

Mental Health Literacy among Accredited Social Health Activists in a Community Development Block, West Bengal, India: A Mixed-method Study

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ABSTRACT

Introduction: Mental health disorders significantly impact global health, yet they remain a low priority in many Low-and-Middle-Income Countries (LMICs), including India. The role of Accredited Social Health Activists (ASHAs) is crucial in bridging the gaps in Mental Health Literacy (MHL) care.

Aim: To assess the MHL of ASHAs and to determine any association between MHL scores and the socio-economic and socio-demographic determinants of the study participants.

Materials and Methods: This mixed-method study was conducted in the Barrackpore II block of the North 24 Parganas district, West Bengal, India between July and September 2023. A cross-sectional descriptive approach was used for the quantitative segment, while two Focused Group Discussions (FGDs) were conducted for the qualitative component. The sample size was 67, selected by simple random sampling. Socio-economic and socio-demographic data were collected using a standardised validated questionnaire,

and MHL data were gathered using the revised Mental Health Literacy Scale (MHLS) questionnaire. FGDs were conducted using a pretested, predesigned FGD guide. Data were analysed using Jamovi (v2.4.8). An Independent samples t-test was performed, with p-value <0.05 considered significant.

Results: The mean age of participants was 37±13.5 years, with 70.1% being Hindus and 47.8% being unreserved. The MHL score ranged from 50 to 115. The Independent samples t-test revealed a statistically significant difference in means between the two age groups (less than 38 years vs. 38 years or older). There was also a statistically significant difference in MHL scores between the two caste categories (p-value=0.006) and among different years of work experience (p-value <0.001). FGDs revealed low mental health awareness among ASHAs and villagers.

Conclusion: The MHL status of ASHAs was low, mainly due to a lack of training. Further research and training for healthcare workers are needed to improve MHL.

Keywords: Community health workers, Community mental health services, Primary healthcare

INTRODUCTION

In the ever-expanding realm of global health, the term MHL has emerged as a pivotal concept encompassing knowledge and beliefs about mental disorders that aid in their recognition, management, and prevention. Originating in 1997 and subsequently refined by Jorm AF et al., MHL extends beyond mere awareness of mental health conditions and includes a spectrum of components such as risk factors, self-help interventions and attitudes that promote recognition and appropriate help-seeking [1,2]. Against the backdrop of increasing mental health disorders worldwide, including in LMICs the importance of robust MHL becomes increasingly apparent. Mental health disorders, now considered significant contributors to the global health burden, are intricately linked with both communicable and non communicable diseases [3]. Nevertheless, the treatment of mental health disorders remains a low priority in many LMICs, including India, leading to pervasive unmet needs for mental healthcare. The shortage of mental health professionals, coupled with minimal training opportunities in rural areas, has increased the challenge, leaving up to 90% of individuals with mental health issues without basic care [4]. Recognising this gap, the World Health Organisation (WHO) advocates for the integration of mental healthcare into Primary Healthcare (PHC) to address the growing global burden of mental illness [5].

MHL education empowers individuals to recognise the signs and symptoms of mental health concerns, fostering self-care practices and health-seeking behaviours. Health workers can utilise community outreach programs, address the social determinants of health, and conduct educational workshops to challenge stigma and promote

help-seeking as a normal part of maintaining health. Health workers can leverage various strategies to cultivate mental wellbeing within their communities. Early identification, intervention, regular mental health screenings integrated into routine healthcare visits and community-based mental health services can also be provided by health workers [4,6-9].

There is a paucity of studies about MHL in eastern India. The rationale for this study was grounded in the recognition that mental disorders impose a significant burden on society and enhancing MHL can lead to improved outcomes. The focus on ASHAs is relevant because they are the frontline workers in the healthcare system and possess the potential to influence mental health awareness within communities. ASHAs play a pivotal role in bridging the gap between communities and healthcare services [10]. This study seeks to assess MHL, determine any potential associations between socio-demographic and socio-economic factors and MHL and unravel the current state of MHL among ASHAs, focusing on their knowledge, attitudes and readiness to address mental health issues within the communities they serve.

MATERIALS AND METHODS

This observational, cross-sectional descriptive study with a mixed-method convergent design was conducted in the Barrackpore II block, North 24 Parganas district, West Bengal, India. It is surrounded by Barasat I, Barasat II, and New Barrackpore Municipality to the east, Barrackpore and North Barrackpore Municipalities to the west, Barrackpore I development block to the north, and Dumdum and North Dumdum municipalities to the south. There are six gram panchayats and 32 subcentres in the block. The study was

conducted over a duration of three months (July-September 2023) and was associated with the College of Medicine and Sagore Dutta Hospital. Approval for the study was granted by the Institutional Ethics Committee (IEC) (Memo no: CMSDH/IEC/74/07-2023, Date: 19/07/2023). Written consent was also obtained from every study participant. The study was conducted in accordance with the ethical standards of the Helsinki Declaration 1975 (modified in 2013).

Inclusion criteria: ASHAs who had been serving in the selected block were included in the study.

Exclusion criteria: ASHAs who were on leave during the data collection period or were unable to participate in focus group discussions were excluded from the study.

Sample size estimation: Fifty percent of the ASHAs from the selected block were included based on convenience sampling. There are 134 ASHAs in the selected block; thus, 67 of them were selected by simple random sampling with the help of Microsoft Excel™ random number generation. A total of 67 ASHAs participated in the quantitative component. For the qualitative component, two FGDs were conducted with 19 ASHAs. This number was determined based on the following considerations:

- A. Data saturation: After two FGDs, data saturation was reached, and no new themes were emerging. Therefore, the researchers decided that further FGDs would likely not contribute additional insights.
- B. Resource constraints: Due to limitations in time, manpower, and other logistical factors, it was not feasible to conduct additional FGDs.
- C. Scheduling challenges: Coordinating with the ASHAs posed challenges as their duties and busy schedules often limited their availability for group discussions.

These factors collectively guided the decision to conclude data collection after two FGDs.

Methodology: The ASHAs selected for the study were first sensitised about the study topic. Written informed consent was obtained from all participants. A predesigned, structured and pretested questionnaire was administered. The questionnaire included socio-demographic and socio-economic variables alongside the revised MHLS developed by O'Connor M and Casey L. Two FGDs were conducted at mutually convenient places and times to obtain a holistic understanding of the research problem. No special criteria were followed for the segregation of the groups. In one group, nine ASHAs were included, and in the other group, 10 ASHAs were included according to their availability and feasibility.

Mental Health Literacy Scale (MHLS)

The original MHLS underwent rigorous psychometric testing by O'Connor M and Casey L (2015), demonstrating robust psychometric validity [1,11-13]. In this study, a revised MHLS, which underwent validation and psychometric testing specifically tailored for applicability in LMICs was utilised [11,12].

Building upon the foundational concept of MHL proposed by Jorm AF et al., as the gold standard, O'Connor M and Casey L refined the MHLS to encompass six quantifiable attributes related to recognition, knowledge, and attitudes surrounding mental health [1,13]:

- a) **The ability to recognise specific disorders and types of psychological distress:** This domain contains eight questions, measured on a 4-point Likert scale. The highest score is 32, and the lowest score is 8.
- b) **Attitudes that facilitate recognition and appropriate help-seeking:** This domain contains 16 Q (Q9-Q24), measured on a 5-point Likert scale. Q Q9-Q17 are reverse scored. The highest score is 80, and the lowest score is 16.
- c) **Knowledge and beliefs about self-help interventions:** This domain contains 2 Q (Q25-Q26), measured on a 4-point Likert

scale. Question Q26 is reverse scored. The highest score is eight, and the lowest score is two.

- d) **Knowledge and beliefs about professional help available:** This domain contains 3 Q (Q27-Q29), measured on a 4-point Likert scale. Question Q29 is reverse scored. The highest score is 12, and the lowest score is three.
- e) **Knowledge of how to seek mental health information:** This domain contains 4 Q (Q30-Q33), measured on a 5-point Likert scale. The highest score is 20, and the lowest score is 4.
- f) **Knowledge and beliefs about risk factors and causes:** This domain contains 2 Q (Q34-Q35), measured on a 4-point Likert scale. Question Q35 is reverse scored. The highest score is eight, and the lowest score is two.

The highest total score that can be obtained is 160, and the lowest total score that can be obtained is 35, with higher scores implying adequate MHL [13]. The questionnaire was validated with the input of three public health experts. It was translated into Bengali and retranslated into English by two subject experts. For the qualitative part, a predesigned FGD guide was developed, which was pretested on eight ASHAs who were not selected for the final study. The domains discussed in the FGD guide included the knowledge and concepts of the study participants about mental health, their approach towards it, the community's perspective from the health workers regarding mental health and the barriers and challenges faced by the ASHAs while communicating with the villagers about mental health. Each domain was further explored depending on the responses obtained from the participants.

STATISTICAL ANALYSIS

The quantitative data were entered into MS Excel™. The data were checked for consistency and imported into Jamovi (version 2.4.8) software for analysis [14]. The characteristics of the sample were analysed using descriptive statistics, including frequencies, percentages, medians, mean values and Standard Deviation (SD). A Student's t-test was performed, and a p-value of ≤0.05 was considered statistically significant for association.

RESULTS

A total of 67 ASHAs participated in the study. The mean age was 37±13.5 years (ranging from 28 to 49 years). Among the participants, 47 (70.1%) were Hindus, and 32 (47.8%) belonged to the unreserved caste category. Additionally, 59 (88.1%) of the study participants were currently married. Furthermore, 41 (61.20%) of the ASHAs had work experience of five years or less. A total of 34 (50.7%) of the study participants belonged to Class II of the BG Prasad socio-economic scale (May 2023) [15]. The main sources of knowledge regarding mental health and diseases for the participants were friends and family (49 participants, 73.1%). None of the participants received any formal training or education regarding mental health and mental diseases [Table/Fig-1].

Variables	n (%)
Age (years)	
≤30	3 (4.5)
31-35	17 (25.4)
36-40	24 (35.8)
41-45	17 (25.4)
>45	6 (9.0)
Religion	
Hindu	47 (70.1)
Muslim	20 (29.9)
Caste	
Others	32 (47.8)
Scheduled caste	15 (22.4)

Scheduled tribe	3 (4.5)
Other backward class	17 (25.4)
Marital status	
Currently married	59 (88.1)
Widow	8 (11.9)
Months of work (years)	
<1	17 (25.4)
1-5	24 (35.8)
6-10	15 (22.4)
>10	11 (16.4)
Socio-economic status*	
Class I (Upper)	11 (16.4)
Class II (Upper middle)	34 (50.7)
Class III (Middle)	17 (25.4)
Class IV (Lower middle)	5 (7.5)
Source of information	
Television	1 (1.5)
Social media	14 (20.9)
Newspaper	2 (3.0)
Friends and family	49 (73.1)
Doctor	1 (1.5)

[Table/Fig-1]: Distribution of study participants according to socio-demographic and socio-economic variables (n=67).

*Modified BG Prasad Socio-economic status scale (May 2023)

The distribution of individual items, the sum of the scores and the six attributes of the revised MHLS for MHL among the ASHAs were estimated. The scores ranged from 50 to 115, with a mean±SD of 86±13.5 and a Coefficient of Variation (CV) of 15% among the study participants. The total score was normally distributed (Shapiro-Wilk W=0.982). The CVs of the six attributes were compared and it was observed that questions regarding the ability to recognise mental disorders, knowledge about self-treatment of mental health disorders, and knowledge of where to seek information had greater dispersion around the mean. Items QA1-QA8, QC25-QC26, and QE30-QE33 had a CV significantly higher compared to the total score and other attributes of MHL [Table/Fig-2].

Attributes	Minimum	Maximum	Mean±SD	CV
A. Ability to recognise mental disorders (Q1-Q8)	8	27	17.8±4.08	22.92
B. Knowledge regarding attitudes that promote the recognition or appropriate help-seeking behaviour (Q9-Q24)	21	57	38.5±7.53	19.55
C. Knowledge regarding self-treatment of mental health disorders (Q25-26)	3	8	5.67±1.24	21.86
D. Knowledge about the availability of professional help (Q27-29)	6	11	8.40±1.13	13.45
E. Knowledge of where to seek information (Q30-Q33)	5	14	9.52±2	21.00
F. Knowledge of risk factors and causes (Q34-Q35)	3	8	6.16±1.23	19.96
Total score of MHLS (Q1-Q35): minimum-35, maximum-160	50	115	86.1±13.5	15.67

[Table/Fig-2]: Distribution of MHLS results among the study population by attributes (n=67).

The distribution of results was examined in more detail using 4-point and 5-point scales. In the 4-point scale measuring recognition and knowledge, the mean scores ranged from 1.30 to 3.69. Only five out of fifteen items in the 4-point scale had a mean score greater than 3.0 (minimum=1, maximum=4). It was found that the lowest mean scores (less than 2) were obtained for three recognition-related questions and one knowledge-related question. The question

with the highest standard deviation was about knowledge: "To what extent do you think it is likely that, in general, in West Bengal, men are MORE likely to experience an anxiety disorder compared to women?" (QF35; SD=0.975, CV=38.69%). This question had reverse scoring.

The question with the greatest CV was a recognition-related question: "To what extent do you think it is likely that the diagnosis of Agoraphobia includes anxiety about situations where escape may be difficult or embarrassing?" (QA6; SD=0.78, CV=44.31%).

The mean scores of the 5-point scale measuring knowledge and attitudes ranged from 1.00 to 3.93. Most of the 20 items consisted of questions regarding "attitudes that promote recognition or appropriate help-seeking behaviour (stigma)" (QB9-QB24), with four of them receiving mean scores of 1.00 (minimum=1.00, maximum=5.00). These questions examined respondents' willingness to accept a family member with mental illness in vows of marriage, collaborate with mentally ill co-workers, support politicians with mental illness and employ someone with mental illness. It was found that five 5-point items had a mean score greater than 3. Eleven 5-point items had a CV greater than 30%. Five 5-point items had a standard deviation greater than 1.

The mean score among those aged 38 years or older was higher than that of those aged less than 38 years (92.5±12.9 vs. 79.8±10.9), and the difference was statistically significant (p-value <0.01). The mean score among those belonging to the unreserved caste category was greater than that of those in the reserved caste category (90.7±13.8 vs. 81.8±11.8), with a statistically significant difference (p-value=0.006). The mean score among those with five or more years of work experience was higher than that of those with less than five years of work experience (97.4±10.5 vs. 78.9±9.67), and this difference was statistically significant (p<0.001). No statistically significant differences between the means were found in terms of religion, marital status, source of information, and socio-economic status (p>0.05).

Levene's test for homogeneity of variance indicated that the variances across the compared groups were statistically similar for all variables (Levene's p-value >0.05 in each case). This suggests that the assumptions of equal variance were met, allowing for the reliable use of independent samples t-tests. Levene's F value is a ratio that reflects the variance between group means relative to the variance within groups; a larger F value suggests a greater difference in variances across groups [Table/Fig-3].

Variables	Mean±SD	Independent sample t-test			Levene's Homogeneity of variance test	
		Student's t	p-value	df	F value (df, df2)	p-value
Age (years)						
<38	79.8±10.9	-4.36	<0.001*	65.0	1.33 (1,65)	0.25
≥38	92.5±12.9					
Religion						
Hindu	87.3±13.9	1.20	0.23	65.0	0.55 (1,65)	0.45
Muslim	83±12.3					
Caste						
Reserved	81.8±11.8	2.83	0.006*	65.0	0.66 (1,65)	0.41
Others	90.7±13.8					
Marital status						
Currently married	85.4±13.3	-1.16	0.24	65.0	0.01 (1,65)	0.90
Widow	91.3±14.7					
Years of work						
<5 years	78.9±9.67	-7.42	<0.001*	65.0	0.20 (1,65)	0.65
≥5 years	97.4±10.5					

Socio-economic status**						
Upper class	85.7±14.0	-0.28	0.71	65.0	0.13 (1,65)	0.71
Lower class	86.7±12.5					
Source of information						
Family and friends	86.5±14.5	-0.40	0.68	65.0	1.98 (1,65)	0.16
Others***	84.9±10.2					

[Table/Fig-3]: Association of demographic variables and Mental Health Literacy (MHL) score.

Independent sample t-test was done; *Statistically significant

**Class I and Class II of socio-economic status scale was merged together into upper class.

Class III and Class IV of socio-economic status scale was merged together into lower class

***others contain television, newspaper, social media and doctor

Qualitative analysis: Over the course of two FGDs, ASHAs revealed their perspectives and insights about mental health and its dimensions. The themes that emerged from the FGDs included the knowledge and beliefs of the ASHAs about mental health, the advice and actions provided by the ASHAs regarding mental health in their regular work, the barriers and challenges faced by the ASHAs, and the villagers' perspectives regarding mental health [Table/Fig-4].

Themes	Subthemes
The knowledge and beliefs about mental health	Unprecedented news, negligence, poverty Symptoms- isolation, reduced enthusiasm
Advice and actions provided by the ASHAs	Referral to higher centres, counselling efforts to improve family interactions and maintain privacy
Villagers' perspective regarding mental health	Stigma, avoidance, ostracisation, spiritual reasons, lack of affordable psychiatric counsellors
Barriers, challenges and benefits of the ASHAs	Lack of formal training, limited knowledge, strong rapport, enhanced accessibility

[Table/Fig-4]: Distribution of themes obtained from Focussed Group Discussions (FGD).

According to the ASHAs, the most common symptoms that a mentally ill person exhibits are staying alone, avoiding social interaction, and showing no enthusiasm for activities. The ASHAs were familiar with only two terms related to mental illness-psychosis and depression-but they did not have a clear understanding of the symptoms of depression, psychosis, or any other mental health disorder. When inquired about the villagers' perspectives on mental illness, the ASHAs described avoidance and taboo. They also mentioned that there are no psychiatric counsellors in the area and that the people are too poor to afford a private counsellor; mental illness is not treated at the Block Primary Health Care (BPHC). One of the ASHAs quoted:

"Madam, although we as health workers know that mental illness should not be stigmatised, society does not accept people with mental illness with an open mind. I do not know about the city, but in our village, if someone discovers that a person is suffering from mental illness, others tend to avoid them. Villagers believe that mental health problems are related to spiritual beings and often take the patient to 'tantriks, ojas, and pir-babas.' It becomes very difficult for us to make them understand that these are not the solutions."

Regarding the source of mental health knowledge, one ASHA said:

"We know very little about mental health, madam; we are not even trained. For any kind of query related to mental health, we approach our Auxiliary Nurse and Midwife (ANM). Sometimes the doubts get cleared, sometimes they do not."

It was also noted in the FGDs that the responsibilities of ASHAs primarily involve children, adolescents and reproductive-age females, and they face significant overburden and underpayment. They have a strong rapport within the community and are trusted, allowing for open communication and better access to villagers than other healthcare professionals.

DISCUSSION

The MHL status of the study participants was found to be poor. The score obtained in this study was lower (86.1±13.5) compared to

research conducted by Korhonen J et al., among PHC workers in South Africa and Zambia [16], where the scores ranged from 76 to 150 (mean=122.3, SD=12.4, CV=10%) among all PHC workers. In another study conducted in Iran among community members, the mean score was 97.99 [11]. The MHLS score in a study conducted among US college students showed a mean score of 123.96 (SD=16.26) [17]. In the present study, ASHAs did not receive any formal training regarding mental health, which may contribute to the differences in scores.

In a study conducted by Bashir A et al., in the Budgam district of Jammu and Kashmir, where MHL was assessed pre- and post-training of mental health among community health workers, it was clearly observed that the scores of various domains of the MHLS increased after training [4]. The present study revealed that the dispersion of mean scores was highest in one ability-related domain (the ability to recognise mental disorders) and two knowledge-related domains (knowledge regarding self-treatment of mental health disorders and knowledge of where to seek information). All of these domains demonstrated a statistical association with the duration of work experience (p-value ≤0.05). Such results can be explained by the fact that an increase in work experience improves MHL. Although the study participants did not receive formal training, their day-to-day experiences in the field and interactions with other community health workers and fellow villagers could be significant influencing factors for their knowledge of MHL [18].

In the study conducted by Korhonen J et al., knowledge of how to seek information, risk factors and causes of mental illness, and self-treatment-related attributes had a CV (coefficient of variation) of 23%, while the CV of the total score was 10% [16]. The results of this study are thus comparable to the results of the study done by Korhonen J et al., [16]. However, dispersion was also found in the ability-related domain, which may again be due to the absence of formal training and differences in the demographic factors of the two different countries.

In the present study, the association of age, caste and work experience of the participants was demonstrated with the total MHL score. This indicates that the understanding and awareness of mental health issues vary depending on age, social background and professional experience. Such findings underscore the importance of considering these demographic factors in our efforts to promote MHL, address mental health stigma and improve access to services among the Indian population [19].

From the FGDs, the reasons behind the low scores of MHL were explored and the major reasons identified were a lack of awareness, a lack of training and no proper source of information, as most of ASHAs mentioned their friends and family members as their main sources of information regarding mental health. A study by Patel VB et al., concluded that ASHAs lacked knowledge and possessed negative attitudes about key mental health issues, which aligns with the results of our study [20].

Moreover, it was evident from the FGDs that knowledge regarding mental health was intricately associated with caste, as most individuals from reserved castes believed that mental illnesses are caused by spiritual beings and can be cured by following the laws of nature as stated by preachers. A study conducted on the MHL of ASHAs participating in the HOPE collaborative approach yielded similar results from thematic analyses [21]. An interventional study by Patel M and Mishra S also showed that prior to training, the perceptions of ASHAs regarding mental illness were inadequate, which was comparable to the results of this study [22].

The role of ASHAs has been immense in the implementation and sustainability of many health programs in our country. They can also be trained and utilised for case finding and follow-up treatments of various mental disorders. Though some studies have reported

poor knowledge and understanding of mental illness among ASHAs [23,24], other reports suggest that with proper training, community health workers can recognise mental illness from case vignettes and reduce stigmatised attitudes regarding these illnesses within the community [21,25-27]. This is primarily possible due to the positive and harmonious relationships maintained by ASHAs with the community, as evidenced by the results of this study [28].

Limitation(s)

The study consisted only of ASHAs. Extending participation to other healthcare professionals of different hierarchies may provide more insights into the determinants of MHL. Furthermore, it was conducted in a single block, which might not be representative of the entire district.

CONCLUSION(S)

A statistically significant association was found between the MHL scores of ASHAs in the study area and their age, caste and work experience, with overall low scores indicating poor MHL. The untrained ASHAs rely on their counterparts for knowledge. It was evident from the FGDs that mental health awareness and literacy are neglected topics both among the villagers and among the healthcare providers in the block. The poor MHL among the ASHAs negatively impacts community health. Adequate training, supervision and incentives can enable ASHAs to integrate mental healthcare into rural primary care. Essential measures include frequent mental health training, regular feedback, tailored guidance considering social and demographic factors and establishing supportive networks. Additionally, raising awareness among communities and health authorities is critical. Further research is needed to comprehensively understand MHL among various health worker hierarchies and communities.

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