Stigma toward individuals with mental illness among Indian adolescents:

Findings from three secondary schools and a cross-cultural comparison

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Abstract

Despite the importance of understanding public attitudes toward mental illnesses, few studies have examined the views of young people or individuals in non-western settings. We aimed to assess the prevalence of stigma toward individuals with mental illness among youths in India, examine factors associated with stigma, and compare stigma cross-culturally with a sample of American youths. Our sample consisted of 945 Indian secondary school students (49.7% female, *Mean age*=14.21) from three high schools in Maharashtra, India. Participants completed a social distance scale to assess stigma, as well as measures of depressive symptoms and anxiety symptoms. Stigma toward individuals with mental illness was commonly reported: only 42% of students reported that they were willing to talk with someone with a mental illness, and 41% were willing to be friends with someone with a mental illness. Gender and age were significantly associated with stigma, with males and younger students reporting greater stigma. Participants' depressive symptoms and anxiety symptoms were not associated with stigma. Furthermore, compared to American adolescents from a different sample who completed the same stigma measure, Indian adolescents reported significantly more stigma ($d = 0.55$). Overall, this study provides one of the first direct cross-cultural comparisons of stigma among youths and highlights the need for greater awareness about mental illnesses among Indian adolescents. These findings raise concern for the potential consequences of psychiatric labels for youths in non-western settings. Strategies and approaches to combat the harmful effects of stigma are discussed.

Keywords: Stigma; mental illness; adolescence; cross-cultural psychology; depression and anxiety

Introduction

People commonly possess negative beliefs, express negative attitudes, and display negative behaviors toward people who experience mental illnesses (i.e., stigma). Formally, stigma involves stereotypes (e.g., dangerousness or incompetence), prejudice (e.g., fear), and discrimination (e.g., avoidance, exclusion) toward individuals of a particular group (Corrigan & Watson, 2002). These beliefs, affective responses, and behaviors can manifest as *self-stigma* (i.e., the beliefs and feelings that an individual holds about their own group) or *public stigma* (i.e., the beliefs and feelings that others have about a group). For individuals with a mental illness, both self-stigma and public stigma are common (Corrigan & Watson, 2002). The experience of stigma among individuals with mental illnesses often involves shame, blame, isolation, and social exclusion (Byrne, 2000). Previous research has suggested that, in many cultures, stigmatizing beliefs and behaviors are not only found in adults. Rather, these beliefs often develop gradually from childhood to adolescence (Wahl et al., 2012; Wahl, 2002). As a result, children and adolescents with mental illnesses may experience a variety of negative consequences. These include social rejection, bullying, isolation, reluctance to seek help, and self-stigma (Wahl, 2002; Kranke & Floersch, 2009; Moses, 2010). Given these consequences, understanding stigma in children and adolescents is a public health priority (Wahl, 2002; Link et al., 1999).

Previous research on western samples has attempted to examine the prevalence of stigma and demographic factors that are associated with stigma. Such research has revealed that female students tend to report less stigma than males, and the relationship between socioeconomic status and stigma is unclear (Kaushik et al., 2016; Thornicroft, 2006). There have been inconclusive findings regarding the relationship between age and stigma (Kaushik et al., 2016), with some

studies finding that younger students endorse more stigma (Swords et al., 2011) and others finding that older students endorse more stigma (McKeague et al., 2015). One major limitation of the research so far is that it has focused nearly exclusively on high-income western countries. For example, a recent systematic review identified 32 studies examining mental health stigma among children and adolescents (Kaushik et al., 2016); of these, zero were in a low- or middle-income country, and only two were in non-western countries (Israel and Japan).

It is especially important to understand how stigma manifests in low- and middle-income countries (LMICs). Mental illnesses are leading causes of disability in LMICs and most mental illnesses develop in late childhood and adolescence (Patel et al., 2007). For example, in India, it has been estimated that one in ten children and adolescents experience a mental disorder (Shastri, 2009) (though estimates range widely based on methods used (Grover et al., 2019), yet 90% of those with a disorder do not receive treatment (Shastri, 2009). With this in mind, there have been limited efforts to understand stigma toward individuals with mental illnesses among children and adolescents in LMICs, and additional research is warranted. Ideally, such research would include well-validated assessment tools that allow for direct cross-cultural comparisons.

In this study, we assessed stigma toward individuals with mental illness among a sample of middle and high school students in Maharashtra, India. We assess the overall rate of stigma (operationalized via a social distance questionnaire), compare the rate of stigma to findings from young people in the United States, and examine associations between stigma and gender, age, depressive symptoms, and anxiety symptoms.

Methods

Participants

We used baseline data from a randomized controlled trial of online mental health promotion interventions conducted in Maharashtra, India. Detailed information about the trial, recruitment methods, and data collection procedures have been described elsewhere (*citation masked for review*). Briefly, eligible participants were adolescents (grades 7 to 12) attending three secondary schools in Maharashtra. Because we aimed to recruit a representative sample of students from these schools, all adolescents were eligible to participate regardless of their baseline symptoms severity.

Baseline data were collected from June to August of 2019 in three high schools. The schools were chosen to reflect geographic and socioeconomic diversity: one was a well-resourced urban school, one was an urban school serving middle class youths, and one was a rural school serving working class youths (*citation masked for review*). The survey included two attention checks; we included only those participants who successfully passed both attention checks ($n=945$). Students filled out the questionnaires online in a school computer lab (via Qualtrics) or via pencil-and-paper. Surveys were administered during regularly-scheduled class time in order to acquire a large sample size, reduce barriers to participation, and increase the likelihood of recruiting a sample that was representative of the student body at each school. Study procedures were approved by the Sangath Institutional Review Board; Sangath is a non-governmental organization in India that regularly performs mental health promotion research in community settings.

Measures

We administered measures of depressive symptoms, anxiety symptoms, stigma, and demographic information. These questionnaires are described below.

Depressive Symptoms (PHQ-9)

The Patient Health Questionnaire-9 (PHQ-9) is a measure of depressive symptoms. The PHQ-9 has demonstrated adequate reliability (Cronbach's alpha of .86-.89) and validity (Kroenke & Spitzer, 2002), and it has been used with Indian adolescents (Ganguly et al., 2013; Wasil, Venturo-Conerly, et al., 2020). Example items from the PHQ-9 include "little interest or pleasure in doing things" and "thoughts that you would be better off dead, or of hurting yourself." Participants are asked to rate the frequency of each item over the past two weeks. Items are scored from 0 ("Not at all") to 3 ("Nearly every day"); total scores can range from 0 to 27, with higher scores indicating greater depressive symptoms. In our sample, the PHQ-9 demonstrated adequate reliability (Cronbach's alpha=0.75). Scores of 5, 10, 15, and 20 represent cutoffs for mild, moderate, moderately severe, and severe depression (Kroenke & Spitzer, 2002).

Anxiety Symptoms (GAD-7)

The GAD-7 is a measure of anxiety symptoms (Spitzer et al., 2006). It has shown adequate internal consistency (Cronbach alpha=.92) in samples of youths in North America, as well as strong validity (Spitzer et al., 2006). The GAD-7 has been used extensively in cross-cultural contexts, including with students in India (Wasil, Park, et al., 2020; Spitzer et al., 2006). Items are scored from 0 ("Not at all") to 3 ("Nearly every day"); total scores can range from 0 to 21, with higher scores indicating greater anxiety symptoms. In our sample, the GAD-7 demonstrated adequate reliability (Cronbach's alpha=0.83). Scores of 5, 10, and 15 represent cutoffs for mild, moderate, and severe anxiety (Spitzer et al., 2006).

Stigma (Social Distance Scale)

We used a social distance scale based on the World Psychiatric Association's anti-stigma schools project (World Psychiatric Association, 2000) and previous research with secondary school students (Wahl et al., 2012; Pinfold et al., 2003). Social distance scales assess

participants' willingness to interact with a person in different kinds of settings and relationships. Social distance scales are one of the most commonly used approaches to assess stigma toward individuals with mental illnesses (Link et al., 2004). Consistent with past research (Wahl et al., 2012), we did not provide participants with a definition of "mental illness." This choice was made to enable participants to respond with their own definition of what a "mental illness" constituted, to allow our findings to be directly compared to a previous study (Wahl et al., 2012), and to avoid imposing a western conceptualization of mental illness.

The social distance scale included eight items asking individuals about their willingness to interact with individuals with mental illness (Wahl et al., 2012). Each item was rated on a 5-point Likert scale from definitely unwilling to definitely willing. Example items include "Talk to someone with a mental illness" and "Invite someone with a mental illness to your home." Items were scored from 1 ("Definitely willing") to 5 ("Definitely unwilling"), and the sum of the item scores constituted a participant's total stigma score. The total score ranged from 8 to 40, with higher scores indicating greater stigma. In our sample, the social distance scale demonstrated strong internal consistency (Cronbach's $\alpha=0.91$).

Analyses

We calculated descriptive statistics for each item of the social distance scale, as well as the total score. To examine associations between other variables and stigma, we constructed a mixed-effect regression model. Gender, age (centered at the mean), depressive symptoms, and anxiety symptoms were included as predictors, and a random intercept was included for school. This model allowed us to examine the association of each variable with stigma while controlling for all other variables, and the random intercept was included to address clustering within schools. We also used clinical cut-offs for the PHQ-9 or GAD-7 (Kroenke & Spitzer, 2002;

Spitzer et al., 2006) to compare stigma among high-symptom youth and low-symptom youth (see online supplement). As an exploratory analysis, we conducted a t-test to examine if there were differences between students at the rural school and those at the two urban schools.

We compared our findings to those reported by a previous study examining stigma in American adolescents (Wahl et al., 2012). We chose to compare our findings to those of this study because it is one of the only studies examining stigma in American youths, and it included the same assessment tool used in the present study. In order to draw comparisons, we applied the scoring rule for the social distance scale (described above) to data that were presented in Table 4 of the paper on American youths (Wahl et al., 2012). The participants in that study were seventh and eighth grade students ($n=193$, 53% female, *Mean age*= 12.5 ± 0.6 , 87% white) at four middle schools in the United States; data were collected from November 2008 to April 2009 (Wahl et al., 2012). For this comparison, we performed an independent sample t-test on each item of the social distance scale, as well as the total score.

Results

Sample Characteristics

Our final sample consisted of 945 adolescents (see Table 1 for sample demographics). Females reported higher depressive symptoms ($M_{\text{females}}=8.39$, $SD_{\text{females}}=5.28$, $M_{\text{males}}=7.36$, $SD_{\text{males}}=4.85$, $p=0.002$, $d=0.20$) and anxiety symptoms ($M_{\text{females}}=8.29$, $SD_{\text{females}}=4.99$, $M_{\text{males}}=6.41$, $SD_{\text{males}}=4.47$, $p<0.001$, $d=0.37$) than males.

Table 1

Sample Demographics

	<i>N (%) or M (SD)</i>
Sex	
Female	460 (49.7%)
Male	466. (51.3%)
Age	14.21 (1.54)
PHQ-9	7.91 (5.09)
GAD-7	7.40 (4.83)

Caption: Table 1 shows participants' demographic characteristics.

Social Distance Scale Responses

Table 2 summarizes responses to the social distance scale.

Table 2

Social Distance Scale Responses

Item	Definitely Willing (N) (%)		Probably Willing (N) (%)		Neither Willing nor Unwilling (N) (%)		Probably Unwilling (N) (%)		Definitely Unwilling (N) (%)	
Talk to someone with a mental illness	136	15%	249	27%	281	30%	122	13%	148	16%
Make friends with someone with a mental illness	140	15%	240	26%	268	29%	159	17%	127	14%
Have someone with mental illness as neighbor	108	12%	199	21%	329	35%	152	16%	146	16%
Have someone with a mental illness in a class with you	152	16%	234	25%	284	30%	142	15%	122	13%
Sit next to someone with a mental illness	123	13%	182	20%	266	29%	172	18%	188	20%
Invite someone with a mental illness to your home	136	15%	199	21%	275	30%	160	17%	162	17%
Work on a class project with someone with mental illness	155	17%	224	24%	248	27%	165	18%	142	15%
Go on a date with someone with a mental illness	50	5%	82	9%	178	19%	157	17%	465	50%

Caption: Table 2 shows participants' responses to the eight items of the social distance scale. Possible scores on the Social Distance Scale range from 8 to 40, with higher scores indicating greater stigma. In our sample, the mean score was 24.61, and the standard deviation was 7.92.

Associations between Stigma, Demographic Variables, and Symptoms

Table 3 presents the results of our mixed-effect linear model. Gender and age were associated with stigma, with males and younger students reporting more stigma. The relationship between stigma and mental health was non-significant, and it remained non-significant when comparing high-symptom and low-symptom youths (see online supplement).

Table 3

Mixed-Effect Regression Model with Gender, Age, and Mental Health as Predictors of Stigma

<i>Fixed Effect</i>	Stigma		
	<i>B</i>	<i>SE</i>	<i>p</i>
(Intercept)	24.14	1.33	<0.001
Gender (Male)	3.21	0.50	<0.001
Age (centered)	-1.19	0.17	<0.001
Depression Symptoms (PHQ-9)	0.01	0.07	0.859
Anxiety Symptoms (GAD-7)	-0.07	0.07	0.343
<i>Random Effect</i>	<i>Variance</i>	<i>Standard Deviation</i>	
School (Intercept)	4.22	2.05	
Residual	54.33	7.37	

Caption: Table 3 shows the results of a mixed-effect regression model, with social distance scale scores as the dependent variable. Gender, age (centered at the mean value), depressive symptoms, and anxiety symptoms were entered as predictors, and a random intercept was included for school (to account for clustering). Possible scores on the PHQ-9 range from 0 to 27, with higher scores indicating greater depressive symptoms. Possible scores on the GAD-7 range from 0 to 21, with higher scores indicating greater anxiety symptoms.

Comparing Stigma between Rural and Urban Students

Students at the rural school reported higher stigma scores than students at the two urban schools ($M_{\text{rural}}=26.46$, $SD_{\text{rural}}=7.00$, $M_{\text{urban}}=23.80$, $SD_{\text{urban}}=8.16$, $p<0.001$, $d=0.34$).

Comparing Stigma between Indian Adolescents and American Adolescents

Table 4 compares responses on the social distance scale between our sample and a sample of American adolescents (Wahl et al., 2012). Indian adolescents endorsed significantly more stigma than the US adolescents.

Table 4

Comparison Between Indian Adolescents and American Adolescents

<i>Item</i>	Indian Sample (Present Study)		American Sample (3)		t-test Results			
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>p-value</i>	<i>Mean Difference</i>	<i>CI</i>	<i>Effect Size (d)</i>
Total Score on Social Distance Scale	24.61	7.92	20.23	8.40	<0.001	4.38	[3.08, 5.68]	0.55
Talk to Someone (Item 1)	2.89	1.26	1.97	1.04	<0.001	0.92	[0.74, 1.08]	0.74
Make Friends	2.89	1.25	2.12	1.08	<0.001	0.76	[0.59, 0.93]	0.62
Neighbor	3.03	1.21	2.28	1.11	<0.001	0.75	[0.58, 0.93]	0.63
Classmate	2.84	1.25	2.39	1.08	<0.001	0.45	[0.28, 0.62]	0.37
Sit Next To	3.13	1.30	2.66	1.21	<0.001	0.47	[0.27, 0.66]	0.36
Invite to Home	3.01	1.29	2.68	1.19	<0.001	0.33	[0.14, 0.51]	0.26
Work on Project	2.91	1.30	2.84	1.25	0.48	0.07	[-0.13, 0.27]	0.05
Go on Date (Item 8)	3.97	1.24	3.59	1.07	<0.001	0.38	[0.21, 0.56]	0.32

Caption: Table 4 compares responses on the social distance scale between Indian adolescents (present study) and American adolescents (Wahl et al., 2002). Possible scores on the Social Distance Scale range from 8 to 40, with higher scores indicating greater stigma.

Discussion

We assessed stigma toward individuals with mental illnesses in a sample of 945 Indian adolescents. Using a social distance scale, we found relatively high levels of stigma in our sample. For instance, only 42% of adolescents reported that they were “probably or definitely” willing to talk to someone with a mental illness and 41% were willing to become friends with someone with a mental illness. Additionally, only 36% said they were willing to invite someone with a mental illness to their home. The greatest social distance was reported for going on a date with someone with a mental illness; 67% of adolescents were unwilling and only 14% were willing.

Overall, these findings suggest that stigma toward individuals with mental illness is highly common among Indian adolescents. These findings shed light on some of the potential harmful or iatrogenic effects of “labeling” youths with psychiatric diagnoses (Sartorius, 2002). While accurate psychiatric diagnosis can be useful for treatment selection, many youths may experience negative stereotypes and prejudices surrounding their diagnosis (i.e., self-stigma), or fear that others will find out about their diagnosis and exclude them (i.e., public stigma). One potential remedy involves interventions that do not label participants with emotional or behavioral disorders. For example, interventions that focus on developing “character strengths” or “life skills” (Osborn et al., 2019) may be most appropriate in contexts where stigma is common. Additionally, digital self-help interventions may be especially promising. Past research has shown that individuals across multiple cultures feel less stigma toward self-help options, and digital self-help programs often include evidence-based content (Andrade et al., 2014; Wasil et al., 2019a). In addition to interventions designed to reduce stigma, future research is needed to

examine how treatments for mental health problems may circumvent some of the negative effects of self-stigma and public stigma.

We also examined potential differences in stigma based on sample characteristics. For instance, consistent with prior literature with youths from western countries (Kaushik et al., 2016), we found that boys reported more stigma than girls. It is possible that males express more stigma than females due to gender roles within Indian culture. For instance, previous research has shown that Indian women are socialized to be more understanding and accepting toward the needs of others (Menon, 2000; Raval & Martini, 2011). Another possible explanation is that adolescent girls are more likely to engage in emotional self-disclosures than adolescent males, and adolescents commonly have same-sex friendships (Papini et al., 1990). As a result, female students may be more likely to have friends who openly describe their experiences with mental illnesses, potentially reducing stigma among their peers. Additionally, while the relationship between age and stigma has been inconclusive in western contexts (McKeague et al., 2015; Swords et al., 2011), we found that younger students reported more stigma than older students. Our findings, if replicated, may suggest that stigma declines as students become older and become more likely to learn about mental illnesses, meet people with mental illnesses, and reject myths about individuals with mental illnesses.

Surprisingly, after controlling for gender and age, we did not find an association between stigma and depressive symptoms or stigma and anxiety symptoms. This finding suggests that even individuals with higher reported levels of anxiety or depression experience stigma toward others with mental illness and highlights the prevalence of self-stigma (Corrigan & Watson, 2002). Thus, anti-stigma programs may be useful not only for “normative” youths but also youths who themselves experience mental illnesses. Moreover, we found that stigma seemed

especially high among youths in the rural high school, suggesting that stigma reduction interventions tailored for rural populations may be especially useful.

Compared to American middle school students (Wahl et al., 2012), the students in our sample reported more stigma. Specifically, total scores on the social distance scale were 22% higher in our sample of Indian adolescents. The differences were especially strong for talking to someone with a mental illness, being the neighbor of someone with a mental illness, or making friends with someone with a mental illness. Importantly, data from the previous study (Wahl et al., 2012) were collected between 2008 and 2009, whereas data from our study were collected in 2019. Additionally, the mean age of the sample in the previous study was 12.5, while the mean age of our sample was 14.2. Since younger students in our sample reported more stigma, we might have found an even greater difference between Indian and American adolescents if our samples were matched on age.

Our findings also have implications for future research and interventions with Indian adolescents. For example, the high rate of stigma emphasizes the need for culturally appropriate interventions that can change attitudes toward individuals with mental illnesses. Interventions that have been shown to reduce stigma in western contexts often include a *psychoeducation* component (in which participants learn about mental illnesses) and a *contact* component (in which participants hear about the lived experiences of someone with a mental illness) (Campbell et al., 2011; Pinto-Foltz et al., 2011). While these interventions have generally been tested in western settings (Griffiths et al., 2014), some recent work has been conducted in non-western settings such as Turkey (Bayar et al., 2009) and Nigeria (Vinson et al., 2016). Our findings suggest a clear need to adapt evidence-based stigma interventions for Indian adolescents. One approach could involve contact interventions that incorporate *recovery self-disclosures*, as stories

emphasizing recovery from mental illness can be especially salient (Wasil et al., 2019b). Another approach could involve training lay counselors to deliver school-based stigma interventions. Recent work in India (Shinde et al., 2018) and other LMICs (Osborn et al., 2019) has shown that school-based interventions led by lay counselors can effectively promote health and mental health. However, to our knowledge, these approaches have not yet been applied to target stigma among adolescents.

Efforts to reduce stigma among Indian adolescents might be especially impactful if they are widely disseminated through social media campaigns. For example, in 2018, Bollywood actress Deepika Padukone published an essay about her experience with depression and anxiety and launched the #NotAshamed campaign, an initiative designed to address stigma around mental illness (Elle Team, 2018; Outlook Web Bureau, 2018). Padukone's social media posts were shared widely on social media, receiving over 1,000,000 likes on Instagram. Importantly, the impact of an intervention is not only influenced by its reach but also by its efficacy. Therefore, partnerships between mental health professionals and celebrities may be especially useful, pairing evidence-based stigma reduction strategies with the expertise and reach of highly influential figures.

Strengths of our study include its large sample size, the use of a well-validated stigma measure, a diverse set of schools, and a sampling strategy that involved reaching a representative sample of students at participating schools. One limitation is that we exclusively sampled high school students, and our findings may not generalize to other Indian youths. Additionally, consistent with past research (Wahl et al., 2012), participants were free to interpret the term "mental illness" in relation to their own understanding of mental illness. Research on Indian adults suggests that stigma differs depending on the mental illness described (Kermode et al.,

2009). In future research, greater specificity about what constitutes mental illness is needed to tease apart attitudes toward individuals with different diagnoses (e.g., depression vs. schizophrenia).

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