Countries and Cultural Differences in the Stigma of Mental Illness: The East–West Divide

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Abstract

Mental illness is a global public health crisis. Although rates of untreated cases stand as a primary problem, stigma is a significant obstacle. Yet, global differences in levels and roots of stigma remain poorly understood. Using the Stigma in Global Context–Mental Health Study (SGC-MHS) data, we analyzed data on two components of stigma—prejudice and discriminatory potential—attached to clinically diagnostic cases of depression and schizophrenia. We examined whether stigma was higher in the East than West. Furthermore, we hypothesized that the link between prejudice and discriminatory potential in the East was due, in part, to cultural differences in the attributions about mental illness. With SGC-MHS' nationally representative vignette data from over 11,000 respondents in 11 relevant countries (four Eastern, seven Western), analyses replicated past research of higher levels of stigma and more moral attributions in Eastern countries, particularly for depression. Moreover, prejudice-related disclosure spillover concerns predicted discriminatory potential (social distance) in the East, but not the West; this was driven by a greater emphasis on moral attributions in the East. Finally, exploratory analyses found that Western respondents endorsed higher discrimination for minority (vs. majority) group members with mental illness. In Eastern countries, the same pattern emerged for schizophrenia, but the reverse occurred for depression—greater stigma for majority as compared with minority group members. Together, these findings suggest that cultural differences in the sources of prejudice and attributions about the etiology of mental illness contribute, at least in part, to global differences in the profile of stigma.

Keywords

mental health stigma, global, double jeopardy, depression, schizophrenia, mental illness

Although one in four people worldwide experience a mental or neurological disorder at some point during their lifetime, nearly two thirds of those individuals never receive treatment (Steel et al., 2014). While causes from impoverished resources to limited understandings contribute to the low utilization of mental illness treatment and prevention, stigma—the prejudice and discrimination attached to "devalued" attributes (e.g., mental illness; Goffman, 1963)—is seen as a

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cultural and structural current underlying the crisis (Link & Phelan, 2001; Pescosolido & Martin, 2015).

Several studies have identified cultural differences in treatment utilization, notably for individuals from Asian (e.g., Eastern) cultures (e.g., Han & Pong, 2015; Sue, 1999). For example, one study found that Asian students on U.S. college campuses were less likely to utilize mental health treatment than students with European ancestry (Han & Pong, 2015), despite the fact that both had similar access to service. This finding suggests that other factors, notably stigma, might contribute to the treatment utilization disparity. Indeed, several studies have found there to be higher stigma toward individuals with mental illness among individuals from Eastern versus Western countries (e.g., Cheng, 2015; Loya et al., 2010; Mirza et al., 2019; Rao et al., 2007). This pattern has been observed among individuals from several different Eastern (e.g., China, Korea, Japan) and Western countries (e.g., Australia, Great Britain, United States; Barry & Grilo, 2002; Cheon & Chiao, 2012; Griffiths et al., 2006; Mellor et al., 2013), irrespective of the country's level of development (Pescosolido et al., 2015). This suggests that the difference might be due to cultural, not country-specific, factors. However, it is unclear what those factors might be. The current investigation explored that question.

Mental illness stigma is defined as negative attitudes (*prejudice*) and/or negative behaviors (*discrimination*) toward individuals with mental illness (e.g., Goffman, 1963). Stigma has been related to the types of attributions that individuals make about the etiology of mental illness (e.g., whether mental illness is considered a disease or a moral failing; see Corrigan et al., 2003; Krendl & Freeman, 2019; Pescosolido & Martin, 2015). Attributing the mental illness to an individual's bad character or lack of self-control (*moral attribution*), for example, has been associated with higher mental illness stigma (e.g., Corrigan et al., 2003; Krendl & Freeman, 2019).

Prior work found that individuals in Eastern countries were more likely to make moral attributions about the etiology of mental illness than were individuals in Western countries (e.g., Edman & Kameoka, 1997; Furnham & Chan, 2004; Knettel, 2016; Sheikh & Furnham, 2000; Wynaden et al., 2005). Moreover, prior research demonstrated that individuals in Eastern countries reported that having a mental illness was shameful (Kung, 2004; Lee et al., 2009), and were more likely to try to conceal their mental illness (Masuda & Boone, 2011). Having a mental illness might be seen as violating cultural norms (Shin et al., 2013), which could be particularly problematic in Eastern countries (e.g., Fiske et al., 1998; Kim & Markus, 1999; Menon et al., 1999). Because research has demonstrated that attributions, prejudice, and discrimination toward mental illness are interrelated (Pescosolido & Martin, 2015; Stefanovics et al., 2016; Yang et al., 2007), the current work explored the possibility that cultural differences in attributions about the etiology of mental illness contributed to differences in mental illness stigma (prejudice and discrimination).

To consider this link, we considered several nuances rarely considered in past research. First, prejudice, which precedes discrimination (e.g., Allport et al., 1954), manifests in many different ways (Pescosolido et al., 2013). For example, researchers on mental illness stigma generally focus on the six core aspects of prejudice (Pescosolido & Martin, 2015). These include *traditional prejudice* (believing that all individuals with mental illness are inferior to others; Hyman & Sheatsley, 1956); *exclusionary sentiments* (seeing persons with mental illness as unfit to fulfill certain key social positions; Link et al., 1989); *negative affect* toward individuals with mental illness (Corrigan & Matthews, 2003); perceptions of *dangerousness* to self or other (Link et al., 1999; Phelan & Link, 2004); *treatment carryover concerns* (believing that mental health treatment has negative long-lasting consequences for one's own social status; Borinstein, 1992); and *disclosure spillover* concerns (fearing that one's friends or families would experience negative consequences if an individual's mental illness was revealed; Corrigan & Matthews, 2003). The extent to which each of these aspects is emphasized relates to the nature and magnitude of prejudice and, ultimately, discrimination toward individuals with mental illness.

Second, past research has tended to use the generic term "mental illness." This has been shown to be theoretically problematic as the referent that respondents use might be quite different. Prior work in the West found that the majority of respondents either conceptualized mental illness as referring to psychosis (e.g., schizophrenia) or a mood disorder (e.g., depression or anxiety; Phelan et al., 2000). Allowing respondents to use their own referent potentially creates a confound because several studies in the West have demonstrated that more individuals stigmatize schizophrenia than depression, making different attributions about the disorders (Krendl & Freeman, 2019; Pescosolido et al., 2010, 2013). Thus, the current work also considered the role of mental illness type (schizophrenia, depression) on stigma and attributions in Eastern and Western countries, asking whether individuals in Eastern and Western countries responded differently.

Third, unlike in Western countries, mental illness stigma in Eastern countries has been shown to be largely associated with concerns about how being diagnosed with a mental illness would impact friends and family members' economic and social well-being (e.g., Phillips et al., 2002; Yang et al., 2007). Thus, negative attitudes toward mental illness in Eastern countries might be more strongly related to core aspects of prejudice related to social concerns (e.g., treatment carryover, disclosure spillover concerns). In turn, these attitudes might then predict higher likelihood for discrimination.

In sum, to investigate these possibilities, we explored differences in stigma between four Eastern and seven Western countries using data from a survey that assessed global stigma toward mental illness (Pescosolido et al., 2013). Taking this cross-cultural approach allowed us to look beyond country-specific effects and focus on culturally specific effects. For discrimination, we focused on *social distance*, the most commonly researched aspect of stigma that targets the unwillingness of individuals to interact with people with mental illness across a number of social venues or roles (e.g., as a neighbor, co-worker; Link et al., 1999). As this measure assessed individuals' potential to discriminate, as opposed to actual discriminatory behavior, it will be referred to as *discriminatory potential*.

Our first hypothesis targeted the generalizability and replicability of East–West differences in mental illness stigma, asking whether there were higher levels of prejudice (Hypothesis 1a) and discriminatory potential (Hypothesis 1b) in Eastern versus Western countries. Hypothesis 1c examined whether moral attributions were higher in the East than West. Hypothesis 1a to 1c also considered the role of mental illness type (depression or schizophrenia), specifically whether individuals in both Eastern and Western countries reported higher stigma toward schizophrenia than to depression, and made different attributions about disorders, as shown in related work in the West (e.g., Krendl & Freeman, 2019; Pescosolido et al., 2010, 2013). Hypothesis 2 explored whether different core aspects of prejudice predicted discrimination in the East versus the West. Specifically, we anticipated that disclosure spillover concerns or treatment carryover (core aspects of prejudice related to social concerns) would predict discrimination in the East, but not the West. Hypothesis 3 then tested for a potential serial mediation relating cultural differences in attributions to higher prejudice and discriminatory potential.

Hypothesis 4 considered whether individuals in both Eastern and Western countries made more moral attributions about individuals with mental illness who were minority (vs. majority) group members (e.g., individuals with *multiple stigmatized identities*). The concept of multiple stigmatized identities recognizes that individuals might have more than one stigmatized identity affecting their health, health beliefs, and health behavior (Sangaramoorthy et al., 2017; Turan et al., 2019). Prior work on the "double jeopardy" hypothesis (Berdahl & Moore, 2006; Turan et al., 2019)—which reported higher prejudice and discrimination toward individuals with multiple (vs. single) stigmatized identities—in Western countries found that individuals with mental illness are more stigmatized when they are minority (vs. majority) group members (McGuire & Miranda, 2008; Staiger et al., 2018 but see Walkup et al., 2004). However, whether these

individuals would also be more stigmatized in Eastern countries, and if so why that might be, remains unknown. Although some cultural theories suggest that the distinction between minority and majority group members might be stronger in Eastern versus Western countries (e.g., Markus & Kitayama, 2010), there is little empirical work examining this question. Thus, Hypothesis 4 predicted that individuals in Eastern and Western countries would express more prejudice (Hypothesis 4a) and discriminatory potential (Hypothesis 4b) toward minority (vs. majority) group members with mental illness. Hypothesis 4c predicted that individuals in both countries would place a stronger emphasis on moral attributions when evaluating minority, but not majority, group members with mental illness. Such a finding would support the assertion that endorsing moral attributions predicts higher stigma.

Method

These hypotheses are investigated through a secondary quantitative analysis of a previously collected data set consisting of responses from 11,004 participants from 11 different countries (four Eastern, seven Western). For demographic details (gender, age, years of education), see Supplemental Table 1.

Survey Development

The Stigma in Global Context–Mental Health Study (SGC-MHS) was a cross-national study developed and implemented with support from the U.S. National Institutes of Health (Fogarty International Center, National Institute of Mental Health, Office of Behavioral and Social Science Research), the Icelandic Centre for Research, and Ghent University. Data were collected from representative samples of adults in 16 countries (at least one country on each inhabited continent). To identify differences between East and West countries only, we examined data from 11 of the countries (four Eastern, seven Western). Countries were operationalized as being Eastern or Western based both on their classification in the literature on mental health stigma (e.g., Barry & Grilo, 2002; Cheon & Chiao, 2012; Griffiths et al., 2006; Loya et al., 2010; Mellor et al., 2013; Mirza et al., 2019; Rao et al., 2007), as well as United Nations specifications as to whether they are considered Eastern (e.g., Asia-Pacific) or Western countries (United Nations Department for General Assembly and Conference Management, 2010). Specifically, China, the Philippines, Korea, and Bangladesh were classified here as Eastern countries, whereas the United States, European countries, and New Zealand were classified as Western countries. See Table 1 for a list of these countries and their respective sample sizes on key variables.

Eligible respondents were noninstitutionalized adults (over the age of 18 years), and all national cross sections were representative of their country (e.g., by gender, race/ethnicity), based on multistage probability sampling methods. Trained interviewers conducted face-to-face interviews (overall SGC-MHS response rate = 65%). The SGC-MHS included demographic variables and 75 items on mental health and illness. Items were developed in a meeting of 15 participating countries and adapted from the instrumentation used in the 1996 MacArthur Mental Health Study (Pescosolido et al., 2000). Survey items were translated through a standard, two-step backtranslation process followed by a 2 to 4 hr cultural interview with a native language speaker without mental health experience or expertise. SGC-MHS staff worked with the translated version of the instrument, asking these individuals to read each item and describe their understanding of the item and its relevance in their country. The instrument was adapted to country differences, for example, in the presence of cultural idioms for illness and causes, for available treatment options, and for sociodemographic differences (see below). The fielding platform for the SGC-MHS was the International Social Survey Program (ISSP; http://www.isp.org), a

Table 1. Data Summary of East and West Societal Types, Effective Sample Sizes and Mean Values by Country (and Overall for East, West) for Six Core Aspects of Prejudice and Discriminatory Potential.

| | | Core aspects of prejudice | | | | | | | | | | | | Discriminatory potential | |
| | Traditional prejudice | | Exclusionary sentiments | | Negative affect | | Treatment carryover | | Disclosure spillover | | Danger | | Social distance | |
	N	M	N	M	N	M	N	M	N	M	N	M	N	M
West Germany	841	2.12 (0.63)	842	2.31 (0.74)	845	2.06 (0.71)	837	2.05 (0.66)	844	1.94 (0.62)	800	2.3 (0.71)	847	2.27 (0.73)
Iceland	592	2.24 (0.4)	593	2.1 (0.47)	592	2.09 (0.52)	593	2.07 (0.52)	593	1.99 (0.45)	575	2.41 (0.6)	593	2.35 (0.62)
New Zealand	679	2.2 (0.43)	680	2.13 (0.55)	680	2.21 (0.51)	679	2.21 (0.51)	679	1.78 (0.46)	653	2.67 (0.62)	680	2.32 (0.59)
Spain	859	2.42 (0.51)	865	2.3 (0.64)	861	2.21 (0.73)	856	2.03 (0.66)	862	1.95 (0.55)	814	2.56 (0.81)	866	2.43 (0.76)
Great Britain	696	2.18 (0.42)	698	2.19 (0.51)	697	2.24 (0.53)	697	2.26 (0.58)	698	1.86 (0.45)	674	2.61 (0.6)	698	2.42 (0.64)
United States	946	2.33 (0.45)	947	2.31 (0.52)	948	2.29 (0.53)	946	2.13 (0.53)	947	1.88 (0.42)	902	2.73 (0.66)	949	2.53 (0.61)
Belgium	774	2.35 (0.48)	774	2.3 (0.57)	774	2.13 (0.57)	774	2.31 (0.62)	774	2.25 (0.47)	772	2.52 (0.63)	774	2.51 (0.64)
Total	5,387	2.27 (0.5)	5,399	2.24 (0.59)	5,397	2.18 (0.6)	5,382	2.15 (0.6)	5,397	1.95 (0.51)	5,190	2.55 (0.69)	5,407	2.41 (0.67)
East Bangladesh	1,000	3.07 (0.53)	1,001	3.1 (0.58)	1,001	2.49 (0.66)	1,000	1.86 (0.57)	1,001	1.88 (0.49)	999	2.94 (0.73)	1,000	3.03 (0.6)
Korea	660	2.72 (0.5)	666	2.36 (0.51)	663	2.24 (0.57)	664	2.2 (0.58)	666	1.97 (0.46)	657	2.7 (0.57)	667	2.65 (0.68)
Philippines	792	2.69 (0.54)	792	2.46 (0.53)	792	2.49 (0.64)	792	2.49 (0.6)	792	2.19 (0.58)	793	2.68 (0.77)	792	2.67 (0.63)
China	3,618	2.38 (0.46)	3,671	2.27 (0.47)	3,672	2.31 (0.54)	3,646	2.19 (0.53)	3,662	2.29 (0.48)	3,573	2.5 (0.7)	3,700	2.75 (0.66)
Total	6,070	2.57 (0.55)	6,130	2.44 (0.59)	6,128	2.35 (0.59)	6,102	2.18 (0.58)	6,121	2.18 (0.52)	6,022	2.62 (0.72)	6,159	2.77 (0.66)

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program of cross-national survey collaboration. For additional SGC-MHS details, see Pescosolido and colleagues (2013).

Vignettes

For the survey administration, respondents were randomly assigned to one of the three vignettes. We focus on the two that either described an individual with symptoms meeting criteria for major depressive disorder or schizophrenia. A subset of respondents completed a "control" asthma vignette, but those data are not included here. The major depressive disorder and schizophrenia vignettes were based on instrumentation used in the 1996 MacArthur Mental Health Study, conducted earlier in the United States (see Pescosolido et al., 2000). These vignettes described an individual with symptoms meeting criteria for major depressive disorder or schizophrenia set forth by the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) or World Health Organization (2011). The vignettes and related questions were revised during a meeting of survey experts from 15 participating countries. During this meeting, an outside psychiatric consultant assessed vignettes with meeting participants, and revised versions were approved by all participating countries.

The gender and race/ethnicity (a culture-specific majority or minority group member) of the individual in the vignette were manipulated across participants (see below). The interviewer read the vignette to each respondent, followed by a series of questions about the individual (identified with a culture-specific [NAME]) described in the vignette.

For the question related to stigma toward individuals with multiple stigmatized identities, country divisions were selected by each country's survey team and generally targeted racial (e.g., in the United States, White versus Black) or ethnic differences (e.g., in China, Han versus Weiger). Not only was the in-group/out-group distinction mentioned, but stereotypical names were chosen to reinforce the distinction (e.g., Mary/John for the White U.S. vignette; Shontell and Tyrone for the Black case). For a list of the country-specific manipulations, see Supplemental Appendix B.

Measure of Six Core Aspects of Prejudice

Respondents were asked items that comprised *core aspects of prejudice*—traditional prejudice, exclusionary sentiments, negative affect, perceptions of dangerousness, treatment carryover, and disclosure spillover (for review, see Pescosolido et al., 2013). Five items comprised *exclusionary sentiments*: ([NAME] [the individual described in the vignette] should not have children, If [NAME] qualified, should be hired, [NAME] should not supervise others at work, [NAME] should not teach children, [NAME] should not hold public office). Four items comprised *traditional prejudice*: ([NAME] is unpredictable, [NAME] is as trustworthy as others, [NAME] is as productive as other, [NAME] is as intelligent as anyone) and *disclosure spillover*: ([NAME] should be embarrassed, [NAME] has little hope of being accepted in community, [NAME's] family better is off if [NAME's] situation secret, [NAME] should be afraid to tell others). Three items comprised *negative affect*: ([NAME] makes me uncomfortable, [NAME] is hard to talk to, [NAME] makes me nervous) and *treatment carryover*: (treatment makes [NAME] an outsider, causes [NAME] to lose friends, limits [NAME's] opportunities) and *dangerousness* (How likely [NAME] will harm others? How likely [NAME] will harm self?). With the exception of dangerousness, items were rated on a scale of 1 (*strongly agree*) to 4 (*strongly disagree*). Dangerousness items were rated on a scale of 1 (*very likely*) to 4 (*not at all likely*).

Items for the six core aspects of prejudice were averaged together to create composite scores for each (traditional prejudice, exclusionary sentiments, disclosure spillover, negative affect, treatment carryover, and dangerousness). Overall reliability for each of the core aspects of

Table 2. Summary of Hierarchical Regression Predicting Social Distance From Six Core Aspects of Prejudice (Traditional Prejudice, Exclusionary Sentiments, Negative Affect, Treatment Carryover, Disclosure Spillover, and Dangerousness). Society (0 = *Western*, 1 = *Eastern*).

	Step 1		Step 2	
	β	T	β	T
Country	.14	16.64**	.43	8.51**
Traditional prejudice	.11	12.10**	.19	12.04**
Exclusionary sentiments	.29	29.42**	.19	12.23**
Negative affect	−.04	−4.60**	.31	21.32**
Treatment carryover	.07	8.29**	−.02	−1.49
Disclosure spillover	.06	6.97**	.02	1.49
Danger	.14	16.64**	.08	6.72**
Country × Traditional Prejudice	—	—	.05	0.99
Country × Exclusionary Sentiments	—	—	−.27	−6.01**
Country × Negative Affect	—	—	−.10	−2.38*
Country × Treatment Carryover	—	—	−.09	−2.52*
Country × Disclosure Spillover	—	—	.18	4.47**
Country × Danger	—	—	−.10	−3.02*
	$F(7, 10981) = 847.03$, $p < .001$, $R^2 = .35$		$F(13, 10997) = 140.13$, $p < .001$, $R^2 = .36$	

*$p \leq .05$. **$p \leq .001$.

prejudice was acceptable (Cronbach's $\alpha \geq .7$). Supplemental Table 2 provides reliability across these items by country, as well as the percent of respondents for whom no responses were available for one or more measures. Respondents in Eastern and Western cultures did not significantly differ in their missing data. For clarity, the overall scores were reverse scored such that higher scores indicated higher stigma for each core aspect.

Measure of Discriminatory Potential (Social Distance)

Respondents' answered six items that measured their willingness to interact with the vignette person, the standard approach to measuring *social distance* (Link et al., 1999; Martin et al., 2000). Specifically, the items asked about their willingness to have [NAME] as a neighbor, or to socialize with [NAME], to let [NAME] care for children, to make friends with [NAME], to work closely with [NAME] on a job, and to have [NAME] marry into their family. Responses ranged from 1 (*definitely willing*) to 4 (*definitely unwilling*).

Valid responses across the six items for the discriminatory potential (Cronbach's $\alpha = .86$) were averaged together to create a composite score wherein higher scores indicated greater desired social distance. Supplemental Table 2 provides reliability across these items by country.

Measure of Moral and Biological Attributions About Mental Illness

Finally, respondents also provided information about their *attributions about the etiology* of mental illness by indicating the likelihood (1 = *very*, 4 = *not at all*) the individual's situation was due to social/environmental causes (*moral attributions*; bad character, the way the individual was raised, God's will, or bad luck) or *biological* causes (brain disease/disorder, genetics). Each item was reverse scored, such that higher scores indicated stronger attribution.

Data Reduction and Analytic Strategy

Data were analyzed using SPSS v. 25. Univariate multivariate analysis of variance (MANOVA) was used to identify mean level differences as a function of country or mental illness type on each of the six core aspects of prejudice (Hypothesis 1a), and the four moral and two biological attributions (Hypothesis 1c). Target race was included as an additional factor to test Hypothesis 4a and 4b. Specific approaches for interpreting significant multivariate main effects and interactions are described below.

Univariate ANOVA was used to examine effects of country and mental illness type on discriminatory potential (Hypothesis 1b). Target race was included as an additional factor to test Hypothesis 4b. As needed, independent samples *t*-tests were used to interpret significant interactions from univariate analyses of variance (ANOVAs). Hierarchical linear regressions were used to identify the six core aspects of prejudice that significantly predicted discriminatory potential in Eastern (vs. Western) countries (Hypothesis 2). Hierarchical regressions were conducted as two model specifications using the linear regression function, wherein all main effects were entered into the first block, and interactions were entered as the second block. Serial mediation analyses (Hypothesis 3) were conducted using PROCESS (Model 6) with 5,000 bootstrap samples (Hayes, 2012) to derive the total, direct, and indirect effects of serial mediation.

Results

Hypothesis 1a (H1a): Individuals in Eastern Countries Would Report Higher Stigma Toward Mental Illness Across Six Core Aspects of Prejudice Than Individuals in Western Countries

These first analyses tested Hypothesis 1a (H1a)—the prediction that the six core aspects of prejudice toward mental illness were higher in Eastern than in Western countries—by examining multivariate differences in the six core aspects. This hypothesis also considered the role of mental illness type (depression or schizophrenia) on prejudice. The 2 (country type: Eastern, Western) $\times$ 2 (mental illness type: depression, schizophrenia) MANOVA with the six core aspects of prejudice as the dependent variables revealed a multivariate effect of Eastern versus Western country, Wilks $\lambda = .88$, $F(6, 10995) = 240.14$, $p < .001$, $\eta_p^2 = .12$, and of mental illness type (schizophrenia vs. depression), Wilks $\lambda = .98$, $F(6, 10995) = 46.73$, $p < .001$, $\eta_p^2 = .03$. The multivariate effects of the East/West difference in prejudice were qualified by an interaction with mental illness type, Wilks $\lambda = .99$, $F(6, 10995) = 20.06$, $p < .001$, $\eta_p^2 = .01$.

To unpack the interaction, two separate MANOVAs (for Eastern and Western countries, respectively) compared the six core aspects of prejudice for schizophrenia to depression. In both countries, although prejudice was higher toward schizophrenia than depression, this difference was more pronounced in Western countries, Wilks $\lambda = .93$, $F(6, 5124) = 60.15$, $p < .001$, $\eta_p^2 = .07$, than Eastern, Wilks $\lambda = .99$, $F(6, 5866) = 4.24$, $p < .001$, $\eta_p^2 = .004$, countries. Moreover, the difference in prejudice toward depression was higher in Eastern versus Western countries, Wilks $\lambda = .85$, $F(6, 5487) = 161.47$, $p < .001$, $\eta_p^2 = .15$, than was the difference in prejudice toward schizophrenia in Eastern versus Western countries, Wilks $\lambda = .90$, $F(6, 5503) = 101.78$, $p < .001$, $\eta_p^2 = .10$. Simply put, prejudice toward depression was particularly pronounced in Eastern, as compared with Western, countries (see Figure 1A).

Hypothesis 1b (H1b): Individuals in Eastern Countries Would Report Higher Discriminatory Potential Toward Mental Illness Than Individuals in Western Countries

Hypothesis 1b predicted that, like the six core aspects of prejudice, discriminatory potential would be higher in Eastern versus Western countries. A 2 (country type: Eastern, Western) $\times$ 2
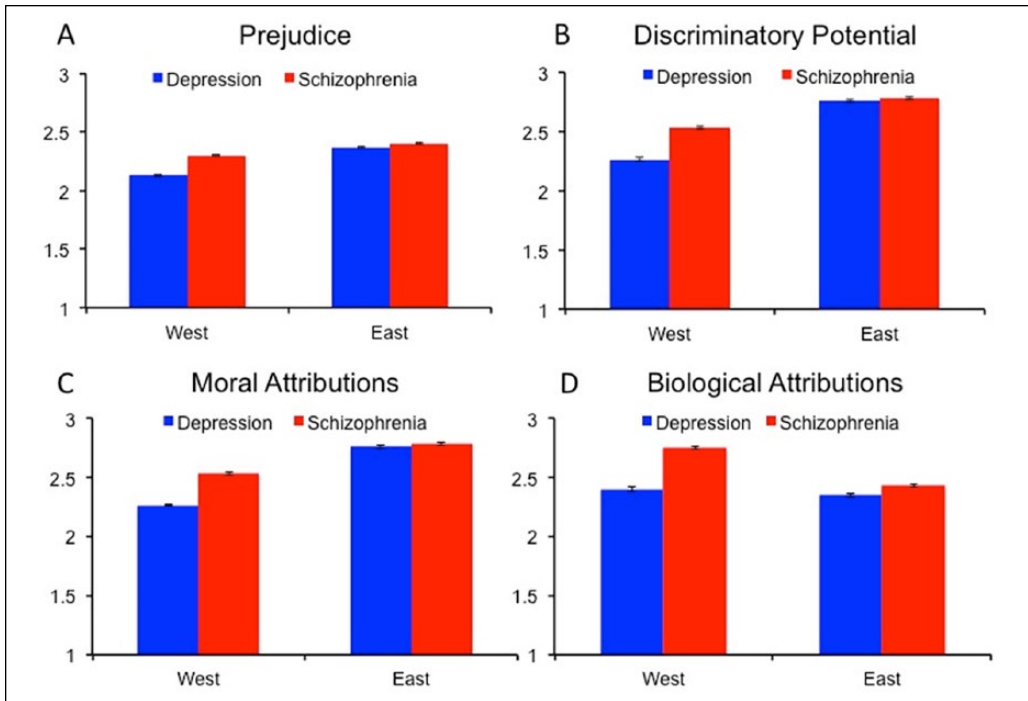
Figure 1. Multivariate effects of country type (Eastern, Western) and disorder type (depression or schizophrenia) on prejudice (A), their univariate effects on discriminatory potential (B), and their multivariate effects on moral attributions (C), and biological attributions (D). Higher bars indicate greater endorsement of each variable. Error bars SEM.
Note. SEM = standard error of mean.

(mental illness type: depression, schizophrenia) univariate ANOVA on the discriminatory potential revealed main effects of Eastern versus Western countries, $F(1, 11562) = 931.54$, $p < .001$, $\eta_p^2 = .08$, and of mental illness type (schizophrenia versus depression), $F(1, 11562) = 147.44$, $p < .001$, $\eta_p^2 = .01$. A Country Type $\times$ Mental Illness Type interaction also emerged, $F(1, 11562) = 99.55$, $p < .001$, $\eta_p^2 = .01$.

The interaction emerged because the disparity in discriminatory potential toward depression was more pronounced in Eastern versus Western countries, $t(5770) = 29.16$, $p < .001$, $d = .77$, than was the disparity toward schizophrenia, $t(5792) = 14.28$, $p < .001$, $d = .37$. Indeed, discriminatory potential was higher toward individuals with schizophrenia than depression in Western countries, $t(5405) = 15.16$, $p < .001$, $d = .41$, but did not differ in Eastern countries, $t(6157) = 1.58$, $p = .11$, $d = .04$. As seen in Figure 1B, discriminatory potential toward depression was particularly pronounced in Eastern, as compared with Western, countries.

Hypothesis 1c (H1c): Moral Attributions About Mental Illness Would be Higher in Eastern Than Western Countries

To test Hypothesis 1c, we conducted a 2 (country type: Eastern, Western) $\times$ 2 (mental illness type: depression, schizophrenia) MANOVA with each of the four moral attributions (bad character, the way the individual was raised, God's will, or bad luck) as dependent variables. There was a multivariate effect of Eastern versus Western country, Wilks $\lambda = .93$, $F(4, 10434) = 208.39$, $p < .001$, $\eta_p^2 = .07$, but no main effect of mental illness type or interaction, both Wilks $\lambda s = 1$, $Fs < 1$, $\eta_{ps}^2 < .001$.

The same MANOVA described above, but with the biological attributions (brain disorder, genetics) as the dependent variables, revealed a multivariate main effect of country type, Wilks λ = .98, $F(2, 10668) = 88.03$, $p < .001$, $\eta_p^2 = .02$. Individuals in Western countries placed greater emphasis on the biological causes for mental illness than did individuals in Eastern countries. Multivariate main effects of mental illness type (schizophrenia versus depression) also emerged for biological attributions, Wilks $\lambda = .97$, $F(2, 10668) = 159.95$, $p < .001$, $\eta_p^2 = .03$. There was also a Disorder Type $\times$ Country interaction, Wilks $\lambda = .99$, $F(2, 10668) = 44.86$, $p < .001$, $\eta_p^2 = .01$. The Country Type $\times$ Mental Illness Type interaction emerged for the biological attributions because individuals in Western countries made stronger biological attributions about schizophrenia than did individuals in Eastern countries, Wilks $\lambda = .96$, $F(2, 5353) = 125.19$, $p < .001$, $\eta_p^2 = .05$, as well as about depression, Wilks $\lambda = .99$, $F(2, 5314) = 5.54$, $p = .005$, $\eta_p^2 = .002$ (see Figure 1C and 1D).

Hypothesis 2 (H2): Core Aspects of Prejudice Related to Social Concerns Would Predict Discrimination in the East, But Not the West

Hypothesis 2 predicted that different aspects of prejudice contributed to discriminatory potential in Eastern versus Western countries. Specifically, core aspects of prejudice related to social concerns (e.g., disclosure spillover concerns, treatment carryover) would predict discrimination in the East, but not the West. A hierarchical regression was run in two steps. All main effects (country type and the six core aspects of prejudice) were entered as the first step (wherein country type was coded: 0 = *Western*, 1 = *Eastern*), and the two-way interactions between country type and each core aspect of stigma were entered as the second step. The overall model with the two-way interactions was significant, $F(13, 10988) = 468.62$, $p < .001$, and accounted for 36% of the overall variance in discriminatory potential. Notably, disclosure spillover was more strongly emphasized in Eastern than Western countries in predicting discriminatory potential ($\beta = .18$, $p < .001$). However, four core aspects of prejudice were more strongly emphasized in Western than Eastern countries in predicting discriminatory potential: exclusionary sentiments ($\beta = -.27$, $p < .001$), treatment carryover ($\beta = -.09$, $p = .012$), dangerousness ($\beta = -.10$, $p = .003$), and negative affect ($\beta = -.10$, $p = .02$). See Table 2 for full regression statistics.

Hypothesis 3 (H3): Serial Mediation Between Moral Attributions and Disclosure Spillover Would Predict Higher Discriminatory Potential in Eastern Versus Western Countries

Because disclosure spillover concerns were more strongly emphasized in Eastern countries in predicting discriminatory potential, we tested a predicted serial mediation between country type (East versus West) and discriminatory potential through moral attributions and disclosure spillover concerns (Figure 2). The total indirect effect of the serial mediation was significant (effect = .08, 95% confidence interval [CI] = [.07, .08]). Specifically, individuals in Eastern countries placed a stronger emphasis on moral attributions ($\beta = .23$, $SE = .01$, $p < .001$), which resulted in a significant indirect effect between country type and discriminatory potential through moral attributions (effect = .02, 95% CI = [.01, .03]). A stronger emphasis on disclosure spillover concerns also predicted greater discriminatory potential ($\beta = .29$, $SE = .01$, $p < .001$), resulting in another significant indirect effect between country type and discriminatory potential through disclosure spillover (effect = .08, 95% CI = [.01, .07]). However, a stronger emphasis on moral attributions was positively associated with a greater emphasis on disclosure spillover concerns ($\beta = .13$, $SE = .01$, $p < .001$), resulting in a significant indirect effect between country type and discriminatory potential through moral attributions and disclosure spillover (effect = .01, 95% CI = [.01, .02]); see Figure 2.
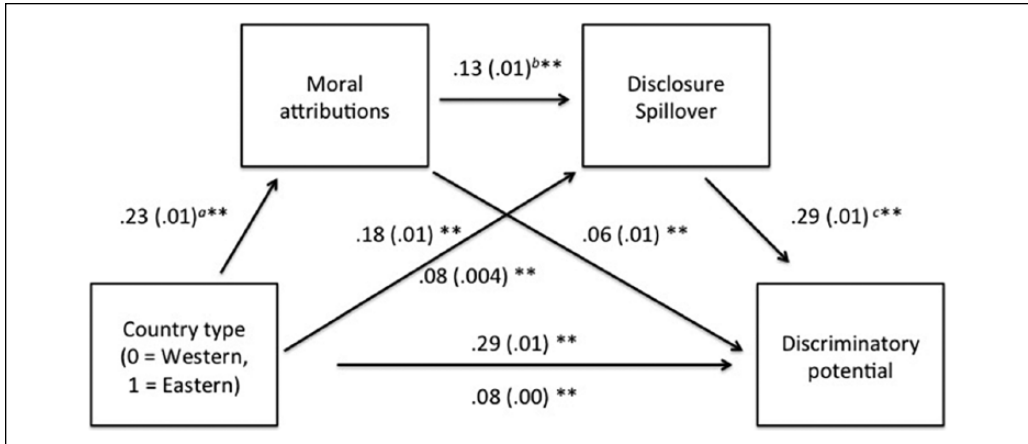
Figure 2. Serial mediation with unstandardized path coefficients from Hayes' PROCESS (Model 6).
[a]$F(1, 10376) = 463.88, p < .001, R^2 = .04$. [b]$F(2, 10375) = 334.26, p < .001, R^2 = .06$. [c] $F(3, 10374) = 487.64$,
$p < .001, R^2 = .12$.
**$p < .001$.

Hypothesis 4a (H4a): Core Aspects of Prejudice Would be Higher Toward Individuals With Multiple Stigmatized Identities in Both Eastern and Western Countries

The final hypothesis examined whether having multiple stigmatized identities (i.e., a mental illness *and* an out-group status) added to stigma burden. Specifically, did minority (vs. majority) group members with mental illness experience more prejudice, discriminatory potential, and moral attributions in both Eastern and Western countries (H4)? We tested Hypothesis 4a with a 2 (country type: Eastern, Western) $\times$ 2 (mental illness type: depression, schizophrenia) $\times$ 2 (target race: majority, minority) MANOVA. In the MANOVA, the six core aspects of prejudice (traditional prejudice, exclusionary sentiments, negative affect, treatment carryover, disclosure spillover, and dangerousness) were entered as the dependent variables. Results revealed a multivariate effect of target race/ethnicity for minority versus majority group members, Wilks $\lambda = .99$, $F(6, 10991) = 2.78, p = .011$, $\eta_p^2 = .002$. However, this multivariate effect was qualified by two-way interactions between Country Type $\times$ Mental Illness Type and Mental Illness Type $\times$ Target Race/Ethnicity, both Wilks $\lambda \leq .99$, Fs > 8.45 ps $< .001$, $\eta_{ps}^2 \leq .011$, and a Three-Way Country Type $\times$ Target Race/Ethnicity $\times$ Mental Illness Type interaction, Wilks $\lambda = .99$, $F(6, 10991) = 7.23, p < .001$, $\eta_p^2 = .004$.

To examine the three-way interaction, two separate 2 (mental illness type: depression, schizophrenia) $\times$ 2 (target race: majority, minority) MANOVAs (one for Eastern and one for Western countries) were conducted. Analyses identified a multivariate effect of target race/ethnicity in Western countries, Wilks $\lambda = .99$, $F(6, 5122) = 3.59, p = .002$, $\eta_p^2 = .004$, but not in Eastern countries, Wilks $\lambda = 1$, $F < 1$, $\eta_p^2 < .001$. However, there was a Mental Illness Type $\times$ Target Race/Ethnicity multivariate interaction in Eastern countries, Wilks $\lambda = .98$, $F(6, 5664) = 15.62$, $p < .001$, $\eta_p^2 = .02$. That interaction was not significant for Western countries, Wilks $\lambda = 1$, $F < 1$, $\eta_p^2 < .001$. The two-way interaction emerged because individuals in Eastern countries expressed greater prejudice toward minority group members with schizophrenia than they did toward majority group members with schizophrenia, Wilks $\lambda = .99$, $F(6, 2908) = 7.61, p < .001$, $\eta_p^2 = .02$. Surprisingly, the reverse pattern emerged for individuals with depression: individuals in Eastern countries expressed greater prejudice toward individuals with depression when they

were majority versus minority group members, Wilks $\lambda = .98$, $F(6, 2951) = 8.60$, $p < .001$, $\eta_p^2 = .02$. See Table 3 for all mean values.

Hypothesis 4b (H4b): Discriminatory Potential Would be Higher Toward Individuals With Multiple Stigmatized Identities in Both Eastern and Western Countries

The univariate 2 (country type: Eastern, Western) $\times$ 2 (mental illness type: depression, schizophrenia) $\times$ 2 (target race: majority, minority) ANOVA on social distance revealed a main effect of minority versus majority target race, $F(1, 11558) = 5.99$, $p = .014$, $\eta_p^2 = .001$. However, as shown in Table 3 (Panel B), this main effect was qualified by a Country Type $\times$ Target Race/Ethnicity interaction, $F(1, 11558) = 8.12$, $p = .004$, $\eta_p^2 = .001$, and a Three-Way Country Type $\times$ Mental Illness Type $\times$ Target Race/Ethnicity, $F(1, 11558) = 21.65$, $p < .001$, $\eta_p^2 = .002$. Consistent with Hypothesis 4b, individuals in Western countries reported a desire for more social distance from minority (compared with majority) targets for both depression, $t(2662) = 2.90$, $p = .004$, $d = .11$, and schizophrenia, $t(2741) = 2.24$, $p = .025$, $d = .09$. Individuals in Eastern countries showed a similar pattern for schizophrenia, $t(3049) = 4.19$, $p < .001$, $d = .15$, but this pattern reversed for depression (more desired social distance from majority than minority targets), $t(3106) = -4.81$, $p < .001$, $d = .17$.

Hypothesis 4c (H4c): There Would be Greater Moral Attributions Toward Individuals With Multiple Stigmatized Identities in Both Eastern and Western Countries

Finally, we examined whether in-group/out-group influences the types of moral attributions individuals in Eastern and Western countries made about mental illness. To test this, a 2 (country type: Eastern, Western) $\times$ 2 (mental illness type: depression, schizophrenia) $\times$ 2 (target race/ethnicity: majority, minority) MANOVA was conducted with the four moral beliefs (bad character, the way the individual was raised, God's will, bad luck) as dependent variables. Results revealed a multivariate effect of target race/ethnicity for minority versus majority group members, Wilks $\lambda = .99$, $F(4, 10430) = 6.36$, $p < .001$, $\eta_p^2 = .002$, supporting Hypothesis 4c. However, this multivariate effect was qualified by two-way interactions between Country Type $\times$ Target Race/Ethnicity, and Mental Illness Type $\times$ Target Race/Ethnicity, all Wilks $\lambda \le .99$, Fs > 3.36, ps $\le .01$, $\eta_{ps}^2 \ge .001$, and a Three-Way Country Type $\times$ Target Race/Ethnicity $\times$ Mental Illness Type interaction, Wilks $\lambda = .99$, $F(4, 10430) = 4.22$, $p = .002$, $\eta_p^2 = .002$. See Table 3 for mean values.

   As with prejudice, the three-way interaction emerged because there was a multivariate effect of target race/ethnicity in Western, Wilks $\lambda = .99$, $F(4, 4980) = 7.78$, $p < .001$, $\eta_p^2 = .006$, but not in Eastern, Wilks $\lambda = 1$, $F(4, 5447) = 1.71$, $p = .14$, $\eta_p^2 = .001$, countries. There was also a Mental Illness Type $\times$ Target Race/Ethnicity multivariate interaction in Eastern countries, Wilks $\lambda = .97$, $F(4, 5447) = 8.90$, $p < .001$, $\eta_p^2 = .006$. That interaction was not significant for Western countries, Wilks $\lambda = .1$, $F < 1$. The interaction emerged because individuals in Eastern countries made more moral attributions toward minority (vs. majority) group members with schizophrenia, Wilks $\lambda = .99$, $F(4, 2712) = 6.78$, $p < .001$, $\eta_p^2 = .01$. However, the reverse pattern emerged for individuals with depression: individuals in Eastern countries made more moral attributions about depression when the target was a majority versus minority group member, Wilks $\lambda = .99$, $F(4, 2732) = 3.77$, $p = .005$, $\eta_p^2 = .005$. See Table 3 for mean values.

Table 3. Mean Values and Standard Deviations for Core Aspects of Prejudice (Prejudice), Social Distance (Discriminatory Potential), and Attributions (Moral Biological) by Culture Type and Vignette Condition, SGC-MHS.

| | East countries | | | | West countries | | | |
| | Depression | | Schizophrenia | | Depression | | Schizophrenia | |
Measures	Majority (in-group)	Minority (out-group)	Majority	Minority	Majority	Minority	Majority	Minority
Panel A: Prejudice (core aspects of prejudice)								
Traditional prejudice	2.58 (0.52)	2.52 (0.55)	2.56 (0.57)	2.61 (0.54)	2.16 (0.45)	2.20 (0.49)	2.33 (0.49)	2.34 (0.48)
Exclusionary sentiments	2.45 (0.55)	2.41 (0.58)	2.43 (0.61)	2.47 (0.58)	2.11 (0.52)	2.13 (0.56)	2.35 (0.58)	2.35 (0.60)
Negative affect	2.37 (0.57)	2.29 (0.56)	2.35 (0.61)	2.40 (0.59)	2.07 (0.53)	2.10 (0.58)	2.25 (0.62)	2.26 (0.61)
Treatment carryover	2.16 (0.55)	2.15 (0.56)	2.17 (0.60)	2.20 (0.57)	2.04 (0.56)	2.12 (0.60)	2.19 (0.59)	2.24 (0.60)
Disclosure spillover	2.20 (0.52)	2.13 (0.51)	2.14 (0.51)	2.21 (0.53)	1.90 (0.51)	1.93 (0.52)	1.97 (0.48)	2.00 (0.51)
Dangerous	2.65 (0.67)	2.50 (0.71)	2.58 (0.77)	2.74 (0.70)	2.39 (0.65)	2.42 (0.67)	2.66 (0.68)	2.70 (0.67)
Panel B: Discriminatory potential (social distance)								
Social Distance	2.81 (0.65)	2.70 (0.62)	2.73 (0.68)	2.83 (0.65)	2.23 (0.60)	2.30 (0.67)	2.51 (0.64)	2.56 (0.68)
Panel C: Moral attributions								
Bad character	1.99 (0.84)	1.90 (0.83)	1.88 (0.88)	1.99 (0.86)	1.74 (0.81)	1.74 (0.80)	1.73 (0.86)	1.73 (0.84)
Way raised	2.42 (0.83)	2.35 (0.84)	2.33 (0.87)	2.45 (0.82)	2.11 (0.85)	2.20 (0.90)	2.08 (0.88)	2.17 (0.90)
Bad luck	1.89 (0.93)	1.92 (0.94)	1.84 (0.95)	1.94 (0.95)	1.86 (0.91)	1.84 (0.92)	1.80 (0.92)	1.81 (0.92)
God's will	1.79 (0.95)	1.87 (1.00)	1.82 (1.01)	1.83 (0.99)	1.40 (0.71)	1.48 (0.79)	1.38 (0.70)	1.45 (0.77)
Panel D: Biological attributions								
Brain disease/disorder	2.48 (0.91)	2.38 (0.88)	2.55 (0.97)	2.64 (0.92)	2.47 (0.89)	2.47 (0.92)	2.94 (0.91)	2.89 (0.92)
Genetics	2.15 (0.88)	2.36 (0.88)	2.35 (0.91)	2.15 (0.87)	2.35 (0.85)	2.31 (0.86)	2.58 (0.89)	2.53 (0.89)

SGC-MHS = Stigma in Global Context–Mental Health Study.

Discussion

This article targeted the oft-stated idea that individuals in Eastern countries are more stigmatizing toward mental illness than those in Western ones. Using critical cross-national data from a theoretically and methodologically coordinated study of many countries, four key findings stand out from our analyses. First, replicating prior work, we found that individuals in Eastern countries reported more mental illness stigma, of all types—both across all six core aspects of prejudice as well as for discriminatory potential—than did individuals from Western countries. Second, individuals in Eastern countries ascribed more moral attributions to mental illness, which played a critical role in increasing discriminatory potential. Third, preliminary analyses revealed an unexpected cross-national differential in the effects of mental illness type. In Eastern (compared with Western) countries, higher stigma—both prejudice and discrimination potential—toward individuals with depression was particularly pronounced. Fourth, the nature and magnitude of cultural differences in mental illness stigma was influenced by target race/ethnicity. More individuals in Western countries endorsed higher stigma (prejudice and discriminatory potential) and made more moral attributions when the target was a minority (as compared with majority) group member. Although analyses in Eastern countries revealed a similar pattern for schizophrenia, the findings for depression were unexpected. That is, more individuals in Eastern countries endorsed stigma toward majority, in-group members compared with minority, out-group members. We discuss each of these findings in turn.

Supporting Hypothesis 1, more individuals in Eastern countries endorsed stigma toward mental illness than did individuals in Western countries. This finding was consistent with prior work (e.g., Cheon & Chiao, 2012; Furnham & Chan, 2004; Rao et al., 2007), but we extended this work in two ways. First, this cross-national finding included multiple countries (four Eastern and seven Western), and multiple core aspects of prejudice—traditional prejudice, exclusionary sentiments, negative affect, treatment carryover, disclosure spillover, and dangerousness—which enhances the generalizability of these results. Second, we also found that target race/ethnicity was associated with discriminatory potential. Consistent with prior work and Hypothesis 4 (Berdahl & Moore, 2006; Turan et al., 2019), individuals in Western countries endorsed more prejudice and discrimination toward individuals with multiple stigmatized identities (e.g., minority group members with mental illness) than those with single stigmatized identities (majority group members with mental illness). This is among the first investigation of the "double jeopardy" hypothesis (Berdahl & Moore, 2006; Turan et al., 2019) in Eastern countries, finding that, like individuals in Western countries, individuals in Eastern countries endorsed more stigma toward minority (vs. majority) group members with schizophrenia. Yet, importantly, an opposite pattern emerges for depression. More individuals in Eastern countries endorsed stigma toward majority, in-group members, than to minority, out-group members, when the case is depression.

This result might be understood in light of the Hypothesis 3 findings regarding the specific effect of moral attributions and disclosure spillover on discriminatory potential in Eastern countries. Disclosure spillover was the only core aspect of prejudice that was more strongly emphasized by respondents in Eastern (vs. Western) countries in predicting their discriminatory potential toward individuals with mental illness. This suggests that stigma in Eastern countries tapped into deep cultural concerns about how being diagnosed with a mental illness would impact family members' social and economic status (e.g., Phillips et al., 2002; Yang et al., 2007). In Western countries, however, four core aspects of prejudice were critical in predicting discriminatory potential (exclusionary sentiments, treatment carryover, dangerousness, and negative affect).

Moreover, the correlation between prejudice (overall) and discriminatory potential was higher in Western countries, $r(5125) = .56$, $p < .001$, than it was in Eastern countries, $r(5864) = .43$, $p < .001$. The finding is particularly interesting given that both prejudice and discriminatory potential themselves are higher in Eastern countries. One possibility is that, despite international

collaboration, items might be more relevant in Western countries, thereby leading to stronger associations between the variables. Indeed, scale reliabilities were somewhat lower among Eastern versus Western cultures (see Supplemental Table 2). Also, as discriminatory potential stems from multiple factors, using multiple core aspects of prejudice to predict discriminatory potential might be more accurate than using one. Finally, East–West differences in the respective attributions made about mental illness might exacerbate or attenuate stigma, respectively. That is, the fact that individuals in Eastern countries were more likely to attribute mental illness to moral (social/environmental) factors might have exacerbated their stigma endorsements, whereas Western attributions to biological factors might have attenuated stigma endorsements. Our findings from the serial mediation in Hypothesis 3 provided some support for this assertion, as does the finding that individuals in Western countries made more moral attributions about minority (vs. majority) group members with mental illness.

The unexpected finding that individuals in Eastern countries expressed greater stigma toward majority (vs. minority) group members with depression might also stem from country-driven differences in attributions about stigma. Although we can only speculate why this finding emerged for depression, and not schizophrenia, the finding that differences emerged in the magnitude of stigma as a function of target race for both schizophrenia and depression suggests that these data were not necessarily restricted by ceiling effects. Alternatively, individuals in Eastern countries might have viewed depression as a disease that could get better, whereas schizophrenia was permanent and unfixable. Although stigma (prejudice and discriminatory potential) was higher overall in Eastern (relative to Western) countries, this was particularly the case for depression. This finding might reflect a concern that those with depression do not contribute to the group or "what matters most" in Eastern cultures (Yang et al., 2014; see also, Chiu et al., 2009). Speculatively, if depression is viewed as being more controllable (e.g., Krendl & Freeman, 2019), the perceived lack of economic contribution by individuals with depression to the family and the community might have been perceived as a choice, which, in turn, exacerbated stigma endorsement.

Of course, this study is not without limitations. The SGC-MHS did not have the option to systematically select countries. Inclusion was a combination of country participation in ISSP and a negotiation with participating countries about their interest and ability to meet the parameters of the study design. Furthermore, given the focus on cross-national comparison, the ability to probe further into the cultural idioms of any one country was not possible. Furthermore, we cannot rule out that other factors, such as contributions of global economic status. Fortunately, prior work examining global patterns of mental illness stigma found that level of development did not systematically affect stigma (Pescosolido et al., 2015). Finally, SGC-MHS respondents were nearly twice as likely to correctly label the depression versus schizophrenia vignettes (as reported by Pescosolido et al., 2013). With literacy poorer on the schizophrenia vignette, findings on cultural differences might be less pronounced and did not reflect any ceiling effects. Specifically, documented race/ethnicity differences emerged within schizophrenia did not suggest ceiling effects associated with schizophrenia. Despite limitations, these data provided the opportunity to examine how culture might contribute to stigma by providing data from multiple countries in the East (four) and the West (seven).

Overall, our results suggest that cultural differences in stigma might be driven more by negative attitudes toward depression than they are to schizophrenia. Many global efforts have centered on increasing awareness and decreasing stigma toward schizophrenia rather than depression (Sartorius & Schulze, 2005). Since the SGC-MHS data were collected, numerous countries (particularly Eastern countries) have re-labeled schizophrenia, resulting in claims of lower stigma and an increase in the number of diagnoses (e.g., for review, see Yamaguchi et al., 2017). Yet, these efforts might have had the ironic consequence of undereducating people about depression, only not on the global radar of stigma concerns (e.g., Reddy, 2012). Our findings also provide

unique insights to spur future research essential for honing our understanding and interpretation of cultural differences. In the end, our analyses suggest that reducing stigma on a global scale may ultimately require culturally tailored intervention strategies—targeting the emphasis on moral attributions or disclosure spillover concerns in the East but not in the West where their impact on change appears to be minimal (Pescosolido et al., 2010).

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Supplemental Material

Supplemental material for this article is available online.

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