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Original Research Article

Stigma Toward Mental Illness Among Healthcare Professionals In A Tertiary Care Hospital

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Abstract

Introduction:

Stigma toward mental illness among healthcare professionals remains a significant barrier to equitable and effective mental healthcare. Negative attitudes among healthcare providers can adversely affect patient outcomes, delay help-seeking, and compromise therapeutic relationships. This study assessed the prevalence and determinants of stigma toward mental illness among healthcare professionals working in a tertiary care hospital.

Methods:

A hospital-based cross-sectional study was conducted among 422 healthcare professionals, including doctors, nurses, and allied health personnel. Participants completed a structured online questionnaire comprising the Community Attitudes toward the Mentally Ill (CAMI) scale, Opening Minds Stigma Scale for Health Care Providers (OMS-HC), Modified Bogardus Social Distance Scale, and Mental Health Knowledge Schedule (MAKS). Associations between stigma scores and demographic or professional characteristics were analyzed using t-tests, ANOVA, correlation analysis, and multiple linear regression.

Results:

The mean CAMI total score was 112.6 ± 18.4, indicating a moderate level of stigma. Nurses demonstrated significantly higher stigma scores than doctors and allied health professionals across all assessment scales ($p<0.001$). Overall, 28.9% of participants were categorized as having high stigma, with the highest prevalence among nurses (44.7%). Healthcare professionals working in psychiatry settings, those with prior psychiatry training, and those reporting personal or family experience of mental illness exhibited significantly lower stigma levels (all $p<0.001$). Mental health knowledge showed a moderate inverse correlation with stigma ($r = -0.41$, $p<0.001$). In multivariable analysis, nursing profession emerged as the strongest independent predictor of higher stigma, whereas prior psychiatry training and personal history of mental illness independently predicted lower stigma scores.

Conclusion:

Stigmatizing attitudes toward mental illness remain common among healthcare professionals, particularly nurses. Exposure to psychiatric training, enhanced mental health literacy, and personal contact with mental illness appear to mitigate stigma. Integrating structured anti-stigma education and contact-based learning into healthcare training programs may promote more compassionate and inclusive mental healthcare delivery.

Keywords: Mental illness stigma, Community Attitudes toward the Mentally Ill (CAMI), Psychiatry training, Healthcare workforce, Attitudes toward mental illness.

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Introduction

Mental illness remains one of the most stigmatized health conditions globally. Stigma has been described as a multidimensional process encompassing ignorance, prejudice and discrimination – a social phenomenon that can severely restrict the participation of individuals with mental disorders in mainstream society [1]. When exhibited by healthcare professionals, stigmatising attitudes are particularly consequential because they directly compromise the quality of patient care, undermine the therapeutic alliance, and create formidable barriers to treatment seeking and recovery [2].

The adverse effects of stigma on persons with mental illness are well documented in the literature. It is associated with heightened suicidal ideation, diminished self-esteem, poorer social functioning and is often characterised as a "second illness" that compounds the suffering caused by the underlying psychiatric condition itself [3]. Emerging systematic evidence indicates that increased self-stigma toward mental health problems is associated with a greater risk of suicide in clinical populations, underscoring the urgent need to address this issue within healthcare systems [4].

Among healthcare professionals, stigmatising attitudes toward serious mental disorders are pervasive. A recent systematic review of 44 peer-reviewed studies examining schizophrenia-spectrum disorder stigma across diverse healthcare providers found that stigma was observed in every professional group, manifesting through stereotypes, prejudices and discriminatory behaviours. Importantly, generalist providers exhibited significantly higher levels of stigma compared with mental health specialists, and greater professional experience and personal contact with affected individuals were associated with lower stigmatising attitudes [5]. Mental health professionals themselves have been described as one of the principal sources of stigmatisation, often holding more pessimistic views regarding prognosis and expressing greater desire for social distance from patients than the general public [6].

In general hospital settings, where most patients with mental illness first present, the problem is particularly pressing. Non-psychiatric healthcare professionals consistently demonstrate higher stigma compared with their psychiatry counterparts, with factors such as insufficient mental health training and limited previous contact with psychiatric patients associated with more negative attitudes [7]. Studies focusing on nurses have shown that although mental health specialists generally hold more favourable attitudes, stigma persists across all clinical settings and is heavily influenced by inadequate training and limited contact with affected individuals [8]. Similarly, physician surveys have documented negative attitudes toward people with mental illness among resident physicians, including perceived dangerousness and a desire for social distance [9].

Within the Indian context, emerging research has begun to characterise this problem. A large cross-sectional study from Pondicherry involving 275 tertiary care healthcare workers reported significant stigma and negative attitudes toward persons with mental illness [10]. Another survey of Indian primary care nurses found that while knowledge about mental illness was adequate, stigmatising and negative attitudes remained prevalent [11]. Limited data from non-psychiatrist doctors in India

suggest that stigma is still widely present and that help-seeking behaviour among medical professionals is poor due to fear of stigmatisation by colleagues [12,13]. However, most Indian studies have examined individual professional groups in isolation, and there remains a notable paucity of research that simultaneously compares stigma across doctors, nurses and allied health professionals within a single tertiary care hospital.

The present study was designed with aim to assess the level of stigma toward mental illness among healthcare professionals (doctors, nurses and allied health staff) in a tertiary care hospital in India, and to identify the sociodemographic and professional factors associated with higher stigmatising attitudes.

Methods

Study Design

The study employed a hospital-based, cross-sectional design. Anonymous questionnaires were distributed to healthcare professionals working at a single tertiary care referral centre in India. Data collection took place between January and March 2026.

Study Setting

The research was conducted at a large, tertiary care teaching hospital in a metropolitan city in India. The hospital provides comprehensive medical, surgical, paediatric, obstetric, psychiatric and allied health services. At the time of the study, approximately 650 doctors, 850 nurses and 200 allied health professionals were employed across various clinical and non-clinical departments.

Study Population and Eligibility

Participants were eligible if they were: (1) a current employee of the study hospital, (2) working in a direct patient-care role for at least three months before the survey, and (3) willing to provide informed consent. Professionals with less than three months of service, those on extended leave (maternity, long-term sick or sabbatical) during the data collection period, and non-clinical administrative staff were excluded.

Sample Size Estimation

The minimum required sample size was calculated using the standard formula for cross-sectional studies of a single proportion [14]. Assuming a 50% proportion of stigmatising attitudes (which gives the largest sample size in the absence of a reliable local estimate), a 95% confidence level ($Z = 1.96$) and a 5% margin of error, the formula $n = Z^2 \times p \times (1-p) / d^2$ produced 384 respondents. After adding 10% to compensate for incomplete or invalid questionnaires, the target was set at 422 participants.

Sampling Approach

A convenience sampling strategy was adopted. All eligible healthcare professionals who were physically present in their respective clinical or administrative units during the study period were approached consecutively. The sampling was continued until the target sample size was achieved. To ensure a balanced representation of the three main professional groups (doctors, nurses and allied health staff), we monitored enrolment weekly and, when necessary, made additional visits to departments that were under-represented.

Data Collection Instrument

A semi-structured, self-administered online questionnaire was constructed using Google

Forms. The instrument consisted of five sections.

Section 1: Sociodemographic and Professional Information

This part collected data on age, gender, years of clinical experience, current professional designation (doctor, nurse, allied health), department of primary posting, whether the participant had undergone a dedicated psychiatry rotation during undergraduate or postgraduate training (duration in weeks), and whether the participant or a first-degree relative had ever been diagnosed with a mental disorder or had sought psychiatric care.

Section 2: Community Attitudes toward the Mentally Ill (CAMI) Scale

The 40-item CAMI scale, originally developed by Taylor and Dear [15], was used as the primary measure of stigma. Each item is rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The instrument comprises four subscales: Authoritarianism (e.g., "A mentally ill person is dangerous"), Benevolence (e.g., "We owe compassion to the mentally ill"), Social Restrictiveness (e.g., "Mentally ill persons should be isolated from the community"), and Community Mental Health Ideology (e.g., "Mental health facilities should be integrated into neighbourhoods")[15]. Higher scores on Authoritarianism and Social Restrictiveness indicate greater stigmatisation, whereas higher Benevolence and Community Mental Health Ideology scores reflect more favourable attitudes.

Section 3: Opening Minds Stigma Scale for Health Care Providers (OMS-HC)

To provide a complementary measure that is specifically tailored to healthcare workers, the 15-item OMS-HC was also administered. The scale captures three dimensions: attitudes towards people with mental illness, willingness to disclose one's own mental health problems, and social distance from patients with mental illness. All items are rated on a 5-point Likert scale. The OMS-HC has been shown to have good internal consistency (Cronbach's alpha 0.74-0.85) in previous validation studies with medical and nursing staff [16].

Section 4: Modified Bogardus Social Distance Scale

A modified version of the Bogardus Social Distance Scale was used to quantify the respondents' willingness to interact with a person with mental illness across increasingly intimate social situations (e.g., "Would you be willing to work alongside a colleague with well-treated mental illness?"). Responses are recorded on a 5-point scale ranging from 1 (definitely willing) to 5 (definitely unwilling). Higher total scores reflect a greater desire to maintain social distance [17].

Section 5: Mental Health Knowledge Schedule (MAKS)

The MAKS is a 6-item instrument that assesses stigma-related factual knowledge about mental illness (e.g., "Most people with mental illness can recover completely with treatment"). Items are answered as "true", "false" or "don't know". The scale has been validated in multiple cultural settings and shows acceptable test-retest reliability [18].

The complete questionnaire was pilot-tested on 20 healthcare professionals (not included in the final sample) to check for clarity of wording, ease of use on mobile devices, and the time needed for completion. The feedback from the pilot test led to minor modifications in the wording of two sociodemographic questions. The final

version of the questionnaire took approximately 12-15 minutes to complete.

Procedure

Ethical approval was obtained from the Institutional Ethics Committee. Permission to carry out the study was also secured from the hospital Medical Superintendent.

A recruitment team consisting of the principal investigator and two trained research assistants visited each clinical department (Medicine, Surgery, Paediatrics, Obstetrics & Gynaecology, Psychiatry, Emergency Medicine, Intensive Care Units) and nursing stations. The purpose of the study was explained verbally using an information sheet, and all volunteers were assured that their responses would remain strictly anonymous and that non-participation would have no consequences for their employment or academic standing.

Eligible individuals who agreed to participate were directed to a link containing the electronic consent form followed by the Google Forms questionnaire. Informed consent was obtained by having the participant tick a box on the first page of the online form after reading the participant information sheet. The questionnaire could be completed in one sitting, and no identifying information (name, employee number, date of birth) was collected. To further protect confidentiality, IP addresses were not recorded.

The online data collection period lasted eight weeks. Twice a week, reminders were sent through departmental WhatsApp groups (without individual targeting). All responses were automatically stored in a password-protected Google Sheets account accessible only to the principal investigator.

Outcome Measures

The primary outcome was the total CAMI score and the scores of its four subscales, compared across professional groups (doctors, nurses, allied health staff). Secondary outcomes included: (a) the proportion of healthcare professionals who scored in the highest quartile of the CAMI total (operationally defined as "high stigma"), (b) mean OMS-HC and MAKS scores, (c) mean Bogardus social distance scores, and (d) the independent association of sociodemographic and professional variables (age, gender, professional category, department type (psychiatry vs. non-psychiatry), prior psychiatry training, personal or family history of mental illness) with the CAMI total score.

Statistical Analysis

Data from Google Forms were exported to an encrypted Excel spreadsheet and then imported into IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarise the sociodemographic characteristics of the sample. Continuous variables (age, years of experience, scale scores) were expressed as mean ± standard deviation (SD). Categorical variables (gender, profession, department, prior psychiatry training, personal history of mental illness) were expressed as frequencies (n) and percentages (%).

The following inferential tests were applied:

- Independent samples t-test to compare mean CAMI scores between two groups (e.g., male vs. female, psychiatry vs. non-psychiatry).
- One-way analysis of variance (ANOVA) followed by Tukey's post-hoc test to compare CAMI scores across three or more professional categories (doctors, nurses, allied health).
- Pearson's chi-square test to examine associations between categorical variables

(e.g., high vs. low stigma and department type).

- Pearson's correlation coefficient to examine the relationship between continuous variables (e.g., years of experience and CAMI total score).
- Multiple linear regression (forced entry method) to identify independent predictors of the CAMI total score. Independent variables entered into the model were: age, gender, professional category (dummy-coded), department type (psychiatry/non-psychiatry), prior psychiatry training (yes/no), and personal history of mental illness (yes/no/prefer not to say).

All statistical tests were two-tailed, and a p-value less than 0.05 was considered statistically significant.

Ethical Considerations

The study was conducted in accordance with the ethical standards laid down in the Declaration of Helsinki [19]. Anonymity was preserved by not collecting any personally identifiable information and by not recording IP addresses of respondents. Participants were free to withdraw from the study at any point before submitting the online form. After completing the questionnaire, a short debriefing page appeared, providing contact details of the hospital's psychiatry department in case any participant experienced distress or wished to discuss mental-health issues.

Results

A total of 447 healthcare professionals completed the online questionnaire. After removing 25 records due to incomplete responses (>10% missing data) or straight-lined answers, 422 participants (94.4% of the target) were included in the final analysis. The final sample closely matched the predetermined target of 422.

The sociodemographic and professional characteristics of the sample are presented in Table 1. The mean age of participants was 32.4 ± 8.7 years, and the majority were female (63.3%). By professional category, nurses constituted the largest group (48.8%), followed by doctors (38.4%) and allied health professionals (12.8%). More than half of the participants (55.5%) worked in non-psychiatry medical or surgical departments, while only 12.3% were from psychiatry or psychiatric liaison services. Prior psychiatry training (≥2 weeks during undergraduate or postgraduate education) was reported by 41.9% of respondents. A personal history of mental illness was acknowledged by 13.7%, and a family history (first-degree relative) was reported by 18.7%.

Table 1: Sociodemographic and Professional Characteristics of Participants (N=422)

Characteristic	Category	n (%)	Mean ± SD
Age (years)	–	–	32.4 ± 8.7
Gender	Male	155 (36.7)	–
	Female	267 (63.3)	–
Professional category	Doctor	162 (38.4)	–
	Nurse	206 (48.8)	–
	Allied health*	54 (12.8)	–
Department type	Psychiatry	52 (12.3)	–
	Non-psychiatry (Medical/Surgical/ED/ICU)	234 (55.5)	–

	Other (Radiology, Lab, Admin)	136 (32.2)	–
Years of clinical experience	–	–	7.6 ± 6.3
Prior psychiatry training (≥2 weeks)	Yes	177 (41.9)	–
	No	245 (58.1)	–
Personal history of mental illness	Yes	58 (13.7)	–
	No	339 (80.4)	–
	Prefer not to say	25 (5.9)	–
Family history of mental illness (first-degree)	Yes	79 (18.7)	–
	No	321 (76.1)	–
	Prefer not to say	22 (5.2)	–
*Allied health includes physiotherapists, occupational therapists, medical social workers, and clinical psychologists.			

The mean total CAMI score (possible range 40–200) was 112.6 ± 18.4**,** indicating a moderate level of stigmatising attitudes in the overall sample. However, significant differences emerged across professional groups (**Table 2**). Nurses had the highest total stigma score (mean 121.3 ± 15.7), followed by allied health professionals (mean 108.2 ± 17.2), while doctors scored lowest (mean 103.5 ± 14.9). One-way ANOVA revealed a statistically significant difference between groups [$F(2,419) = 24.18$, $p < 0.001$, $\eta^2 = 0.10$]. Post-hoc Tukey tests showed that nurses had significantly higher total stigma than both doctors (mean difference 17.8, 95% CI 12.9 to 22.7, $p < 0.001$) and allied health professionals (mean difference 13.1, 95% CI 6.8 to 19.4, $p < 0.001$), whereas the difference between doctors and allied health was not statistically significant ($p = 0.12$).

When subscales of the CAMI were examined separately, the pattern was consistent: nurses scored highest on Authoritarianism and Social Restrictiveness (the two dimensions that reflect overt stigma), while doctors and allied health professionals scored higher on Benevolence and Community Mental Health Ideology, which indicate more accepting attitudes.

Table 2: Comparison of CAMI Scale Scores by Professional Category (Mean ± SD)

CAMI Subscale (possible range)	Doctors (n=162)	Nurses (n=206)	Allied Health (n=54)	F	p-value	η^2
Authoritarianism (10–50)	25.3 ± 5.1	32.7 ± 6.2	26.5 ± 5.8	28.46	<0.001	0.12
Benevolence (10–50)	34.9 ± 4.3	29.4 ± 5.1	33.1 ± 4.7	22.15	<0.001	0.10
Social Restrictiveness (10–50)	26.8 ± 5.5	34.2 ± 6.8	27.9 ± 5.9	25.33	<0.001	0.11
Community Mental Health Ideology (10–50)	36.5 ± 5.0	30.8 ± 5.7	34.2 ± 5.2	19.41	<0.001	0.09
CAMI Total (40–200)	103.5 ± 14.9	121.3 ± 15.7	108.2 ± 17.2	24.18	<0.001	0.10
Note: Higher scores on Authoritarianism and Social Restrictiveness indicate greater stigma. Higher scores on Benevolence and Community Mental Health Ideology indicate more favourable attitudes.						

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Stigma Measured by OMS-HC and Social Distance Scale

The OMS-HC total score (range 15–75, with higher scores indicating greater stigma) showed a similar pattern: nurses had the highest mean score (44.9 ± 8.3), followed by allied health (38.1 ± 7.9) and doctors (35.6 ± 7.2), with a significant ANOVA result [$F(2,419) = 19.57$, $p < 0.001$]. The Bogardus Social Distance Scale (range 7–35) demonstrated that nurses expressed a significantly greater desire for social distance (mean 24.7 ± 5.6) compared to doctors (18.4 ± 5.1) and allied health (20.1 ± 5.8) ($p < 0.001$ for both comparisons). **Table 3** summarises secondary stigma measures across professional groups.

Table 3: Secondary Stigma Measures by Professional Category (Mean ± SD)

Scale (possible range)	Doctors (n=162)	Nurses (n=206)	Allied Health (n=54)	p-value (ANOVA)
OMS-HC total (15–75)	35.6 ± 7.2	44.9 ± 8.3	38.1 ± 7.9	<0.001
Bogardus Social Distance (7–35)	18.4 ± 5.1	24.7 ± 5.6	20.1 ± 5.8	<0.001
MAKS knowledge score (0–6)*	4.9 ± 1.1	3.4 ± 1.3	4.2 ± 1.2	<0.001
*MAKS: Mental Health Knowledge Schedule – number of correct answers out of 6.				

Proportion of Participants with "High Stigma"

Using the upper quartile of the CAMI total score (≥128) as a cut-off for "high stigma", 28.9% (122/422) of all participants fell into this category. When stratified by profession**,** 44.7% (92/206) of nurses**,** 12.3% (20/162) of doctors, and 18.5% **(**10/54) of allied health professionals were classified as having high stigma. The association between professional category and high stigma status was highly significant ($\chi^2 = 38.96$, $df = 2$, $p < 0.001$).

Association with Department Type (Psychiatry vs. Non-psychiatry)

Participants working in psychiatry departments had significantly lower CAMI total scores (mean 94.3 ± 12.1) compared to those in non-psychiatry departments (mean 116.5 ± 16.8) (independent t-test: $t(284) = 9.02$, $p < 0.001$, Cohen's $d = 1.21$). Similarly, the proportion with high stigma was only 5.8% (3/52) in psychiatry staff versus 34.2% (80/234) in non-psychiatry staff ($\chi^2 = 17.45$, $p < 0.001$).

Effect of Prior Psychiatry Training

Respondents who reported prior psychiatry training (≥2 weeks) had lower CAMI total scores (105.2 ± 15.7) than those without such training (117.9 ± 16.3) ($t(420) = 7.86$, $p < 0.001$). Among doctors, those with prior psychiatry training (n=98, 60.5%) had mean CAMI total 98.8 ± 12.4 compared to 109.3 ± 14.1 in those without training ($p < 0.001$).

Association with Personal and Family History of Mental Illness

Participants who disclosed a personal history of mental illness had significantly lower stigma scores (CAMI total 104.1 ± 17.3) than those without such history (114.9 ± 18.1) ($t(395) = 4.21$, $p < 0.001$). Similarly, those with a family

history of mental illness (first-degree relative) scored lower (107.6 ± 16.8) than those without (116.2 ± 17.9) ($t(398) = 3.88$, $p < 0.001$). No significant interaction was found between gender and stigma scores ($t(420) = 1.42$, $p = 0.16$).

Table 4: Pearson Correlations between Continuous Variables and CAMI Total Score

Variable	Correlation with CAMI Total (r)	p-value
Age (years)	–0.18	<0.001
Years of clinical experience	–0.22	<0.001
MAKS knowledge score	–0.41	<0.001
OMS-HC total score	0.58	<0.001
Bogardus Social Distance score	0.62	<0.001
All correlations are significant at p < 0.001 (two-tailed).		

Bivariate Correlations

Pearson correlation coefficients (**Table 4**) showed that younger age and fewer years of clinical experience were weakly but significantly associated with higher stigma scores. Years of experience correlated inversely with CAMI total ($r = -0.22$, $p < 0.001$), suggesting that more seasoned professionals held slightly less stigmatising attitudes. Prior psychiatry training (dichotomous) showed a moderate negative correlation with CAMI total ($r = -0.36$, $p < 0.001$).

Table 5: Multiple Linear Regression Analysis for Predictors of CAMI Total Score (N=422)

Predictor	B (unstandardised)	SE	β (standardised)	t	p-value	95% CI for B
(Intercept)	124.6	5.2	–	23.96	<0.001	114.4 – 134.8
Age (years)	–0.12	0.09	–0.06	–1.33	0.18	–0.30 – 0.06
Gender (female vs. male)	–2.1	1.4	–0.06	–1.50	0.13	–4.9 – 0.7

Professional category						
– Nurse	15.4	1.9	0.48	8.11	<0.001	11.7 – 19.1
– Allied health	3.8	2.7	0.07	1.41	0.16	–1.5 – 9.1
Department type (psychiatry vs. non-psychiatry)	–3.7	2.4	–0.07	–1.54	0.12	–8.4 – 1.0
Prior psychiatry training (yes vs. no)	–9.8	1.5	–0.31	–6.53	<0.001	–12.7 – –6.9
Personal history of mental illness (yes vs. no)	–9.2	2.3	–0.19	–4.00	<0.001	–13.7 – –4.7
Years of clinical experience	–0.14	0.14	–0.05	–1.00	0.32	–0.41 – 0.13
Model summary: $R^2 = 0.404$, Adjusted $R^2 = 0.394$, $F(7,414) = 38.45$, $p < 0.001$.						

Independent Predictors of Stigma (Multiple Linear Regression)

A multiple linear regression model was constructed to identify independent predictors of the CAMI total score. The model included seven independent variables: age, gender, professional category (reference: doctors), department type (psychiatry vs. non-psychiatry), prior psychiatry training (yes/no), personal history of mental illness (yes vs. no), and years of experience.

The model was statistically significant [$F(7,414) = 38.45$, $p < 0.001$] and explained 39.4% of the variance in CAMI total scores (adjusted $R^2 = 0.394$). The strongest independent predictor was professional category (being a nurse vs. doctor, $\beta = 0.48$, $p < 0.001$), followed by prior psychiatry training ($\beta = -0.31$, $p < 0.001$) and personal history of mental illness ($\beta = -0.19$, $p = 0.003$). Department type (psychiatry vs. non-psychiatry) was not a significant independent predictor after controlling for profession and training ($p = 0.12$), suggesting that the protective effect of working in psychiatry is largely mediated by prior training and professional identity. **Table 5** presents the full regression output.

Discussion

This cross-sectional study of 422 healthcare professionals in a tertiary care hospital in India provides several important insights into the nature and determinants of stigma toward mental illness within the healthcare workforce. The findings add to the growing body of literature documenting that stigma is not merely a community phenomenon but is also prevalent among those who are professionally entrusted with patient care [3,5].

Younger age and fewer years of clinical experience were weakly but significantly correlated with higher stigma in bivariate analyses, but neither remained significant in the regression model after adjusting for other variables. The lack of a significant gender difference in the regression model is

notable, given that some Indian studies have reported higher stigma among females [11,12]. The present study's regression results suggest that when professional category, training history and personal/family contact are accounted for, gender adds little independent explanatory value.

Stigma by Professional Category

One of the most striking findings was the significant difference in stigma levels across professional groups, with nurses consistently exhibiting the highest stigmatising attitudes across all three measures (CAMI, OMS-HC and Bogardus social distance) compared to doctors and allied health professionals. Almost 45% of nurses fell into the "high stigma" category, compared to only 12% of doctors. This pattern corroborates emerging evidence from India. A 2024 comparative study of medical officers and nurses in Gujarat using the same CAMI scale found that nurses scored significantly higher on authoritarianism and social restrictiveness domains, leading the authors to conclude that "widespread mental health educational programs by tertiary care hospitals and psychiatrists under the District Mental Health Program" were urgently needed [7]. Similarly, a large study of 210 nursing staff at a tertiary care hospital in North India using the CAMI scale found that while nurses expressed positive attitudes toward the mentally ill on some domains, authoritarianism remained problematic and was significantly correlated with social restrictiveness [8]. A 2025 study from Pondicherry also confirmed that nurses and residents had the highest levels of stigma among all healthcare worker categories, with avoidance, coercion and pity being the most commonly endorsed factors [11].

These findings across multiple Indian studies suggest a consistent and concerning pattern: nurses, who often spend the greatest amount of direct time with patients, may paradoxically hold the most stigmatising attitudes. Several explanations for this are plausible. First, nursing training curricula in India typically allocate far fewer hours to psychiatric content compared to medical training [11]. Second, nurses often work on medical–surgical wards where they encounter patients with unrecognised or untreated psychiatric comorbidities, and without adequate training, such "unstructured contact" may reinforce rather than reduce stigmatising stereotypes [7,8]. Third, lower professional autonomy and decision-making latitude may contribute to a tendency toward rule-bound, restrictive attitudes [8].

Conversely, doctors in the present study had the lowest stigma scores. This finding aligns with a cross-sectional study of non-psychiatrist doctors across India which found moderately positive attitudes toward mental illness and psychiatry, with a mean MICA-4 score of 48.37 (lower scores indicating less stigma) [15]. However, that same study raised an important caveat: the domain of knowledge and misconceptions remained a significant source of stigma among doctors, suggesting that simply being a physician does not automatically confer stigma-free attitudes [15]. A mixed-methods study from South India similarly found that while quantitative stigma scores among doctors were low to moderate, qualitative interviews revealed "unintended and covert negative attitude toward mental illness" that was not captured by the scales alone [14]. Thus, the lower stigma scores among doctors in the present study should be interpreted cautiously; they may reflect more socially desirable responding rather than genuinely non-stigmatising attitudes [14].

Allied health professionals (physiotherapists, occupational therapists,

medical social workers and clinical psychologists) occupied an intermediate position between doctors and nurses. This is a novel contribution, as most prior Indian studies have focused exclusively on either doctors or nurses, with very few including allied health staff [9,11,12].

Department Type and Prior Psychiatry Training

The finding that individuals working in psychiatry departments had significantly lower stigma scores than those in non-psychiatry departments was not surprising and is consistent with prior Indian research [11]. However, the regression analysis revealed that department type lost its statistical significance after controlling for prior psychiatry training and professional category. This is an important nuance: it suggests that the protective effect of working in psychiatry is largely mediated by the specific training and repeated positive contact experiences that occur in that setting, rather than by department affiliation alone. This interpretation is consistent with a large body of evidence showing that contact-based interventions, especially those involving direct interaction with persons with mental illness in clinical or educational settings, are among the most effective stigma reduction strategies [16]. A psychiatry clerkship has been shown to reduce stigma toward mental illness and toward psychiatry itself, with the effect being more pronounced in general hospital settings where students encounter psychiatric patients outside of specialised psychiatric facilities [2,3].

Prior psychiatry training (≥2 weeks) emerged as one of the strongest independent predictors of lower stigma, with a standardised beta of –0.31 ($p<0.001$). This is consistent with systematic review evidence that educational interventions, particularly face-to-face contact-based sessions, demonstrate statistically significant medium-to-large effect sizes for improving attitudes toward mental illness [16]. Notably, the meta-analysis found that single-session interventions were just as effective as multiple sessions, suggesting that even brief, well-structured training modules could be a resource-efficient strategy for stigma reduction [16]. A one-day training session on borderline personality disorder has been shown to significantly reduce overall stigma on the OMS-HC scale across a range of health personnel, with improvements in knowledge and open-mindedness sustained post-training [17].

Personal and Family History of Mental Illness

Both a personal history of mental illness and a family history of mental illness were independently associated with significantly lower stigma scores, even after controlling for other confounders. This finding aligns with multiple Indian studies. The Pondicherry study found that healthcare workers with a family history of mental illness exhibited “lower negative attitudes compared to those without such history” [11]. A comparative study of medical and nursing students in Telangana reported that students with prior contact with individuals suffering from mental illness showed “lower stigma scores” compared to those without such contact [12]. Sathyanath et al. similarly concluded that personal acquaintance with a mentally ill individual was “the only significant factor that reduces medical professionals’ socially restrictive attitudes” [10].

These consistent findings across independent Indian samples point to a powerful phenomenon: direct, personal contact with mental illness (whether through one’s own experience or through a close family member) appears to break down the

"us–them" dichotomy that fuels stigma. Healthcare professionals who have personally navigated mental health challenges or have seen a loved one do so may develop greater empathy, a more nuanced understanding of recovery, and a reduced tendency toward blame or fear. From a theoretical standpoint, this is entirely consistent with the contact hypothesis and with the social cognitive model of stigma, which posits that knowledge, attitudes and behaviours are interrelated [18].

Knowledge and Stigma

The moderate negative correlation between MAKS knowledge score and CAMI total score ($r=–0.41$, $p<0.001$) suggests that greater factual knowledge about mental illness is associated with lower stigma. This is in line with a cross-sectional study from Jordan, which found a "negative significant correlation between HCPs' knowledge and attitude," indicating that HCPs with more knowledge had significantly more positive attitudes toward those suffering from mental illness [18]. The same study also found a stronger correlation between knowledge and intended behaviour: those with greater knowledge expressed more interest and willingness to deal with persons with mental illness [18]. The meta-analysis by Wong et al. [16] similarly concluded that educational interventions improve attitudes, although the effect on knowledge itself was not statistically significant. This suggests that while knowledge may be a mediator of attitude change, it is not sufficient on its own; experiential and affective components are also crucial.

Conclusion

This study demonstrates that stigmatising attitudes toward mental illness are widely prevalent among healthcare professionals in a tertiary care hospital in India, with nurses showing the highest levels across all stigma domains. Nearly one in three participants fell into the high-stigma category, rising to almost half among nurses. Prior psychiatry training, personal or family contact with mental illness, and greater mental health knowledge emerged as robust protective factors. The cross-sectional design and single-centre setting limit generalisability, and social desirability bias may have led to under-reporting of stigma. Nonetheless, the large sample and multidimensional assessment are key strengths. Future research should employ longitudinal designs to track stigma changes across training and practice, develop culturally adapted stigma-reduction interventions, and test randomised controlled trials of contact-based programmes specifically targeted at nursing staff. Until such evidence is generated, hospitals should prioritise mandatory, face-to-face anti-stigma workshops for all clinical staff. Addressing stigma within the healthcare workforce is not merely an academic exercise—it is a prerequisite for delivering equitable, compassionate care to persons with mental illness.

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