

Including culture in programs to reduce stigma toward people with mental disorders in low- and middle-income countries

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Abstract

Stigma is one of the main barriers for the full implementation of mental health services in low- and middle-income countries (LMICs). Recently, many initiatives to reduce stigma have been launched in these settings. Nevertheless, the extent to which these interventions are effective and culturally sensitive remains largely unknown. The present review addresses these two issues by conducting a comprehensive evaluation of interventions to reduce stigma toward mental illness that have been implemented in LMICs. We conducted a scoping review of scientific papers in the following databases: PubMed, Google Scholar, EBSCO, OVID, Embase, and SciELO. Keywords in English, Spanish, and Portuguese were included. Articles published from January 1990 to December 2017 were incorporated into this article. Overall, the studies were of low-to-medium methodological quality—most only included evaluations after intervention or short follow-up periods (1–3 months). The majority of programs focused on improving knowledge and attitudes through the education of healthcare professionals, community members, or consumers. Only 20% (5/25) of the interventions considered cultural values, meanings, and practices. This gap is discussed in the light of evidence from cultural studies conducted in both low and high income countries. Considering the methodological shortcomings and the absence of cultural adaptation, future efforts should consider better research designs, with longer follow-up periods, and more suitable strategies to incorporate relevant cultural features of each community.

Keywords

interventions, low- and middle-income countries, mental illness, stigma

Introduction

Over one-fifth of the global burden of disease has been attributed to neuropsychiatric disorders such as depression, schizophrenia, and substance use disorders (Whiteford, Degenhardt, Murray, Vos, & Lopez, 2014). About three-quarters of this burden is experienced in low- and middle-income countries (LMICs). Nonetheless, over 80% of those persons living in LMICs who are in need of mental health care do not receive any effective treatment, due to the scarcity of skilled healthcare staff, persistent social inequalities, and the stigma associated with mental illness

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(Mascayano, Armijo, & Yang, 2015; Saxena, Thornicroft, Knapp, & Whiteford, 2007).

Stigma is responsible for a huge part of the burden related to mental illness. Extensive evidence shows that stigma is strongly associated with a series of negative outcomes among people with mental illness, such as low self-esteem and quality of life; limited engagement with mental health services; and reduced social support and recovery (Mascayano et al., 2015). Therefore, stigmatization has been recognized as a major mental health problem and several programs have been deployed to tackle it. So-called “anti-stigma programs” have proliferated worldwide, especially in high-income countries (HICs)—with mixed results (Gaebel, Rössler, & Sartorius, 2017). However, only a few such interventions have been implemented in LMICs.

Stigma can be defined as a phenomenon whereby individuals with discredited attributes are rejected by society, thus generating devalued social identities (Goffman, 1963). As noted by Thornicroft (2006), stigma involves knowledge, attitudes, and behavior. At least five main types of stigma have been identified in the literature: 1) *public stigma*: negative attitudes and beliefs about individuals with mental illness among community members; 2) *provider stigma*: stigma from healthcare professionals that significantly influences help-seeking and engagement with treatment (Corrigan & Watson, 2002a; Wahl & Aroesty-Cohen, 2010); 3) *consumer/internalized stigma*: stigma among people diagnosed with a mental illness, who experience discrimination and/or internalize prejudices and stereotypes from the community (Corrigan & Watson, 2002b); 4) *family stigma*: stigma among those who are closely associated with a labeled individual, such as family members of mentally ill individuals (Lefley, 1989); and 5) *structural stigma*: institutional practices that work to the disadvantage of the stigmatized group or person (Corrigan, Markowitz, & Watson, 2004).

Stigma is understood here as a social process that takes place within the daily engagements that “matter most” within a particular sociocultural environment. There is evidence that the sociocultural environment shapes the way that stigma is experienced by individuals within that cultural group (Yang et al., 2007). “Modified labelling theory” has been proposed to explain how the process of stigmatization occurs. According to this theory, individuals first learn about, and then internalize, concepts that society associates with individuals with mental illness: labels such as “dangerous,” “weak,” and “useless” are used to classify and discriminate against the targeted “others” (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989). Stigmatized individuals may feel devalued, leading them to adopt harmful coping mechanisms, such as secrecy or withdrawal (Yang, Thornicroft, Alvarado,

Vega, & Link, 2014). Stigma is considered an overarching concept that includes the problems of negatively valenced knowledge, biased attitudes, and discrimination toward people with mental illness (Thornicroft, Rose, Kassam, & Sartorius, 2007).

Some have noted that culture may shape and modulate the way stigma is expressed in different social groups and societies. Here culture is conceptualized as a product of both collective and individual values, norms, experiences, and life histories of people pertaining to a specific social group (Lopez & Guarnaccia, 2000). According to Yang et al. (2007), each local social group engages in a set of fundamental daily activities that “matter most” in their respective culture, and stigma profoundly affects these activities and capacities. For example, gender roles concerning work and marriage, and adherence to socially acceptable behavior, are important sources of stigmatization in Asia and Latin America (Koschorke et al., 2014; Mascayano et al., 2015). Despite these examples of cultural influence, research about stigma toward people with mental illness in LMICs has relied predominantly on the use and development of measures and strategies that come from HICs (Yang et al., 2014). Interventions in global mental health, as noted by Kirmayer and Pedersen (2014), have tended to neglect non-Western perspectives and local forms of healing/reintegration that might shape the way in which communities in LMICs understand stigma, social integration, and recovery.

Stigma is known to be a significant barrier to the implementation of community mental health services in LMICs, mainly because stigmatized individuals are less inclined to seek and engage with mental health care (Patel et al., 2010; Saraceno et al., 2007). A recent review of stigma-focused research conducted in LMICs revealed consistently high rates of negative attitudes from community members toward mental illnesses (Thirhalli & Kumar, 2012). High rates of perceived stigma were identified in people with schizophrenia in India (Koschorke et al., 2014), Nigeria (Oshodi et al., 2014), and some Latin American countries (Leiderman et al., 2011; Peluso & Blay, 2011). Several interventions to address stigma in LMICs have been launched in response to this critical issue (Mascayano et al., 2015), although the extent to which these interventions are effective and how frequently they use culturally-sensitive approaches, if at all, remains unknown.

Although anti-stigma programs in HICs have made remarkable progress in terms of reducing stigma over the last two decades (Evans-Lacko, Corker, Williams, Henderson, & Thornicroft, 2014), they tend, as noted earlier, to be based on Western principles, values, and frameworks (Yang et al., 2014), which are not easily transferred to and introduced in areas with fewer

resources. Many of these interventions are costly and complex, and/or are not suited to the service systems and sociocultural contexts in LMICs. Programs based on regional and local evidence would surely be more applicable, and likely more persuasive to stakeholders.

The implementation of anti-stigma programs in LMICs involves many challenges, but certain factors may contribute to successful implementation of anti-stigma projects in developing countries: 1) encouraging persons with mental illness to participate in the activities that signify “personhood” in the community to promote reintegration within society (Yang et al., 2007); 2) encouraging their participation in traditional healing rituals and fostering social solidarity from the local community; 3) increasing the flexibility of work requirements to allow for a reduced level of functioning in a subsistence economy (Rosen, 2006); 4) encouraging family and extended kinship or a communal network to support individuals with mental disorders (Susser, Collins, Schanzer, Varma, & Gittelman, 1996; Mascayano, et., 2016); and 5) building upon positive cultural and spiritual elements of psychosis (Rosen, 2006).

Increasingly, evidence about stigma in LMICs highlights the critical need for anti-stigma campaigns in these regions. Because practices regarding mental illness and health care are contingent on culture, it is important to use an *emic* approach when analyzing the relevance of assessments and interventions (Yang et al., 2014). This article presents a scoping review of interventions to reduce stigma toward mental illness in LMICs, with a focus on the role of culture. As noted by some scholars (Anderson, Allen, Peckham, & Goodwin, 2008; Levac, Colquhoun, & O’Brien, 2010), scoping reviews are preferable to systematic reviews when: 1) it is challenging to define specific and narrow review questions; 2) the potential studies to include in the review have used different research designs, data collection techniques, and data analysis procedures; and 3) minimal prior analyses on the topic have been undertaken. Although an earlier review addressed some of the same literature (Semrau, Evans-Lacko, Koschorke, Ashenafi, & Thornicroft, 2015), we aimed to examine the implementation issues in more depth to guide future work.

Methods

Research design

This scoping review was primarily focused on exploring what and how cultural features were taken into account to define both content and format of existing anti-stigma interventions in LMIC. Additionally, given the importance of having accurate and culturally-adapted

outcome measures to estimate intervention effectiveness, we also reported information regarding the psychometric features of each instrument employed. To guide this study, we formulated three main research questions: 1) *What kinds of anti-stigma interventions have been reported from LMICs?* 2) *How have these been culturally adapted to local contexts, if at all?* 3) *What are the main outcomes reported and how do these relate to the local cultural context?*

Searching strategy

A search of scientific papers was conducted using the following databases: PubMed, Google Scholar, EBSCO, Ovid, Embase, and SciELO. We followed Arksey and O’Malley’s (2005) framework for scoping reviews, which includes five components: 1) *Identifying a clear but broad research question*; 2) *Identifying relevant studies*, which includes a decision plan for where to search, which terms to use, which sources are to be searched, time span, and language; 3) *Study selection*, considering inclusion and exclusion criteria; 4) *Charting the data*, using a descriptive analytical approach for extracting contextual or process-oriented information from each study; and 5) *Collating, summarizing, and reporting results* (Arksey & O’Malley, 2005).

The World Bank classification was used to identify LMICs (World Bank, 2019). Keywords in English, Spanish, and Portuguese were included. We kept search terms broad to find relevant studies even when the specific keyword, “stigma,” was not mentioned in the title or abstract (see Table 1). We also carefully checked for specific localities within LMICs (e.g., “Istanbul”) when these were mentioned in titles or abstracts instead of countries. We searched for articles published from January 1990 to December 2017. The terms were also combined for a more precise search and used to identify titles, abstracts, and full texts in the databases noted above.

Articles were included in this review if they met the following inclusion criteria: (1) stigma interventions conducted in any LMIC by teams located either in LMICs or HICs; (2) reported primary research published in peer-reviewed journals; (3) focused on broad or specific interventions to reduce stigma toward adults and/or children with a diagnosis of mental disorder or their relatives, public stigma, institutional stigma, and/or healthcare stigma; (4) included quantitative or qualitative methods; and (5) were written in English, Spanish, and/or Portuguese. Additional articles were also identified by reviewing the reference sections of the articles found in the literature search. We reviewed each report through a sequential process (searching, refining search strategy, examining titles and abstracts, and reviewing full articles). Two reviewers (JT and SH)

Table 1. Key terms included in the selection of articles.

General terms	Alternative terms
Stigma	Attitudes OR labeling OR prejudice OR social acceptance OR social stigma OR social discrimination OR social perception OR stereotyping
Mental illness, Mental disorders	Adjustment mental disorders OR anxiety disorders OR eating disorders OR mood disorders OR neurotic disorders OR schizophrenia
Intervention	Campaign OR program OR therapy OR approach
Low- and middle-income countries	Developing countries OR emergent countries OR third world OR developing nations OR Latin America OR Africa OR Asia OR Sub-Saharan Africa OR East Asia OR South Asia OR Caribbean
Culture	Race OR minority OR ethnicity OR anthropology OR qualitative
Literature review	Systematic review OR meta-analysis OR scope review

independently judged each report. Reviewers met at the beginning, midpoint, and final stages of the article review process to discuss challenges and uncertainties related to study selection. If any disagreements regarding study inclusion arose, the first author (FM) made the final decision.

A systematic search of the databases yielded 6100 hits. We reviewed 126 abstracts and full documents. Of those, 44 papers were excluded mainly because they were not focused on stigma, and 25 were excluded because they were cross-sectional studies not including pre- and post-study measures. The final review included 25 articles (18 quantitative reports and 7 qualitative reports) that met the selection criteria (see Figure 1).

The research team collectively developed a data-charting form and determined which variables needed to be included to answer the research questions. This form was based on the framework set out by Cabassa and Hansen (2007) and included the country and continent where the study took place; sample size and demographic information; the study's aims and methods; principal components of each intervention; and outcomes. In addition, stigma was classified by "type" based on the categories listed in the Introduction: (1) public stigma; (2) provider stigma; (3) consumer stigma; (4) family stigma; and/or (5) structural stigma.

Analysis strategies

Because this scoping review incorporated both quantitative and qualitative reports, we used two different tools to assess the quality of each document. For quantitative studies, we used a modified version of the Methodological Quality Rating Scale (MQRS) to evaluate methodological characteristics (Miller et al., 1995). This instrument assesses effectiveness across 13 dimensions (including study design, enumeration of baseline data, follow-up rate, analyses, and cultural/linguistic adaptations, among others), and has been used in previous systematic reviews of intervention studies

(Cabassa & Hansen, 2007). Each paper was evaluated using a score range from 0 (poor quality) to 17 (high quality).

For qualitative studies, we used a modified brief version of the Guide for Reading Qualitative Studies (RQS) (Sandelowski & Barroso, 2002). This instrument evaluates several dimensions of a qualitative paper according to their presence and relevance on a dichotomized scale ("yes"/"no"). To generate a numeric score, the qualitative scores were represented by binary treatment codes, whereby 1 represented "yes" and 0 represented "no." For example, some dimensions included "problem," "method," "data collection techniques and sources," "ethics," etc. These parameters help in assessing how well or poorly a category of information has been addressed.

Two independent raters (JT and SH) scored each selected paper using both of the instruments described above. A third independent rater (FM) calculated the Intraclass Correlation Coefficient (ICC) to estimate interrater reliability for the MQRS scores (ICC = 0.82) and the Kappa inter-observer agreement for the RQS ($\kappa = 0.84$) by using Stata 12. All raters then had a series of meetings to resolve disagreements by rereading the studies and further discussing their methodological features, results, and implications.

Results

Methodological features

Quantitative studies. Total MQRS scores for quantitative studies ranged from 6 to 17 ($M = 9.14$, $SD = 3$). Of the 18 quantitative studies, four (22.4%) consisted of pre-test/post-test studies with at least two groups. Nine involved a single group pre-test/post-test design and five studies were randomized controlled trials (RCTs).

Most of the articles provided sufficient details to replicate the intervention and reported baseline sociodemographic data. However, 27.7% (5 of 18) of the reports did not include baseline information and only

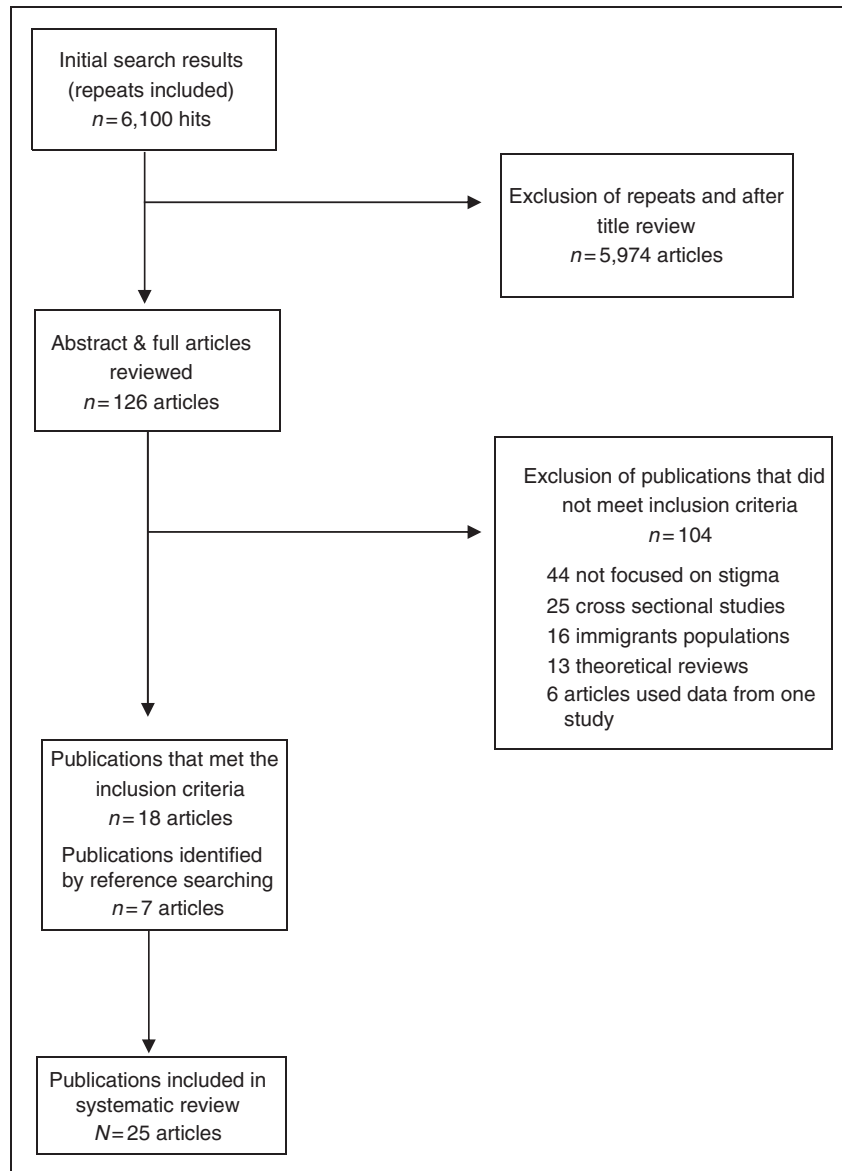


Figure 1. Search results and articles selection procedures.

44.4% (8 of 18) incorporated a manual with procedures, guidelines, or protocols. Most studies did not include specific information about sociocultural features or characteristics of the community or country where they took place. Most studies that used strategies and tools developed for HICs did not fully explain how they were adapted to each specific setting.

Follow-up periods ranged from 0 to 12 months, and follow-up rates ranged from 63% to 100%. Most studies (61%) only included evaluations after the intervention (“immediately after” intervention, i.e., less than one week; or “delayed following” intervention, i.e., more than one week) or short follow-up periods (1–3 months). No studies used any additional information (e.g., medical records) to corroborate and/or supplement self-reported measures.

All studies conducted suitable statistical analyses for their particular research designs based on the MQRS. Some of the statistical procedures included repeated-measure analysis of variance and covariance, multivariate regression, parametric analysis, among others. All studies incorporated instruments adapted to their specific population, but only a few explicitly described how these adaptations were conducted and evaluated.

Qualitative studies. Seven qualitative articles were included in this review. These studies were based on well-described research problems, and all but one (Kalra, 2012) included explicit research questions and purposes. In general, the reports referred to sociological and/or psychological theories about stigma, particularly those relating to how stereotypes and attitudes

are formed and transmitted from and through different social actors such as individuals with mental illness, community members, families, and mental health providers. However, none of these papers mentioned cultural perspectives concerning stigma or its mechanisms.

The RQS instrument was used to measure the “presence” and “relevance” of several methodologies and qualitative approaches. RQS scores indicated that the methods fit the research purpose and were accurately rendered in 4 of the 7 (57.1%) studies. Three studies used semi-structured interviews, two used focus groups, and one reported using “observation field notes” for collecting information. All interpretations of findings were demonstrably plausible and sufficiently substantiated with data. Nevertheless, validation strategies were rarely implemented to ensure the quality of the findings. Techniques tailored for validating the findings (e.g., saturation) were scarcely conducted to fit the purpose, method, sample, data, and findings.

Description of the anti-stigma programs

The interventions included in this review were heterogeneous. In some cases, they corresponded to specific programs to reduce stigma and discrimination (Altindag, Yanik, Ucok, Alptekin, & Ozkan, 2006; Bayar, Poyraz, Aksoy-Poyraz, & Arikan, 2009; Chan, Mak, & Law, 2009; Fernandez, Tan, Knaak, Chew, & Ghazali, 2016; Ivezić, Sesar, & Mužinić, 2017; Kakuma et al., 2010), including stigma-related measures such as the Chinese Self-Stigma of Mental Illness Scale (Fung, Tsang, & Cheung, 2011) or the Mental Health Knowledge, Attitude and Behaviour measure (Maulik et al., 2017). Most studies, however, used general approaches to improve mental health literacy and attitudes toward mental disorders among healthcare professionals, community members, and relatives (Ahuja, Dhillon, Juneja, & Sharma, 2017; Arkar & Eker, 1997; Armstrong et al., 2011; Balaji et al., 2012; Cardenas, De Santacruz, & Salamanca, 2014; Farhood, Richa, & Massalkhi, 2014; Gutiérrez Maldonado, Caqueo-Urizar, & Ferrer-García, 2009; Kalra, 2012; Kutcher et al., 2015; Makanjuola, Doku, Jenkins, & Gureje, 2012; Pejović-Milovančević, Lečić-Toševski, Tenjović, Popović-Deušić, & Draganić-Gajić, 2009; Premalatha Chinnayya et al., 1990; Reddy et al., 2005; Thavichachart & Lueboonthavatchai, 2007). A few reports evaluated the implementation of regional and national programs to enhance empowerment among consumers (Gupta & Roberts, 2014), and the inclusion of mental health services into primary care (Petersen, Ssebunnya, Bhana, & Baillie, 2011) or community settings (Chatterjee et al., 2014), evaluating the impact of such programs on stigma.

The deliverers of interventions were principally psychiatrists, psychologists, nurses, and in a few cases, community workers. Of the 25 interventions, 20 (80%) consisted of short training programs targeted at specific populations: health professionals or para-professionals; high school students or consumers and their families. For healthcare workers, the most common approaches involved education related to mental disorders (Makanjuola et al., 2012); practice-based skills (Kutcher et al., 2015); exposure through direct patient contact (Arkar & Eker, 1997; Fernandez et al., 2016); support for people with mental disorders and their relatives (Balaji et al., 2012); treatment adherence management and referrals to community agencies (Chatterjee et al., 2014); or viewing films that depict individuals with schizophrenia positively for discussion (Kalra, 2012). For high school students, education was also the primary mechanism to increase mental health literacy (Pejović-Milovančević et al., 2009), but in two studies a demythologizing contact-video approach was used as well (Chan et al., 2009; Fernandez et al., 2016). In one study, this kind of educational methodology was also incorporated into daily activities of the school curriculum (Kutcher et al., 2015). Finally, for consumers and their families, art activities, training for caregivers, or needs-based interventions were implemented to promote positive attitudes and reduce self-stigma (Chatterjee et al., 2014; Gutiérrez-Maldonado et al., 2009; Ivezić et al., 2017; Kakuma et al., 2010).

With regard to culture, only 5 studies explicitly stated how they developed and/or adapted interventions based on cultural values and meanings (Ahuja et al., 2017; Farhood et al., 2014; Gutiérrez-Maldonado et al., 2009; Kutcher et al., 2015; Maulik et al., 2017). For example, Farhood et al. (2014) reported using an adapted form of cognitive behavioral therapy to desensitize traumatic feelings after war in Southern Lebanon. This 8-week group intervention included training in social skills, destigmatizing education about mental illness, and learning coping skills. The authors explicitly stated that intervention sessions addressed “common myths surrounding mental illness such as the belief that mental illness is a personal flaw, a punishment from God, or a result of being possessed by jin or demons” (p. 179), religious beliefs that seem to be common in the Lebanese setting. Ahuja et al. (2017) employed cultural resources and strategies, such as dance theatre, to address negative beliefs about mental illness among a group of students in India. Maulik et al. (2017) used a similar approach in a rural area in India: they conducted a comprehensive evaluation of the setting to assess the appropriateness and relevance of a massive anti-stigma campaign before implementing it. Finally, Gutiérrez-Maldonado et al. (2009) elaborated a strategy to improve knowledge of

and attitudes toward mental disorders among family members by enhancing, for instance, communication and coping skills. They conducted several roleplays and discussions with caregivers in order to reproduce Chilean customs and lifestyle activities, such as how to cope with limited economic resources, how to ask for help, and so on.

Outcomes

Most studies included in our analysis employed measures to assess knowledge about and attitudes toward mental illness among health providers, college students enrolled in healthcare programs, and community health workers. There were some studies, nonetheless, that used specific instruments to evaluate stigma among those who provide health and mental health care. Few studies focused on public stigma, consumer stigma, or family stigma, and none addressed structural stigma. All reports were written in English, with the exception of one in Spanish; none were presented in Portuguese. Table 2 lists the main results of each study.

Provider stigma. The most common type of stigma reported was provider stigma (from current or soon to be healthcare workers). Accordingly, several reports were focused on addressing stigma among healthcare professionals, para-professionals, and medical students (Altindag et al., 2006; Arkar & Eker, 1997; Fernandez et al., 2016; Makanjuola et al. 2012; Petersen et al., 2011; Premalatha Chinnayya et al., 1990; Reddy et al., 2005; Bayar et al. 2009). One study conducted in Turkey by Arkar and Eker (1997) evaluated the effect of a 3-week psychiatric training program composed of lectures and direct contact with people with mental disorders. No significant differences were observed on social distance between those who participated in the program compared to those who did not (ophthalmology training). In Malaysia, Fernandez et al. (2016) conducted a RCT aimed at testing two different approaches to address stigma: 1) educational lecture plus face-to-face contact; and 2) lecture plus video-based contact. Both groups (condition 1 and condition 2) reported less stigma based on the Opening Minds Stigma Scale for Health Care Providers at post treatment, but such differences were not statistically significant between groups. Bayar et al. (2009) evaluated the effects of an informative email about stigma in psychiatry residents and specialists in Turkey through a quasi-experimental study conducted immediately after the intervention. The intervention group scored higher overall on a questionnaire on stigma elaborated by the researchers, indicating they had less stigma than subjects in the control group.

In terms of mental health literacy and attitudes toward mental illness, studies conducted in Turkey (Altindag et al., 2006), India (Armstrong et al., 2011; Premalatha Chinnayya et al., 1990), Nigeria (Makanjuola et al., 2012), and Malaysia (Reddy et al., 2005) reported significant improvements on such dimensions using pre-test/post-test research designs (see Table 2). Finally, Kalra (2012) conducted a qualitative study that involved watching a destigmatizing movie, followed by a focus group discussion, with 11 psychiatry trainees in India. The participants agreed that this approach was useful to elicit their experiences and feelings related to studying psychiatry, and they mentioned how constructive it was to discuss their own emotional processes in order to offer better treatment and to better understand clients. No cultural content was integrated in this intervention, however.

Public stigma. With regard to stigma among community members, Maulik et al. (2017) conducted the largest anti-stigma campaign ever reported in a LMIC. They selected 42 villages in rural Andhra Pradesh (South India) and developed culturally sensitive materials that were designed to increase literacy on mental health and to reduce negative beliefs and behaviors associated with mental disorders among laypersons. The pre- and post-assessments revealed significant improvements in scores in most domains of the Mental Health Knowledge, Attitude and Behaviour scale. Chan et al. (2009) implemented an anti-stigma program in 255 secondary schools in Hong Kong and found that the strategy of video-based contact plus education was more effective in reducing social distance if the video was presented after the education component. The improvements in social distance were maintained at the one-month follow-up.

Interventions based on increasing mental health literacy and attitudes toward mental disorders were also reported. For instance, Kutcher et al. (2015) reported positive findings after implementing a training program in Malawi; they observed significant and substantial improvements in knowledge and attitudes in a group of 218 primary and secondary school teachers and youth club leaders. Rahman et al. (1998) conducted a pre-test/post-test study in Pakistan among 400 participants, including primary school students, relatives, friends, and people from the larger community. They used a questionnaire to assess knowledge and attitudes about depression and psychosis, among other mental illnesses. Outcome scores after the school-based intervention revealed statistically significant differences: the schoolchildren who participated in the program, along with their parents, neighbors, and friends, scored about five points higher than their counterparts in a control group.

Table 2. Description of included studies.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Altındag et al. (2006)	Provider stigma 25 medical students from Harran University (study group); 35 students from Dicle University (control group).	Turkey	Stigma 1-day program that included: - Education - Contact (discussion with a person with schizophrenia) - Film viewing (<i>A Beautiful Mind</i>) Control: One group watched a film on migratory patterns of birds.	2 group pre-test/post-test design plus 1-month follow-up.	Attitudes about schizophrenia questionnaire Psychometric features were not reported.	Attitudes about people with schizophrenia changed favorably in the study group compared to the control group after the program. At the 1-month follow-up assessment, that effect had diminished slightly but remained significant.	No	No
Bayar et al. (2009)	Provider stigma 205 psychiatric residents and specialists.	Turkey	Stigma Instructive email with a general account of stigmatization. Control: One group did not receive the instructive email.	2-group RCT design	9-item Internet-based questionnaire on stigmatizing opinions about mental illness. Adapted/validated in the study ($\alpha = 0.66$).	Scores were significantly higher in the experimental group than in the control group, demonstrating less stigmatizing attitudes. However, there may have been a social desirability effect with the intervention email that was not paralleled in the control group.	No	No
Chan et al. (2009)	Provider stigma 255 secondary school students.	China	Stigma 3 different stigma reduction programs: - Education only (consisting of demythologizing lecture) - Education-video based contact (lecture followed by video on mental health experiences) - Video-education (video followed by lecture).	3 group pre-test/post-test design plus 1-month follow-up.	Public stigma scale. Adapted/validated in the study (pre-test $\alpha = .91$; post-test and follow-up $\alpha = .96$). Social distance scale. Adapted/validated in the study (pre-test $\alpha = .85$; post-test and follow-up $\alpha = .88$).	Participants who were part of the education-video program had significantly reduced public stigma post-intervention that continued through the follow-up period.	No	No
Fernandez et al. (2016)	Provider stigma 102 pre-clinical medical students.	Malaysia	Stigma The anti-stigma intervention was based on three main components: 1) educational lecture (90 min); 2) face-to-face contact (45 min); and 3) video-based contact (40 min).	RCT with two conditions: 1) education + face-to-face contact; and 2) education + video-based contact. Three assessment point times were defined: baseline, post-treatment, and 1-month follow up.	Opening Minds Stigma Scale for Health Care Providers (OMS-HC) Adapted/validated in the study ($\alpha = .50$ for Attitudes; $\alpha = .60$ for Disclosure, Help-Seeking and Social Distance).	Both groups (condition 1 and condition 2) reported lower scores on OMS-HC at post-treatment. However, the differences between groups were not statistically significant based on MANOVA, and the decrease seen at post-treatment was not sustained at 1-month follow up.	No	No

(continued)

Table 2. Continued.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Ivezić et al. (2017)	Consumer stigma 80 people with schizophrenia.	Croatia	<i>Stigma</i> Brief supportive group with a focus on psychoeducation to reduce stigma. The program integrated elements of education about the illness, cognitive techniques for dealing with attitudes and beliefs, and a psychodynamic approach for dealing with emotional reactions associated with the illness and stigma.	2 group pre-test/post-test Solomon design.	The following measures were previously validated in Croatia: Internalized Stigma of Mental Illness Scale ($\alpha = .92$). In addition, validated in the study ($\alpha = .90$). Boston University Empowerment Scale ($\alpha = .82$). In addition, validated in the study ($\alpha = .79$). Perceived Devaluation and Discrimination Scale ($\alpha = .77$). In addition, validated in the study ($\alpha = .79$).	Participants in the intervention group scored significantly lower on self-stigma measurements as compared to the control group at post-test assessment. However, no significant differences were observed between groups in terms of empowerment and perceived discrimination at post-test assessment.	No	No
Kakuma et al. (2010)	Public stigma 64 interviewees (policy-makers, mental health patients, NGO and public sector managers, professional organizations).	South Africa	<i>Stigma</i> Anti-stigma campaigns through: - Consumer/user involvement - Early education - Public awareness and media - Correctional services - Other activities (e.g., social integration program).	Qualitative study	WHO Assessment Instrument for Mental Health Systems Version 2.2 Semi-structured interviews.	Numerous anti-stigma campaigns take place throughout South Africa, but very few are evaluated for effectiveness or shared in peer-reviewed journals to share experiences and lessons learned.	No	No
Fung et al. (2011)	Consumer stigma 66 individuals with schizophrenia with notable levels of self-stigmatization	China	<i>Stigma</i> Self-stigma reduction program (12 group and 4 individual sessions). Components include psycho-education, cognitive behavioral therapy, motivational interviewing, social skills training, and goal attainment program. Control: Newspaper reading group.	RCT design with 6-month follow-up.	The following measures were previously validated in China: Chinese Self-Stigma of Mental Illness Scale ($\alpha = .82-.90$; ICC = .71-.81). Change Assessment Questionnaire for People with Severe and Persistent Mental Illness ($\alpha = .79-.89$). Psychosocial Treatment Compliance Scale ($\alpha = .87-.96$; ICC = .86-.90). The Scale to Assess Unawareness of Mental Disorders (ICC = .67-.89). Chinese General Self-Efficacy Scale ($\alpha = 0.92-0.93$; ICC = 0.75-0.94).	The intervention program was effective in reducing self-stigmatizing attitudes immediately post-intervention, but the benefits were not maintained through follow-up.	No	No

(continued)

Table 2. Continued.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Maulik et al. (2017)	Public stigma Community members (pre: n = 1576; post: n = 2100).	India (rural area)	<i>Stigma</i> Intervention based on education and recovery, including person-contact and video-contact components to reduce stigma. The program was specially tailored to the target population and included culturally sensitive resources such as Indian drama theater.	Pre-test/post-test design.	Barriers to Access to Care Evaluation (BACE). Adapted/validated in the study ($\alpha = .85$). Mental Health Knowledge, Attitude and Behaviour. Adapted/validated in the study. Psychometric features, however, were not reported in this article. Qualitative data were also collected by using a set of open-ended questions.	Improvements were observed in scores for most of the questions related to attitudes and behaviors. All items on the BACE were significantly lower at post-intervention compared to pre-intervention.	Yes	Yes
Ahuja et al. (2017)	Public stigma 50 college students.	India	<i>MH literacy</i> One-time education and contact-based intervention. The intervention addressed negative beliefs about mental illness by using cultural resources such as Indian dance-theatre.	Pre-test/post-test design.	Perception of people with mental illness (open-ended questions). Community Attitudes towards Mental Illness scale (CAMI). Adapted/validated in the study. Internal consistency by subscale: community mental health ideology ($\alpha = .84$); benevolence ($\alpha = 0.78$); social restrictiveness ($\alpha = 0.54$); authoritarianism ($\alpha = 0.68$).	Results indicated increased feelings of benevolence, community mental health ideology, and less authoritarianism at the post-intervention assessments. Reduction in endorsement of social restrictiveness was also observed but only at the immediate post-assessment.	Yes	No
Arkar & Eker (1997)	Provider stigma 135 medical students.	Turkey	<i>MH literacy</i> 3-week psychiatric training program at med school aimed to increase MH literacy: - Coursework (lectures) - Clinic work with direct patient contact Control: 3-week ophthalmology training.	2 group pre-test/post-test design	Questionnaire with case vignettes Social distance scale. Adapted/validated previously in Turkey ($\alpha = .88$) Both instruments were used to assess attitudes about mental illness.	In terms of social distance, no significant differences were observed between the experimental vs. control groups.	No	No
Armstrong et al. (2011)	Provider stigma 70 community health workers.	India	<i>MH literacy</i> 4-day training course to increase MH literacy that included: - Introduction to mental health and mental health disorders - Mental health first aid - Practice-based skills - Mental health promotion.	Pre-test/post-test design plus 3-month follow-up.	Mental health literacy survey to measure knowledge of mental health. Adapted/validated in the study. Psychometric features, however, were not reported.	Participants were better able to correctly identify case vignettes after completing the training program. However, there were no significant changes in beliefs about recovery and attitudes about people with mental disorders.	No	Yes

(continued)

Table 2. Continued.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Balaji et al. (2012)	Multiple stigma (consumers and family) 32 individuals with schizophrenia and their families.	India	MH literacy Community intervention with 5 components: - Psycho-education - Adherence management - Rehabilitation - Referrals - Health promotion.	Qualitative study	Qualitative in-depth interviews to evaluate the intervention components.	The intervention was determined to be acceptable and feasible for the treatment of schizophrenia in India. However, experiences of stigma and discrimination were inadequately addressed.	No	No
Cardenas et al. (2014)	Consumer stigma 764 participants (Spanish-speaking Facebook users).	Various countries (Internet-based)	MH literacy Facebook page for people with mental disorders, their family members, friends, and health workers.	Qualitative study.	Analysis of online posts and discussions: articles, videos, member comments.	Members shared information frequently and provided emotional support to each other.	No	No
Chatterjee et al. (2014)	Consumer stigma 282 people with schizophrenia.	India	MH literacy Collaborative community-based care + facility-based care: - Needs assessments - Structured clinical reviews - Psychoeducational information for participants - Adherence management strategies - Health promotion for physical health - Individualized rehabilitation strategies. - Support in dealing with stigma/discrimination - Linkage to self-help groups - Help with social benefits/inclusion Control: Facility-based care only	Multi-centre parallel group RCT design with 12-month follow-up.	PANSS: measure symptoms. IDEAS: measures disability. Previously adapted/ validated in India. Psychometric features were not reported in this article. Other items and scales to measure secondary outcomes on adherence, discrimination, family burden and knowledge about schizophrenia.	After 12 months, both symptomatology and disability scores were lower in the intervention group than the control group. No significant differences were found between groups in terms of discrimination.	No	No
Farhood et al. (2014)	Consumer stigma 14 participants.	Lebanon	MH literacy 8-week cognitive behavioral group therapy: - Power Point presentations - In-depth discussions - Q&A sessions.	Qualitative study.	Qualitative interviews, focus groups, therapist field notes.	Participants were satisfied with the intervention and therapists identified several beneficial factors as well as barriers to therapy attendance.	Yes	Yes
Gupta & Roberts (2014)	Consumer stigma 7 participants (4 patients, 2 researchers, 1 communications developer).	India, Kenya, Nepal, Zambia	MH literacy EMPOWER project communicated research via: - Posters - Songs - Theater shows - Websites - Videos - TV documentaries.	Qualitative study	Semi-structured interviews on the experience with the EMPOWER study.	Many positive aspects of collaboration between researchers and patients were identified, including support and empowerment. Some challenges were also identified, including differences in levels of education and lack of payment.	No	No

(continued)

Table 2. Continued.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Gutiérrez-Maldonado et al. (2009)	Family stigma 45 family/caregivers.	Chile	MH literacy Psycho-educational program that consisted of 18 weekly group sessions for caregivers. Sessions covered: - Family experience with schizophrenia - Psycho-education - Skills to improve communication - Relatives' self-care - Evaluation of the intervention Control: Standard protocol (a monthly appointment with a psychiatric nurse).	RCT	Relatives Attitudes towards Schizophrenia Questionnaire. Developed/validated in the study ($\alpha > .90$). SF-36 General Health Questionnaire on physical and mental health. Adaptation/validation process was not reported.	Yes	Yes	
Kalra (2012)	Provider stigma 11 psychiatry trainees.	India	MH literacy Psychiatry "movie club" film presentation: <i>Gothika</i>	Qualitative study	Focus group discussion.	The movie presentation and subsequent discussion helped psychiatry trainees openly share their experiences related to studying psychiatry.	No	No
Kutcher et al. (2015)	Public stigma 218 primary and secondary school teachers and youth club leaders.	Malawi	MH literacy 3-day curriculum intervention culturally adapted from a Canadian program. The intervention covers the following topics: stigma; understanding mental health and wellness; experiences of mental illness; seeking help and finding support; and positive mental health.	Pre-test/post-test design	Anonymous questionnaire designed to measure knowledge about and attitudes toward mental health and mental disorders. Adapted/validated in the study (knowledge items $\alpha = 0.64$; attitudes items $\alpha = 0.55$).	Results demonstrated a highly significant and substantial improvement in knowledge and attitudes.	Yes	Yes
Makanjuola et al. (2012)	Provider stigma 24 trainers of community health workers.	Nigeria	MH literacy 1-week training workshop with theory, discussion, and role-play of 5 modules: - Core concepts of mental health - Core skills (including communication, diagnosis, and management) - Common neurological disorders - WHO primary care guidelines for mental health - Policy, legislation, and integration of mental health in other services.	Pre-test/post-test design	Questionnaire to assess knowledge and attitudes about mental health issues. Adapted/validated in the study. Psychometric features, however, were not reported.	A significant improvement was observed in knowledge about mental health issues; many attitudes about mental health issues also improved.	No	No
Pejović-Milovančević et al. (2009)	Public stigma 63 high school students.	Serbia	MH literacy 6-week workshop to increase knowledge and attitudes to mental illness: - Theoretical aspect - Workshop activities.	Pilot program: Pre-test/post-test design	Opinion about Mental Illness Questionnaire to assess attitudes on mental health. Adaptation/validation process was not reported.	Social discrimination was reduced and social awareness of mental illness was increased in the students who were involved in the program.	No	No

(continued)

Table 2. Continued.

Author/Study	Type of Stigma N	Country	Intervention (Stigma/MH literacy)	Method	Outcome measures	Main results	Cultural components (Yes/No)	
							Intervention	Assessment
Petersen et al. (2011)	Public stigma South Africa: 15 CHWs (focus groups), 22 stakeholders (individual interviews); Uganda: 5 participants (focus groups), 12 stakeholders (individual interviews).	South Africa, Uganda	MH literacy Common implementation framework: - Reorientation of district management - Establishment of community collaborative forums - Task-shifting - Promotion of self-help groups.	Qualitative study	Focus group discussions Individual qualitative interviews.	A common implementation framework can increase access to mental health treatment and has a positive effect on the attitudes of health professionals. Self-help groups are a huge factor in promoting social inclusion for users.	No	No
Premalatha Chinmaya et al. (1990)	Provider stigma 150 primary care health workers.	India	MH literacy 1-week mental health training program facilitated by a manual: - Lectures - Case demonstrations - Role play.	Pre-test/post-test design.	Attitude questionnaire developed by the authors. Adaptation/validation process was not reported	A significant positive change was observed in the attitudes of health workers after completing the training.	No	Yes
Reddy et al. (2005)	Provider stigma 122 medical students.	Malaysia	MH literacy Compulsory 8-week psychiatry post-ing with exposure to patient contact.	Pre-test/post-test design.	Attitudes Toward Mental Illness Questionnaire. Adapted/validated in the study ($\alpha = 0.61$) Attitudes Toward Psychiatry Questionnaire. Adapted/validated in the study ($\alpha = 0.77$).	Improvements were observed among female students in terms of attitudes about mental illness. The same was not true for male students.	No	No
Thavichachart & Lueboonthavatchai (2007)	Family stigma 91 caregivers.	Thailand	MH literacy 1-day psychoeducational program: - Didactic component - Group discussion component.	Pre-test/post-test design	Knowledge assessment questionnaire Attitude assessment questionnaire. Psychometric features were not reported.	Mean scores on the knowledge and attitude assessments increased significantly after the program, indicating improved knowledge and attitudes about consumers among caregivers.	No	No

Consumer stigma. One of the most common type of intervention was intended to reduce stigma among people with a mental illness (Cardenas et al., 2014; Farhood et al., 2014; Fung et al., 2011; Ivezić et al., 2017; Thavichachart & Lueboonthavatchai, 2007). Farhood et al. (2014) developed a culturally adapted cognitive-behavioral intervention for Lebanese people diagnosed with post-traumatic stress disorder (PTSD). They used interviews, focus groups, and observational field notes as sources for their qualitative analysis. Participants reported that the intervention helped them to destigmatize mental illness and use cognitive restructuring and functional coping strategies to better deal with their disabilities. Similar results were reported by Ivezić et al. (2017), who used a brief intervention based on psychoeducation and recovery to enhance empowerment and reduce self-stigma among 80 people with schizophrenia in Croatia. At post-test assessment, participants in the intervention group reported significantly lower scores on self-stigma measurements than the control group. Fung et al. (2011) also used cognitive-behavioral strategies to address internalized stigma in 66 people with schizophrenia in China. They developed and applied measurement tools based on their own model of self-stigmatization. These instruments measured three main dimensions: 1) stereotype agreement, 2) self-concurrence, and 3) self-esteem decrement. After the implementation of this program, self-esteem scores revealed modest improvements, but this therapeutic effect was not maintained during the follow-up period (at 2 and 6 months).

Family stigma. Only a few studies focused on improving attitudes of family members toward individuals with mental illness (Gutiérrez-Maldonado et al., 2009; Thavichachart & Lueboonthavatchai, 2007). Gutiérrez-Maldonado et al. (2009) conducted a two-group pre-test/post-test study involving 41 families of people with schizophrenia in South America. They implemented a psycho-educational program with the goal of changing these attitudes; the intervention significantly improved the scores of participants ($F=8.054$; $p=.007$), but the researchers did not reassess outcomes at a later follow-up. As noted above, this intervention was tailored based on local cultural customs.

Discussion

This study was conducted to evaluate and synthesize programs intended to reduce stigma in LMICs. We emphasized the role of culture in the ways that the interventions were understood, designed, and implemented. We found that only a few of the studies considered cultural features related to mental illness and

stigma in the design of anti-stigma programs. Both intervention models and measurements were, in general, conceived in and translated from HICs, not reflecting local understandings and values, which might have affected the effectiveness and feasibility of the anti-stigma programs. Additionally, the measures employed were generally neither adapted to nor validated in the settings where the studies were conducted.

Given the heterogeneity of studies, methods, and outcomes reported, we decided to use Arksey and O'Malley's (2005) framework for scoping reviews. As discussed above, this framework is especially useful for summarizing both quantitative and qualitative literature, as well as integrating different kinds of evidence. The quantitative studies were assessed as having low-medium methodological quality, so the overall positive results they reported must be evaluated with caution. Only five studies were RCTs and only one involved long-term follow-up assessments, so the long-term efficacy of most interventions is not clear. Another shortcoming is that 44% of the quantitative articles lacked manualized protocols and guidelines for administering the intervention. Standardization maintains consistency between trials and participants and reduces the likelihood of data being biased through unintended interviewer effects (Drake et al., 2001). Moreover, due to a lack of information regarding specific features of socio-cultural groups, the degree to which the procedure was culturally appropriate or relevant to the population being studied is not clear (Bernal, Jiménez-Chafey, & Domenech Rodríguez, 2009). Among the qualitative studies, methodological quality was often compromised by the absence of a specified model or theory characterizing the qualitative approach. Additionally, a lack of validation strategies, including theoretical saturation, affected validity through inadequate sampling. Without saturation, achieving informational redundancy is unlikely, which also affects the overall validity of the study (Fusch & Ness, 2015).

An important finding of this review was that only a few studies reported results from programs/interventions specifically aimed to decrease stigma by measuring the intervention effects on stigma-related measures (Bayar et al., 2009; Chan et al., 2009; Fernandez et al., 2016; Ivezić et al., 2017). Most studies, on the contrary, used general approaches to improve mental health literacy and attitudes toward mental disorders. Although knowledge about and attitudes toward illness are usually included as key components of stigma (Thornicroft, 2006), there is substantial evidence that increasing knowledge and modifying attitudes are not sufficient to decrease stigma and discrimination. Therefore, the positive results on such outcomes that are reported in this review, which are, in general, similar to those reported in HICs (Knaak, Modgill,

& Patten, 2014; Pescosolido, Medina, Martin, & Long, 2013; Schulze, 2007; Wahl & Aroesty-Cohen, 2010), should be considered very carefully, with an awareness of the limitations noted here.

Finally, it should be noted that only two studies used social contact with consumers as a principal active component (Arkar & Eker, 1997; Chan et al., 2009). Because successful anti-stigma programs in HICs usually include consumers and relatives in protagonist roles, and since this has been proven to be the most effective way to address discrimination (Thornicroft et al., 2016), future national or regional campaigns in LMICs should consider incorporating this strategy. Interventions that encourage user participation and mutual support might be a useful approach to diminish stigma among consumers and families in LMICs (Thornicroft et al., 2016).

Although promising efforts have been made over recent decades to introduce anti-stigma programs in LMICs, the studies included in this review are limited both methodologically and conceptually. As discussed above, they had flawed research methods that threaten the internal validity of their findings. More importantly, they lacked systematic and thorough consideration of the cultural differences across and within countries. Previous authors have concluded that implementing generic mental health interventions in non-Western settings does not appear to appropriately address all aspects of stigma and discrimination (Yang et al., 2014). Read, Adiibokah, and Nyame (2009) suggested that the introduction of mental health programs in LMICs must be accompanied by efforts involving negotiation with sociocultural and traditional representations of mental illness, stigma, and healing treatments.

As noted above, culture shapes stigma differently in different social groups in LMICs or among minorities in HICs (Abdullah & Brown, 2011; Ciftci, Jones, & Corrigan, 2013; Mora-Rios, Bautista-Aguilar, Natera, & Pedersen, 2013; Yang et al., 2007; Yang et al., 2012; Yang et al., 2014). For instance, family is a key priority in many Asian cultures, and stigma may impede a person with mental illness from getting married and extending their family lineage (Yang et al., 2007). Additionally, phenomena such as “machismo” or a “culture of honour” in Latin America can affect manifestations of stigma depending on gender roles (Brown, Imura, & Mayeux, 2014): women may be more stigmatized if they lose their capacity to fulfill family roles, and men may hide their psychiatric diagnosis to avoid losing status and the ability to work (Mascayano, Toso-Salman, et al., 2016).

There are good examples of culturally adapted interventions reported in this review. For instance, Ahuja et al. (2017) targeted myths about mental illness in

India by incorporating local customs and cultural practices that resonated with college students. A similar approach was also adopted by Kutcher et al. (2015) in Malawi and by Farhood et al. (2014) in Lebanon. Another good practice in terms of cultural adaptation was provided by Balaji et al. (2012), who incorporated measures to remove barriers to the delivery of their stigma intervention and to make it more acceptable and feasible. They considered alternative community spaces to deliver the intervention rather than delivering it at home to address the fear of illness disclosure in the community. Furthermore, self-help groups were organized to address feelings of isolation, low self-esteem, and to facilitate the exchange of information; such groups are, in general, scarce in LMICs.

In addition, previous experience with minorities in the US also illustrates how to tailor anti-stigma interventions for people with mental illness. The popular “foto-novelas”—small booklets that portray a dramatic story using photographs and captions—were adapted and used among a group of Latinos with depression in California; the researchers observed significant increases in knowledge about depression and reductions in stigmatizing attitudes about mental illness (Unger, Cabassa, Molina, Contreras, & Baron, 2013). Yang et al. (2014) designed an intervention based on a peer-family group format for a group of Chinese immigrants; this strategy was developed to incorporate the traditional Chinese notion of *guanxi* (social network exchange). These experiences, among others that are underway, might inform a new generation of interventions better adjusted to each particular community.

Limitations

This review has several limitations. First, although searches were conducted in English, Spanish, and Portuguese, our search terms did not include all idioms of mental illness or stigma (e.g., “nervios”), so we may have missed some relevant studies. Additionally, we did not search in other languages such as French or Chinese, but almost all scientific articles publish their titles and abstracts in English, so the odds of missing a relevant publication were very low. Second, we included studies with different conceptual and methodological designs. This made synthesis and comparison difficult, even after employing two consistent instruments. Third, most of the reported studies were conducted in urban settings, where individuals are usually well educated and have relatively good access to social and health services. Therefore, the relevance of the findings presented for those living in rural setting is uncertain. Fourth, we only considered articles published in peer-reviewed journals, and did not include publications from grey literature. While this

limited our range of social science research and evaluation methods, we wanted to analyze data that had been previously evaluated based on scientific merit.

Conclusion

This review of studies of stigma reduction programs in LMICs identified 1) the scarcity and variable quality of studies, 2) the lack of follow-up, 3) the lack of cultural components in the design of anti-stigma interventions, and 4) the need for accurate and culturally appropriate measures to estimate intervention effectiveness. Future efforts should include: more longitudinal studies; more RCTs with longer follow-up periods; a greater focus on behavioral outcomes rather than just attitudes or knowledge; more comprehensive and informative qualitative designs; more suitable strategies to incorporate relevant cultural features of each community in the design of anti-stigma programs; and more culture-specific measures that can reliably and validly assess changes in mental health stigma and discrimination over time.

We believe it is crucial to find a balance between Western ontologies of persons, health, and illness and the traditional health perspectives of each community (Hanlon, Tesfaye, Wondimagegn, & Shibre, 2010). Although programs from HICs might be applicable when developing anti-stigma interventions in LMICs, they must be selected very carefully. Those that clearly identify their core and “adaptable” components should be prioritized. Modifications might facilitate the acceptability and sustainability of evidence-based programs, but may also affect internal consistency, treatment integrity, and effectiveness (Lundgren, Amodeo, Cohen, Chassler, & Horowitz, 2011). Therefore, once an intervention is culturally adapted, implementers should set up a continuous evaluation as they are introducing it in a new setting. They should also develop methods to record and evaluate cultural adaptations, especially adaptation strategies (additions, changes, deletions), timing (reactive or proactive), and congruence with core components (Castro, Barrera, & Holleran Steiker, 2010). It will also be important to assess how modifications might influence intervention outcomes. Researchers should be able to differentiate which adaptations appear to boost intervention effectiveness.

Finally, as a general suggestion to future developers of stigma interventions in LMICs, it may be a productive first step to identify the local capacities that define “personhood” in that context (Yang et al., 2007) and to attempt to address the restoration of these capacities as a culturally-based means to reducing stigma. In addition, researchers must consider unique cultural factors to improve the suitability, feasibility, effectiveness, and

overall validity of these initiatives. Specific adaptations will depend on the program itself and might include adapting the training process for trainers or participants, the content of information provided, as well as language, modality, and setting, among numerous other potential modifications.

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