally agree	21 (14%)	48 (32%)	48 (32%)
	Almost totally agree	31 (20.67%)	20 (13.33%)	20 (13.33%)
	Sometimes agree	78 (52%)	46 (30.67%)	46 (30.67%)
	Almost totally disagree	9 (6%)	21 (14%)	21 (14%)
	Totally disagree	11 (7.33%)	15 (10%)	15 (10%)
It is seldom that people who are successful at work have a mental illness	Totally agree	13 (8.67%)	30 (20%)	39 (26%)
	Almost totally agree	34 (22.67%)	10 (6.67%)	9 (6%)
	Sometimes agree	70 (46.67%)	71 (47.33%)	67 (44.67%)
	Almost totally disagree	20 (13.33%)	17 (11.33%)	16 (10.67%)
	Totally disagree	13 (8.67%)	22 (14.67%)	19 (12.67%)
It is shameful to have a mental illness	Totally agree	3 (2%)	4 (2.67%)	4 (2.67%)
	Almost totally agree	12 (8%)	13 (8.67%)	13 (8.67%)
	Sometimes agree	43 (28.67%)	18 (12%)	25 (16.67%)
	Almost totally disagree	22 (14.67%)	20 (13.33%)	18 (12%)
	Totally disagree	70 (46.67%)	95 (63.33%)	90 (60%)
Mental illness is a punishment for doing bad things	Totally agree	9 (6%)	6 (4%)	6 (4%)
	Almost totally agree	12 (8%)	7 (4.67%)	7 (4.67%)
	Sometimes agree	54 (36%)	7 (4.67%)	7 (4.67%)
	Almost totally disagree	26 (17.33%)	15 (10%)	15 (10%)
	Totally disagree	49 (32.67%)	115 (76.67%)	115 (76.67%)
I suggest that those who have a mental illness do not tell anyone about their illness	Totally agree	32 (21.33%)	9 (6%)	15 (10%)
	Almost totally agree	26 (17.33%)	21 (14%)	21 (14%)
	Sometimes agree	42 (28%)	17 (11.33%)	17 (11.33%)
	Almost totally disagree	15 (10%)	36 (24%)	34 (22.67%)
	Totally disagree	35 (23.33%)	67 (44.67%)	63 (42%)

Table 2 shows an individual's overall attitude towards mental health before and after psychiatry training. Psychiatric training significantly improved primary healthcare workers overall attitude towards mental illness ($p<0.001$). We found a significant increase in benevolence ($p<0.001$), suggesting more positive attitudes. However, separatism ($p<0.001$), stereotyping ($p<0.001$), and restrictiveness ($p<0.001$) also increased, indicating an increase in negative attitudes. While the intervention did not significantly impact pessimistic prediction. These changes were largely maintained until the follow-up assessment.

Table 2. Comparison of attitudes of primary healthcare workers towards Mental Health

Sub Scales	Pretest	Post test	Follow-up	p-value
Separatism	26.87 ± 13.18	34.88 ± 11.34	33.57 ± 10.73	<0.001*
Stereotyping	8.71 ± 4.53	12.55 ± 4.99	11.6 ± 4.52	<0.001*
Restrictiveness	11.99 ± 5.84	15.68 ± 4.77	15.48 ± 4.76	<0.001*
Benevolence	25.11 ± 9.36	28.44 ± 7.18	28.15 ± 7.06	0.0197*
Pessimistic Prediction	11.26 ± 4.13	11.61 ± 5.15	11.59 ± 5.13	0.9950
Stigmatization	13.46 ± 4.56	15.58 ± 4.43	15.19 ± 4.29	<0.001*
Overall Attitude	97.41 ± 22.49	118.74 ± 24.1	115.58 ± 22.76	<0.001*

**indicates statistical significance.*

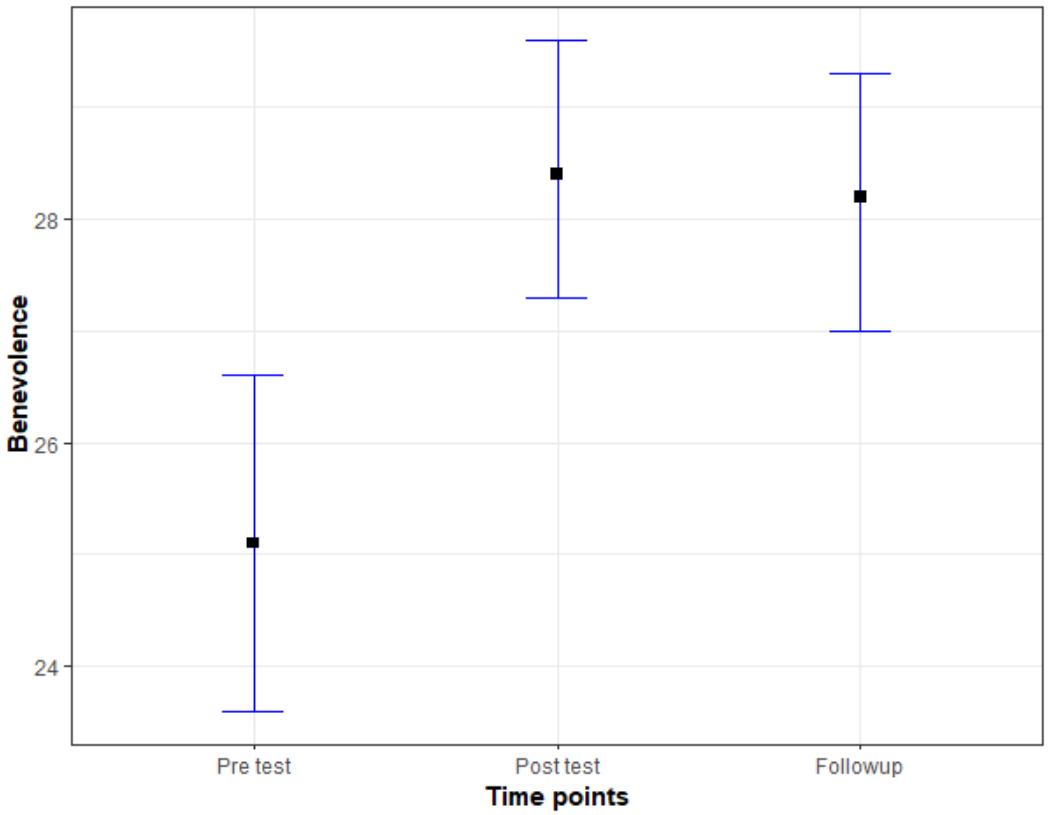

Figure 1: Mean plot of Benevolence over time

DISCUSSION

Attitude toward mental health greatly affects the practice of primary healthcare workers. A positive attitude can enable healthcare workers to provide proper health education, active treatment and rehabilitation guidance. Negative attitudes can result in poor patient functioning and overall outcomes.[10, 12] The present study examined how psychiatry training affected primary healthcare workers attitude towards mental health. The findings revealed psychiatric training improved benevolence but stigma, stereotyping, restrictiveness and separatism increased after the training. Despite the rise in certain stigmatizing attitudes, the overall attitude of primary healthcare workers towards mental illness improved. The changes are largely maintained till the follow-up assessment.

A study conducted in India involving Accredited Socail Health Activitists (ASHA) workers who underwent 18 months of psychiatric training showed a significant improvement in benevolence, social restrictiveness, and community mental health ideology towards those with mental illness ($p<0.001$).[4] Results from a South African study on community health workers who received training improved confidence, and overall attitudes. Specifically, they became more benevolent, less socially restrictive, and increase in tolerance to psychiatric rehabilitation with no change in authoritarian attitudes.[9] Primary healthcare providers in rural China were pessimistic and had negative attitudes toward individuals with mental illness. Most providers believed that these individuals were prone to impulsive property destruction (71.3%) and viewed them as burdens to their families and society (72.9%).[10] Another study in India showed that the training course improved community health workers ability to recognize a mental disorder, reduced their belief in harmful pharmacological interventions, and slightly decreased stigmatizing attitudes.[13]

Overall, our findings confirm that psychiatric training increased the benevolence or kindness of primary healthcare workers toward those with mental illness, however other are not significantly changed by the existing psychiatric training program. The study has a few potential limitations that needs to be acknowledged. Firstly, as the participants were primary healthcare workers and convenient sample from a single institution, findings may not be generalized. Secondly, as this is a cross-sectional interventional study, it may be difficult to establish causality between variables. Hence, to achieve generalization, it is necessary to include diverse populations and increase the sample size. Despite these limitations, the study presents noteworthy findings that are of interest to both academic and

mental health professionals. The present study also informs revisions to current curriculum and teaching methodologies in specific domains.

Overall, the study states mental health education training program alone is insufficient in completely shifting healthcare workers attitudes towards the right direction in a few domains. Multiple factors such as personal beliefs, family environment, education, social circle, and media exposure might have influenced their attitude. Hence, to improve mental health services, raise awareness and build an integrated health system, healthcare institutions should take an active and effective role.

CONCLUSION

Our study demonstrates that psychiatric training is effective in improving the attitude of primary healthcare workers toward mental illness to some extent, particularly in the domain of benevolence. Furthermore, the sustained impact of the training until follow-up emphasizes its effectiveness in developing positive attitudes towards mental health. However, the increase in negative attitude in few domains suggests the need to provide more holistic care to the individuals with mental illness.

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