*Original Research Article*

# A Rural Community-Based Study on Public Stigma towards Mental Illness from Eastern India

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## ABSTRACT

**Background:** Considerable stigmatizing attitude exists towards persons suffering from mental illness in spite of considerable measures to counter stigma. The current study tried to explore level of public stigma towards mental illness from a rural community-based sample from Eastern India.
**Methods:** It was an observational study with cross-sectional design done in a village in Howrah District, West Bengal, India, in 2017. The interview schedule consisted of a socio-demographic and clinical proforma, Attitudes to Mental Illness Questionnaire (AMIQ) and Perceived devaluation discrimination scale (PDD).
**Results:** Of the 602 families, most respondents were females (60.1%) and members of nuclear family (60.6%). Negative attitude towards mental illness was found to be positively correlated to age of the responder, family size and monthly family income. A family history of use of prescription psychotropic medication in the family was found to be significantly correlated to less stigmatizing attitude to persons with mental illness (PMI).
**Conclusion:** Significant public stigma and negative attitude to mental illness exists exist in our sample. There can be discreet attributes in PMI that is distinct from the illness characteristics that needs our attention in the future for success of the anti-stigma campaign. The major limitation of our study was the use of a cross-sectional design and use of sample of convenience.

*Key-words:* Social Stigma; Public stigma; Mental illness; Community; Negative attitude

## INTRODUCTION

Stigma is conceptualized to be attributes of persons or institutions that evoke negative attitudes and outlook and often results in discrimination against the persons or institutions. Considerable amount research has been conducted on internalized stigma across various mental illnesses. The results have been consistently showing that stigma results in discrimination, segregation, and perceived reduction in autonomy and self-efficacy. [1,2] Public stigma in particular is defined as the degree to which the general public holds negative views and discriminates against a specific group. Research has also showed that the perception of public stigma to a large extent influences the level of internalized stigma in patients with mental illness. [3]

The relationship between internalized stigma and perceived stigma has been a matter of great interest for researchers. The initial assumption that high internalized stigma will be translated to high perceived stigma was negated by various studies. For example, in a sample of college students, when around 65% believed that someone receiving mental health treatment will be discriminated, 85% of the same sample reported that they themselves will

not be doing the same. [4] The complicated relationship assumes further importance because of the fact that measures to counter stigma, which were initially developed based on our understanding of self-stigma failed to live up to the expectations in addressing public stigma. [5]

The research on public stigma has been picking up over the last decade. The studies on public belief point out that the origin of the stigma often lies in the presenting symptoms of the mental disorders. The symptoms which are less correctly recognized and understood are more often seen as an expression of a mental illness. [6] The research also shows us that the belief about the origin of the disorders are more often based on unscientific conclusions explained by socio-cultural attributes than the concurrent scientific evidence. [7] Probably, as a result of this view, the help-seeking behavior of the public for mental disorders varied. It was seen that the tendency to seek help from a mental health facility increased if the respondent endorsed a scientific explanation about the etiology of the illness. [8] Public stigma also seemed to affect the decision of the type of treatment chosen; psychological interventions were considered to be more favorable as compared to pharmacological. [9] On the contrary, the public perceived treatment of mental illness as essential and the course of an untreated person was expected to be more severe. The studies so far has been unable to demonstrate any difference in the stigmatizing attitude between the genders or age. However, it was found that respondents with higher completed education endorsed scientific explanation of mental illness and endorsed medication for the same. [10,11] The research on public attitudes towards patients with mental illness shows a few interesting trends. Some studies show that the public see people with mental illness as vulnerable persons in need of help. [12] Whereas other studies have shown that the public sees mentally ill patients as unpredictable [13] and often violent and dangerous. [14]

Considerable variation in results is observed across various socio-cultural milieus. For example, in a study comparing the level of stigma across Novosibirsk (Russia), Ulaanbaatar (Mongolia) and Germany showed that the former two centers had a more stigmatizing attitude towards mentally ill persons. [15] In another study, conducting direct comparison of attitudes towards mentally ill, it was found that people from Mannhein, Germany (economically more developed) had a sophisticated outlook as compared to Grand Duchy of Luxembourg. [16] These results bear evidence to the necessity of investigating the public attitude across various centers. The differences were also observed among respondents from different ethnic background in a single centre. In a study by Rao et al, among community college students, it was found that African Americans and Asians perceived people with mental illness as more perilous and wanted more separation than Caucasians, and Latinos. [17]

India is the second most populous country in the world. Being constituted with various states and a conglomeration of people of various socio-cultural and ethnic background, the findings from a single centre cannot be generalized to the whole country. West Bengal, which is in the eastern part of the country, differs significantly in its socio-cultural perspectives from the rest of the country. In one of the early studies [18] conducted in West Bengal, using a qualitative method on randomly selected 21 non- affected laypersons and 17 health care providers, it was found that stigma was higher among the health care providers. In another recent study [19] conducted in a rural area of West Bengal (North 24Parganas district), using an observational, cross-sectional design, it was found that significant proportion of the respondents agreed that psychiatric illness are like other medical disorders and are amenable to treatment, with 70.96% people were accepting the fact that mental diseases can be curable. However, in spite of these

positive evidences, various questions remain unanswered.

In this background the current study was carried out with the aim of firstly assessing the attitude of a person to mental illnesses; secondly, to assess public stigma towards people with mental illness and thirdly, to examine the association of public stigma to mental illness with socio-demographic and clinical variables.

## METHODOLOGY

Our study was conducted in a rural village in Howrah District of West Bengal State, India. The information was gathered by personnel who had received 3 days training to aid in the administration of the interview schedule. Around 10% of the interviews were supervised by mental health professional. A convenient method of sampling was followed. The personnel tried to visit every household staying in the village. The chief decision maker (depending upon the consensus of the family members) was chosen for the interview. If the chief decision maker was not present on the first visit, another attempt was made on another day to interview him/her, failing which the family was asked to nominate another member as the chief decision maker, who was interviewed. Interview was preceded by obtainment of informed consent. According to our estimate we could survey about 95% of the families residing in the village in this study. Ethical Clearance was obtained from the Institute ethics committee.

The interview schedule consisted of a socio-demographic and clinical proforma, Attitudes to Mental Illness Questionnaire (AMIQ) and Perceived devaluation discrimination scale (PDD). The AMIQ [20] is a 5 item self-report questionnaire assessing the attitude of a person to mental illnesses. The respondents were presented with a short vignette about an imaginary patient from an identical socio-cultural background and then respond to five questions which were scored on a five-point likert scale ranging from strongly agree to strongly disagree (maximum +2, minimum -2) with *neutral* and *don't know* scored zero. The total score hovered between -10 and +10. A higher (more positive) score indicates a sympathetic or less stigmatizing attitude. The vignette was developed by a team of mental health experts.

The PDD [21] is a12 item scale that assesses perceived stigma of mental illness. It is used to assess the extent to which a person believes that other people will devalue or discriminate against someone with a mental illness. The scale assesses the items on a 6 point likert scale ranging from 1 (strongly agree) to 6 (strongly disagree). Higher scores in this scale are indicative of higher perceived stigma.

**Statistical Methods**

The socio-demographic data was analysed using descriptive statistics. The scores on AMIQ and PDD were compared across various sub-groups created by classification of socio-demographic data using Kruskal Wallis test or Mann Whitney U test when the data had a non-parametric distribution and Students t-test or analysis of variance (ANOVA) when the data had a normal distribution. The scores on PDD and AMIQ were correlated with the continuous variables in socio-demographic data. The data was further examined to fit into a linear regression model, but the prediction model was not found to be statistically significant.

## RESULTS

The total number of families that were interviewed in the village was 602. The socio-demographic and clinical parameters of the families have been described in table 1. The respondent sample had higher frequency of females and being a part of a nuclear family.

The scores on AMIQ were found to be significantly and positively correlated to the age, family income and number of family members of the respondents, but, the scores on PDD was not correlated to any of the socio-demographic variables (Table 2).

**Table 1- Socio-demographic & clinical variables of the families; #-Median**

| Sociodemographic variables | Mean (S.D)/Median* or Frequency (%) |
|---|---|
| **Age** | 40.89 (14.44) |
| **Education** (years) | 12.26 (3.99) |
| **Gender** Male Female | 240 (39.9%) 362 (60.1%) |
| **Occupation** Professional/ Higher Executive/ Business | 80 (13.3 %) |
| Middle /Lower Executive/ Skilled Worker | 193 (32.0%) |
| Unskilled Worker/Farmer | 207 (34.4%) |
| Student/ Housewife/ Retired/Unemployed | 122 (20.3%) |
| **Type of family** Nuclear Joint | 365 (60.6) 237 (39.4) |
| **Number of family members** | 4# |
| **Number of earning members** | 1# |
| **Monthly income** (in Rupees per month) | 12830.21 (13.967.14) |
| **History of Psychotropic medication in family** Yes No | 10 (1.7) 592 (98.3) |
| **History of Psychiatric illness in family** Yes No | 17 (2.8) 585 (97.2) |
| **AMIQ** | 2.42 (2.59) |
| **PDD** | 17.58 (3.06) |

The correlated socio-demographic variables were further analyzed by fitting into a linear regression model. The prediction model though was statistically significant, $F(3, 598) = 6.940$, $p < .001$), accounted only for approximately 3% of the variance of AMIQ scores ($R^2 = 0.034$, Adjusted $R^2 = 0.029$) (Table 3).

Intra-class comparison of the scores on AMIQ and PDD is shown in Table 4. The analysis showed that families with a history of taking psychotropic medication in the family had a significantly higher score on AMIQ.

**Table 2- Correlation between the scores on PDD and AMIQ with the socio-demographic variables**

| | PDD | AMIQ |
|---|---|---|
| Age | 0.059 | 0.104* |
| Years of education | -0.044 | -0.011 |
| Family income | 0.011 | 0.137** |
| Number of family members | -0.047 | 0.082* |

**\*\* p<0.01.\* p<0.05.**

**Table3- Summary statistics, correlations and results from the regression analysis of AMIQ**

| | | | | Multiple regression weights | |
|---|---|---|---|---|---|
| Variable | Mean | Std | Correlation | B | β |
| **AMIQ** | | | | | |
| Number of family members | 4.21 | 1.847 | 0.082* | 0.803** | 0.129 |
| Age | 40.89 | 14.44 | 0.104* | 0.018* | 0.098 |
| Family Income | 12830.21 | 13.967.14 | 0.137** | 0.077 | 0.055 |

**\*\* p<0.01.\* p<0.05.**

**Table 4- comparison of scores of PDD & AMIQ between subgroups created based socio-demographic variables,**

| | | AMIQ | | PDD | |
|---|---|---|---|---|---|
| | | Mean (SD) | Mann-Whitney U test/ Kruskal-Wallis Test; p-value | Mean (SD) | t-Test / ANOVA; p-value |
| **Gender** | **Male** (N= 240) | 2.36 (2.63) | U= 42331; p= 0.59 | 17.80 (3.028) | F= 0.030; p= 0.86 |
| | **Female** (N= 362) | 2.46 (2.58) | | 17.43 (3.075) | |
| **Type of Family** | **Nuclear** (N= 365) | 2.28 (2.60) | U=39994; p= 0.12 | 17.60 (2.993) | F= 0.566; p= 0.45 |
| | **Joint** (N=237) | 2.64 (2.59) | | 17.55 (3.165) | |
| **Family history of Psychiatric illness** | **Present** (N= 17) | 2.59 (3.20) | U=4600.5; p= 0.60 | 18.06 (4.39) | F= 1.094; p= 0.30 |
| | **Absent** (N=585) | 2.42 (2.59) | | 17.57 (3.02) | |
| **Family history of Psychotropic medication** | **Present** (N= 10) | 2.20 (3.05) | U= 2928; p= 0.95 | 18.80 (5.53) | F= 6.688; p= 0.01** |
| | **Absent** (N=592) | 2.42 (2.60) | | 17.56 (3.00) | |
| **Occupation** | **Professional/ Higher Executive/ Business** (N=80) | 1.95 (2.77) | F=3.555; p= 0.31 | 17.50 (2.62) | F= 0.321; p= 0.81 |
| | **Middle /Lower Executive/ Skilled Worker** (N=193) | 2.48 (2.69) | | 17.76 (3.15) | |
| | **Unskilled Worker/Farmer** (N=207) | 2.42 (2.56) | | 17.48 (2.96) | |
| | **Student/ Housewife/ Retired/Unemployed** (N= 122) | 2.64 (2.39) | | 17.58 (3.06) | |

**\*\* p<0.01.**

## DISCUSSION

Our study sample showed a higher proportion of female respondents, as compared to males. This was probably due to the fact that the usual period of home-visits were made during the time when male members would have been out of the home due to occupational obligations. Only 2.8% of the respondent family reported of a history of psychiatric illness in the family ad 1.7% reported of history of psychotropic medication in the family. This was found to be less than the estimates of the National Mental Health Survey conducted in India, which showed the prevalence of any mental illness at 10.6%. [22] One possible reason behind this could be under-reporting due to recall bias as the sample had a higher proportion of nuclear families and details about mental illness in the extended family members could have been forgotten.

The measures of correlation between the socio-demographic variables and the scores on PDD did not show any significant association. This result is supported by the fact that previous studies have shown that public stigma is influenced not influenced by the age of the respondents. [11] Our study however failed to the previous evidence that public stigma is associated with the educational classification of the respondents, [23] though it must be stated that like our study various studies previously had also noted that the association is lacking. [24] Our findings however show that age, average family income and number of family income were positively correlated to the attitude towards mental illness. This means that in our sample, as the age or the monthly family income of the family of the respondents increased, the view towards mental illness became more sympathetic, though this necessarily didn't translate into a positive outlook to the patients with mental illness. This finding should be considered important in the context of the failure in the various anti-stigma measures. Our attempts may have been flawed in the assumption that targeting the illness attributes should be

sufficient in our pursuit of abolishing public stigma. But probably, further research should be conducted in finding out patient specific attributes in mental illness that needs separate consideration.

Further analysis of our data showed that the responses did not significantly vary with the gender of the respondents. This finding is well supported by previous research. [11] This result must also be seen in the light of the fact that though West Bengal has a male: female ratio of more than 1 and our study population has an inverse ratio in that aspect, the overall public attitude and stigma did not vary. Our results also showed that a positive family history of psychiatric illness didn't significantly affect the stigmatizing attitude. Only a history of use of prescription psychotropic medication in the family, significantly lead to a decrease in public stigma towards people with mental illness. Previous studies in this regard had shown that people who had lesser public stigma was found to believe that psychotropic medications are useful in the treatment of psychiatric disorders, [25] which is supported by the findings in our study.

The major strengths of our study were the use of well validated instruments and conducting the study at a community level which should allow appreciable generalizability of the findings to rural sectors of West Bengal. The major limitation of our study was the use of a cross-sectional design and use of sample of convenience.

## CONCLUSION

To conclude, our study showed that the levels of public stigma in a rural setting in West Bengal is not dependent on the gender, occupation, educational status or family history of psychiatric illness in the family. The study also showed that the factors that could lead significant discriminatory attitude in the public need not be similar for the patient with psychiatric disorder and the illness itself. Our study showed that a positive family history of psychotropic medication was

significantly associated with decreased public stigma but not with a positive attitude about mental illnesses. On the other hand; age of the respondents, monthly income of the family and a larger family size was associated with a positive attitude about mental illnesses but not with lesser public stigma. Future endeavors in this regard should attempt to reproduce these results in other socio-cultural settings, understand the reasons for this differential explanation of the phenomena and how this information can be useful in our campaign to reduce public stigma towards mental illness.

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