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Sustainable Mental Health Literacy among Nursing Students: A Cross-sectional Study in West Bengal, India

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ABSTRACT

Background: Mental health nursing is one of the major subjects in all types of nursing curricula. Assessment of mental health literacy of nursing students is very crucial, as they will play a key role in nursing fraternities and society as well. The present study is aimed at assessing the level of mental health literacy among nursing students at selected nursing training institutes in West Bengal, India. **Methods:** A cross-sectional study design was adopted for the collection of data from a total of 240 female nursing students using a census or complete enumeration sampling technique from two General Nursing and Midwifery training schools and two basic bachelor nursing colleges in West Bengal. The tool consisted of six items of structured socio-demographic profile, and the "Mental Health Literacy Scale" consisted of 35 items. **Results:** The overall mean score of the mental health literacy of nursing students was 117.04 (SD=11.34). General Nursing and Midwifery students scored a higher mean (119.43), (SD=9.93) than Basic Bachelor Nursing students (114.84), (SD=12.12), which was statistically non-significant (Mann-Whitney U test, U=6371, *p*=0.128). The Chi-Square test confirmed that there was a significant association between mental health literacy and selected demographic components, 'Whether any previous exposure to mental health awareness programme / survey' (5.54) and 'Whether any previous experience of observing or caring for a person with mental illness other than in the clinical area' (4.82), of nursing students at *df* (1) at the 0.05 level of significance. **Conclusion:** The present study results reveal a comparatively lower level of "mental health literacy" among student nurses despite an effective mental health curriculum than that of the other available studies.

Keywords: Mental Health Literacy; Mental Health Literacy Scale; Nursing Students

INTRODUCTION

The word phrase "mental health literacy" (MHL) was first conceived and defined by a team of Australian intellectuals as knowledge and belief of mental illnesses in terms of ability to identify disorders or various emotional problems, knowledge and beliefs regarding causes, self-help strategy, professional resources available, and knowledge about the way of seeking information related to mental health (Jorm, 2000). Evidence from numerous studies supports the fact that MHL is an essential determinant of a person regarding understanding about the presence and severity of mental illnesses, help-seeking behavior and helping others with related problems. A mental-health literate citizen is empowered to solve his/her own problems as well as empathetic to help others as well (Hock *et al*., 2012; Sweileh, 2021; Tambling, D'Aniello & Russell, 2023). Though the pioneer of this concept has claimed MHL as a neglected dimension of "health literacy" among common people, He concluded that without achieving the optimum level of MHL, the public will not be able to gain adequate insight regarding mental health problems and their necessary help-seeking attitudes (Zare *et al*., 2022).

The global mental health scenario has become more miserable, followed by the COVID pandemic. COVID-19 Pandemic has a significant influence on mental and emotional wellbeing among people. Some of them experienced depressive indication, concentration difficulty, anxiety, touchy and easy to get irritated (Tambunan *et al*., 2021). Global mental health burden requires multi-dimensional approaches to resolve the problems. The "World Health Organization" addresses the solutions of mental health problems by taking aggressive efforts to increase awareness among people by removing misconceptions—myths, stigma, and discriminations—on mental illnesses and by filling up the scarcity of mental health professionals. Though it needs the support and goodwill of politicians (Bjornsen *et al*., 2019). Mental health issues need to be addressed as an essential topic along with physical issues because "mental health burden" is increasing globally. Assessment of MHL should be a primary, simple, but indispensable measure before initiating any awareness inventiveness. It is like a primitive step toward reducing global mental health burden (Korhonen *et al*., 2022). Again, it directs to gain required knowledge to understand the disorders comprehensively and improves attitude towards illness (Sampaio, Gonçalves & Sequeira, 2022; Sweileh, 2021).

Health care professionals have a crucial role in providing mental health services. They obtain the education, expertise, and knowledge necessary to provide such care (Mandal, Basu & De, 2020). Nursing students are important future members amongst health care professionals and are part of promising and challenging professions worldwide. The profession deals with physical and psychological issues of the clients in the indoor and community. They are going to shoulder the responsibilities of future citizenship of the nation as well. So, an in-depth understanding regarding the concept of "mental health" should be reinforced in nursing students to promote holistic care and effective management of "psychiatric emergencies" (Joubert & Bhagwan, 2018). On the other hand, mental health education is one of the major subjects in various types of nursing curricula. The Indian Nursing Council (INC) developed standard mental health curricula for all existing courses like "Auxiliary Nursing and Midwifery" ("ANM"), "General Nursing and Midwifery" ("GNM"), and "Basic Bachelor of Nursing" ("Basic B.Sc. Nursing"), keeping in mind the universal and Indian context (Saito & Creedy, 2021; INC, 2021). INC also updates the curricula by revising routinely and periodically. So, the assessment of MHL level of the students may be a diagnostic assessment for future endeavors for equipping future nurses with adequate knowledge and practice. A thousand studies have been found on MHL in global research only in the SCOPUS database (Sweileh, 2021). Evidence shows that several studies have been conducted on the population of teenagers and young people. Most of them resulted in low scores of MHL (Sampaio, Gonçalves & Sequeira, 2022).

A limited amount of research has been found regarding MHL among nursing students worldwide. An Australian study stated that MHL is a major domain of nursing courses. Determination of its level helps students to identify knowledge and practice gaps and design the measure to fill up the identified gaps (Saito & Creedy, 2021). Another Australian longitudinal study commented that many nursing students showed poor level MHL while finishing course. Improvisation of effective curricula required to bridge the gaps (Mccann Lu & Berryman, 2009). In an American comparative study, nursing students showed satisfactory MHL along with pharmacy and medical students (Devraj, Gupchup & Henson, 2019). Adequate knowledge and positive attitude were seen among nursing students in a study done in Nepal (Shrestha, 2013).

An Indian study revealed negative attitudes among nursing students toward mental illness (Sreeraj *et al*., 2017). In another Indian study, most of the nursing students in Puducherry showed moderate knowledge, and only 18% had adequate knowledge on mental disorders and MHL as well (Suvitha *et al*., 2021). Results of research are showing repeatedly that the optimum level of MHL among individuals is helpful for early recognition of features of mental problems and care-seeking behavior. "Positive mental health literacy" enables a person to help oneself as well as others (Bjornsen *et al*., 2019).

Besides the typical role of caregiver, nurses play the important role of educator and advocate for the client and their relatives. So, it is important for nurses to be adequately educated with knowledge of various aspects of mental health. It should be started from the very beginning of training future nurses. So that today's nursing students will be well equipped with MHL to be tomorrow's nurse—who will be an important member of clinical, community health, or any other extended field of nursing. And who will be able to assess, diagnose, take appropriate decisions and utilize the available resources regarding mental health (Saito & Creedy, 2021).

There are immense possibilities to prepare nursing students as strong and reliable resources in the mental health care system. Which will be a solution to mental health burden and unproportionate shortage of health care professionals (Sagar *et al*., 2020). The measurement of MHL of student nurses is an initial and important step of this task. Based on results, the entire planning and selection of effective measures for improvement of knowledge and attitude towards mental health and illness are to be designed. But there is a lack of evidence regarding assessment of MHL among nursing students. About a thousand studies on different populations have been found on MHL in global research only in the SCOPUS database (Sweileh, 2021). Among all, the top ten cited study lists are shown there. Surprisingly, not a single study has been found carried out on nursing students.

There is no available study in West Bengal on this concern. The researcher felt interested in carrying out a survey on nursing students of selected institutions in West Bengal, India, with a query on the status of MHL among pupil nurses. The objective of this research was to assess the level of MHL among student nurses at selected nursing training institutes in West Bengal, India to compare the level between two courses of nursing students, and to find out whether there was any association between selected socio-demographic components and MHL.

METHODOLOGY

A cross-sectional design was chosen for data collection from a total of 240 female nursing students. Final year General Nursing and Midwifery (GNM) (115) and final year Basic B.Sc. (125) nursing students who have studied Mental Health Nursing in the course curricula and can read, write, and understand English were included as study participants by the "census" or "complete enumeration" sampling technique. Data was collected from two government (Govt.) GNM nursing training schools and two government nursing colleges in West Bengal. According to inclusion criteria, all students of the class were included to attain comprehensive and detailed data from them (Arnab, 2017). The duration of data collection was approximately three months. The tool consisted of a structured socio-demographic profile consisting of six items: age, residential area, religion, marital status, whether any previous exposure to a mental health awareness programme/survey, and any previous experience of observing or caring for a person with mental illness other than in the clinical field.

The "Mental Health Literacy Scale" (MHLS), developed by O'Connor and Casey in 2015, widely used, valid, and reliable (with Cronbach's alpha coefficient $= 0.87$ and test-retest $r = 0.79$, $p < 0.001$) instrument was utilized to measure knowledge of different perspectives to do with health related to mental wellbeing. The 35-item tool includes areas: i) capability of identifying definite mental problems; ii) knowledge regarding how to get information; iii) knowledge regarding causative factors; iv) knowledge of treating oneself; v) knowledge about expert guidance obtainable; and vi) attitudes that improve disorder-related understanding and assistance-seeking behavior. Questions were structured with a five-point, and a few were four-point Likert scales. The score ranged from minimum 35 to maximum 160 (O'Connor & Casey, 2015).

The necessary permission of the concerned authorities was obtained. Data was collected physically in the classroom, followed by obtaining the informed consent of the students. Confidentiality and anonymity were maintained by a coding system. Data analysis was done by Microsoft-XL and SPSS version 27 using statistical description and inferential statistics. Socio-demographic information was presented in frequency and percentage. Computation of mean, mean-difference, and standard deviation was done. Comparison of the MHL score between two groups of nursing students was calculated by the Mann-Whitney U test. Association between selected demographic variables and MHL by using the "Chi-Square Test.".

Ethical Consideration

The study obtained ethical permission from the Institutional Ethics Committee of College of Medicine, Sagore Dutta Hospital, India, with reference number ECR/1210/Inst/WB/2019/RR-22 by memo number CMSDH/IEC/42/03-2024 on 27th March, 2024.

RESULTS

Demographic Characteristics

Data was collected from a total of 240 female nursing students. Among them, 115 (47.9%) students were

final year G.N.M., and 125 (52.1%) were from final year "Basic B.Sc. nursing" students. The mean age of G.N.M. students was 22.01 years (SD 2.98, range 19-33 years) and of Basic B.Sc. students was 20.97 years (SD 1.24, range 19-25 years). In both, most students (G.N.M. = 69.5%, Basic B.Sc. = 67.2%) were from rural areas, and most (G.N.M. = 83.5%, Basic B.Sc. = 85.6%) were Hindu and unmarried (G.N.M. = 96.5%, Basic B.Sc. = 96.8%). Most of the G.N.M. students (80.9%) had no previous exposure to a mental health awareness program or survey, and the majority (64.3%) had no previous experience of observing or caring for someone with mental illness other than in the clinical field. In the other group of students' approximate half had previous exposure, but the majority (64%) did not have any previous experience of observing or caring for someone with a mental illness other than in the clinical field (Table 1).

Table 1: Findings Related to Demographic Variables (n=240)

Sociodemographic Characteristics		GNM Students n$_1$ = 115		Basic B.Sc. Students n$_2$ = 125	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Age in years	(Mean ± SD)	22.01 ± 2.98		20.97 ± 1.24	
	Range	19-33		19-25	
Residential area	Rural	80	69.5	84	67.2
	Suburban	24	20.9	11	8.8
	Urban	11	9.6	30	24
Religion	Hindu	96	83.5	107	85.6
	Muslim	14	12.2	14	11.2
	Buddhism	2	1.7	0	0
	Christian	3	2.6	4	3.2
Marital status	Unmarried	111	96.5	121	96.8
	Married	4	3.5	4	3.2
Whether any previous exposure to mental health awareness programme / survey	No	93	80.9	63	50.4
	Yes	22	19.1	62	49.6
Whether any previous experience of observing or caring person with mental illness other than in the clinical area	No	74	64.3	80	64
	Yes	41	35.7	45	36

Mental Health Literacy Score

Total "Mental Health Literacy Score" of 240 female nursing students was 28090 with a mean of 117.04 (SD=11.34) ranging from 78-141 (Table 2).

Table 2: Mental Health Literacy Score of Nursing Students (n=240)

	Total no. of Students	Highest Score Obtained	Lowest Score Obtained	Total Score	Mean	SD
Total	240	141	78	28090	117.04	11.34

Comparing MHL between G.N.M. and B.Sc. nursing students, the total score of G.N.M. students (13735) is lower than that of B.Sc. nursing students (14355). But G.N.M. students secured a higher mean (119.43, SD=9.93) than B.Sc. students (114.84, SD=12.12). The range of the score among G.N.M. was 91-141, and among B.Sc. students it was 78-140 (Table 3).

Table 3: Mental Health Literacy Score of G.N.M. and B.Sc. Nursing Students (n=240)

	Total no. of Students	Total Score Obtained	Highest Score Obtained	Lowest Score Obtained	Mean	SD
G.N.M. Students	115 (47.9%)	13735	141	91	119.43	9.93
Basic B.Sc. Nursing	125 (52.1%)	14355	140	78	114.84	12.12

A Mann-Whitney U test was utilized to compare the MHL scores of G.N.M. and B.Sc. nursing students. The summary shows that Mann-Whitney U test (U = 6371, p =0.128) (Table 4).

Table 4: Summary of Independent-Samples Mann-Whitney U Test (n=240)

Independent-Samples Mann-Whitney U Test Summary	
Total N	240
Mann-Whitney U	6371.000
Wilcoxon W	14246.000
Test Statistic	6371.000
Standard Error	536.741
Standardized Test Statistic	-1.521
Asymptotic Sig. (2-sided test)	0.128

The hypothesis test summary of the independent test makes the decision that "the distribution of mental health literacy scores is the same across categories of nursing students," which means there is a statistically non-significant difference between two groups of students in MHL scores (Table 5).

Table 5: Decision about Hypothesis -- Mental Health Literacy Score of GNM and B.Sc. Nursing students by Independent-Samples Mann-Whitney U Test

Null Hypothesis	Test	Sig.	Decision
The distribution of Mental Health Literacy Score is the same across categories of Nursing students	Independent-Samples Mann-Whitney U Test	0.128 NS	Retain the null hypothesis

*The significance level is.050. (*S=significant at <0.05 level, NS=not significant)*

Data in Table 6 depict comparative, domain-wise total, mean, standard deviation (SD), and range of MHL among two groups of students (Table 6).

Table 6: Domain Wise Mental Health Literacy Score of Nursing Students (n=240)

Subscale	GNM Students n_1=115					Basic B.Sc. Student n_2=125				
	Min	Max	Total Score	Mean	SD	Min	Max	Total Score	Mean	SD
Ability to recognize disorders	21	32	3154	27.43	2.366	8	32	3229	25.83	5.508
Knowledge of risk factors and causes	2	8	642	5.58	1.527	3	8	726	5.81	1.141
Knowledge of professional help available	5	12	1026	8.92	1.655	3	12	1007	8.06	1.504
Knowledge of self-treatment	2	8	590	5.13	1.151	2	7	599	4.79	1.138
Knowledge of where to seek information	7	20	1904	16.56	2.472	8	20	2123	16.98	2.581
Attitudes that promote recognition or appropriate help-seeking behaviour	38	72	6419	55.82	7.043	35	69	6671	53.37	6.772

Min= Minimum, Max= Maximum, SD= Standard Deviation

Findings Related to Associations between "Mental Health Literacy Score" and Selected Demographic Components.

Computed x^2 value of MHL with 'Whether any previous exposure to a mental health awareness program or survey' (5.54) and 'Whether any previous experience of observing or caring for a for a person with mental illness other than the clinical area' (4.82) were greater than 'table value' (3.84) for *df (1)* at the 0.05 level of significance. Therefore, MHL and selected demographic components, 'Whether any previous exposure to mental health awareness program or survey' and 'Whether any previous experience of observing or caring for a for a person with mental illness other than clinical area' of students were significantly associated (Table 7).

Table 7: Chi-Square (x²) Values Showing Association between Mental Health Literacy Score and Selected Demographic Variables of Nursing Students (n=240)

	Demographic Variables		Mental Health Literacy Score		Total	(χ²) value	df	P value	*S/ NS
			Below Median	Above Median					
1.	Whether any previous exposure to mental health awareness programme / survey	No	88	68	156	5.54	1	0.018	*S
		Yes	34	50	84				
2.	Whether any previous experience of observing or caring for a person with mental illness other than in the clinical area	No	65	89	154	4.82	1	0.028	*S
		Yes	49	37	86				

*S=significant at <0.05 level and NS=Not significant Median value of Mental Health Literacy Score=118.

DISCUSSION

There is limited literature available on this topic, particularly within the context of India. To the best of our knowledge, this study is the first to assess mental health literacy among different groups of nursing students, specifically in West Bengal. The study was carried out with the intention to find out the level of MHL among nursing students. The investigator was curious to know whether there were any significant differences in MHL level among different types of nursing trainees. So, data were collected from a total of 240 nursing students pursuing a similar nursing curriculum, "General Nursing and Midwifery" (GNM), "Basic Bachelor of Nursing" (Basic B.Sc. Nursing). The instrument used to collect data was the "Mental Health Literacy Scale" (MHLS) by O'Conner and Casey, a 35-item questionnaire. This scale is reliable and widely utilized in more than forty-five languages (O'Connor, n.d.). In the current study, nursing students showed a lower level of MHL (mean = 117.17) than that of an Australian study (mean = 131.02) among 114 undergraduate students and 372 beginner bachelor students of psychology discipline (average = 127.38) (Saito & Creedy, 2021). On the contrary, a Turkish study showed a relatively lower mean of MHLS (102.53) of 676 students (Özer & Şahin Altun, 2024).

A study conducted upon Singapore nursing students, aimed at "correct recognition of mental disorders," revealed that more than 70% of students identified "mental disorders" correctly through "vignettes" (Seow *et al.*, 2017). In a study in clinical settings in Nepal, most of the students showed adequate "knowledge regarding causes of mental illnesses" and "effective professional and self-help treatments" (Shrestha, 2013). Most of the nursing students had adequate knowledge about "where to find information on mental illnesses" in two studies, one in a South African and another United Kingdom (UK) study (Gorczynski *et al*., 2017; Petersen, 2019). In the current study, domain-wise "mental health literacy score" was expressed as mean and "standard deviation" (SD). GNM. students had a higher mean score than 'Basic B.Sc.' students in four domains, which are "ability to recognize disorders." [GNM (mean=27.43, SD=2.3) & 'Basic B.Sc.' (mean=25.83, SD=5.5)], "knowledge of professional help available" [GNM (mean=8.9, SD=1.65) & 'Basic B.Sc.' (mean=8.06, SD=1.5)], "knowledge of self-treatment" [GNM. (mean=5.13, SD=1.15) & 'Basic B.Sc.' (mean=4.79, SD=1.13)] and in "attitudes that promote recognition or appropriate help-seeking behaviour" [GNM (mean=55.82, SD=7.04) & 'Basic B.Sc.' (mean=53.37, SD=6.77)]. In the other two domains, the result was opposite: "knowledge of risk factors and causes" [GNM (mean = 5.58, SD = 1.52) & 'Basic B.Sc.' (mean = 5.81, SD=1.14)] and "knowledge of where to seek information" [GNM (mean = 16.56, SD=2.472) & 'Basic B.Sc.' (mean = 16.98, SD=2.581)].

Though there was a mean difference in MHL score between GNM and B.Sc. students, the hypothesis testing results indicated that there was no statistically significant difference. It is consistent with the result of another study carried on nursing students in South Africa according to academic year (Petersen, 2019). The cause may be due to common educational and clinical experiences shared by both groups, despite the

differences in their curricula structure and duration. MHL among nursing students was significantly associated with two demographic variables, which were 'Whether any previous exposure to a mental health awareness program or survey' and 'Whether any previous experience of observing or caring for a for a person with mental illness other than the clinical area.' In a study conducted in South India upon B.Sc. nursing students regarding attitude towards mentally ill persons, it revealed significantly positive results (Poreddi *et al*., 2014).

In a review, the author remarked that the knowledge level of Bachelor nursing students was compromised because of inconsistency in the mental health nursing curriculum and a lack of synchrony between theory and practice. The reviewer identified an important aspect that students gather knowledge through experiencing the substances of mental health (Barry & Ward, 2017).

Another Australian study explored that the student nurses were interested in attaining information on various mental disorders, available treatments, measures to reduce misconceptions, and communication media for increasing public awareness. Participants also recommended that "Mental Health First Aid" must be mandatory for better implement "Mental Health Nursing" practice (Saito & Creedy, 2021).

Limitations

Certain limitations are there in current study. First, the cross-sectional study design, which limits the ability to draw causal inferences about the relationship between demographic factors and MHL. Longitudinal studies would be required to assess how MHL evolves over time among nursing students and whether educational interventions lead towards improvements. The study settings were in West Bengal, which limits the generalizability of the findings to entire nation due to cultural and regional diversities. Another limitation is the possibility of the introduction of unintentional biasness. As in self-reported technique of data collection, there is chance of students overestimating or underestimating their own MHL

CONCLUSION

The present study revealed a comparatively lower level of "mental health literacy" among future nurses despite an effective "mental health nursing" curriculum than that of the other available studies. The current study identifies the scarcity of relevant literature and concludes that this topic should be addressed more among them through research and relevant strategies to be recommended for improving the current scenario. Knowledge improves practice and helps in developing a positive attitude. So, the optimum level of MHL obviously will contribute to competent clinical and/or community nursing practice.

In nursing education, current study results indicate that nursing curricula need to be revised to include MHL in a comprehensive manner. Induction programs, awareness programs and workshops can be conducted along with clinical experience. In nursing practice, the optimum level of MHL improves competency and emphasizes the importance of practical training in different settings. So, it is essential and preliminary steps to assess MHL level to get the desired professional outcome. In nursing research, the present study addresses the necessity for more research on MHL in India, at different regions and contexts, promoting evidence-based strategies to enhance mental health education for nursing students.

There is future research scope on large-scale samples, either using online forms or multiple data collectors. Inclusion of male nursing students will demonstrate generalized results. Students all over West Bengal from different public and private institutions and universities will replicate a better finding. A comparative study with medical, paramedical, and psychology students will address important aspects to focus on. Longitudinal or experimental study will enable to show effectiveness of study curriculum or training strategy. Future studies should aim to include a more diverse geographic sample, adopting randomization in sample selection.

Conflict of Interest

The authors declare there is no competing interests.

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