



Evidence for effective interventions to reduce mental-health-related stigma and discrimination

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Stigma and discrimination in relation to mental illnesses have been described as having worse consequences than the conditions themselves. Most medical literature in this area of research has been descriptive and has focused on attitudes towards people with mental illness rather than on interventions to reduce stigma. In this narrative Review, we summarise what is known globally from published systematic reviews and primary data on effective interventions intended to reduce mental-illness-related stigma or discrimination. The main findings emerging from this narrative overview are that: (1) at the population level there is a fairly consistent pattern of short-term benefits for positive attitude change, and some lesser evidence for knowledge improvement; (2) for people with mental illness, some group-level anti-stigma inventions show promise and merit further assessment; (3) for specific target groups, such as students, social-contact-based interventions usually achieve short-term (but less clearly long-term) attitudinal improvements, and less often produce knowledge gains; (4) this is a heterogeneous field of study with few strong study designs with large sample sizes; (5) research from low-income and middle-income countries is conspicuous by its relative absence; (6) caution needs to be exercised in not overgeneralising lessons from one target group to another; (7) there is a clear need for studies with longer-term follow-up to assess whether initial gains are sustained or attenuated, and whether booster doses of the intervention are needed to maintain progress; (8) few studies in any part of the world have focused on either the service user's perspective of stigma and discrimination or on the behaviour domain of behavioural change, either by people with or without mental illness in the complex processes of stigmatisation. We found that social contact is the most effective type of intervention to improve stigma-related knowledge and attitudes in the short term. However, the evidence for longer-term benefit of such social contact to reduce stigma is weak. In view of the magnitude of challenges that result from mental health stigma and discrimination, a concerted effort is needed to fund methodologically strong research that will provide robust evidence to support decisions on investment in interventions to reduce stigma.

Definitions and models of stigma and discrimination

Research on mental-health-related stigma and discrimination has increased steadily over the past few decades, although until recently, published work has been mostly descriptive and has not included intervention studies.^{1,2} Earlier work also tended to focus on public attitudes towards people with mental illness rather than on direct experiences of people with these conditions.^{3,4}

Several theoretical approaches to mental-health-related stigma and discrimination have been developed including social cognitive models⁵ that give salience to stereotypes (negative beliefs about a group), prejudice (agreement with stereotyped beliefs, or negative emotional reactions such as fear or anger, or both), and discrimination (behavioural consequence of prejudice, such as exclusion from social and economic opportunities). Self-stigma is included in these models and occurs when people with mental illness accept the discrediting beliefs (stereotypes) held against them, agree with the prejudiced beliefs, and lose self-esteem and self-efficacy.⁶ This response to prejudice can lead to adverse behavioural consequences, such as not applying for work.⁷

By contrast, sociological theories consider public stigma as a wider societal force affecting both the individual and society as a whole. Using labelling theory to describe how stigma is created, sociological theories are based fundamentally on the idea that interpersonal

interactions are socially constructed,³ so that stigma is present when labelling, stereotyping, separation, status loss, and discrimination co-occur.⁴

In this Review, we present a narrative summary of what is known about interventions to reduce stigma and discrimination associated with mental illness, discuss whether such interventions can produce sustained benefit, and identify the implications for future research, policy, and practice. We use the conceptualisation developed by the National Institute for Health and Clinical Excellence (NICE) to assess behaviour change at the population, community, and individual levels, to assess the knowledge,

Search strategy and selection criteria

We identified references for this Review through searches of Medline, PsycINFO, the Cochrane Library, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), the Social Science Citation Index (SSCI), and Global Health for articles published from January, 1970, to December, 2012. The search terms used are shown in the panel. In addition we did a Google Advanced Search focusing on low-income and middle-income countries (LMICs; figure). The searches were not limited by language. All non-English language papers were read by fluent native language speakers. Systematic and non-systematic reviews were identified during the search and the reference lists of these studies were checked manually.

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Panel: Key search terms

Text word and MeSH searching were used; the full Medline search is reproduced in the appendix

- 1 Terms that relate to stigma (which include prejudice discrimination, attitude, stereotype, rights and justice terms)
- 2 Terms that relate to mental health and mental illness—eg, schizophrenia, depression
- 3 Terms that relate to interventions (which include terms that relate to study designs for evaluating interventions, terms that describe interventions used to counter stigma, or stigma outcome terms)
- 4 Terms (1) AND (2) AND (3)
- 5 Terms (1) AND (2) AND (3) but limited to human beings
- 6 Terms (1) AND (2) AND (3) but limited to 1980 to 2013

attitude, and behavioural outcomes of interventions intended to reduce stigma and discrimination.⁸ In terms of their applicability to mental illness, these outcome domains refer to problems of knowledge (ignorance or cognitive domain), problems of attitudes (prejudice or affective domain), and problems of behaviour (discrimination or behavioural domain).^{9–11} The approach we have used for this Review has the benefit of providing a simple framework for the classification of study outcomes, and several, although not all, of the concepts in other theories map onto those in this approach.

See Online for appendix

Behavioural consequences of stigma

The behavioural consequences of stigma (ie, discrimination) can compound the disabilities related to the primary symptoms of mental illness, and lead to disadvantages in many aspects of life, such as personal relationships, education, and work.¹ Such discrimination can limit opportunities through, for example, loss of income, unemployment, reduced access to housing or health care.³

In addition to experiences of direct discrimination from others, people with mental illness might be disadvantaged through structural or systemic discrimination, such as a lesser investment of health-care resources allocated to the care of people with mental disorders, than to those with physical illnesses.^{12,13} Furthermore, people with mental disorders also often experience unequal treatment for physical health conditions, which could contribute to an increase in morbidity and premature mortality.^{14,15}

Within health-care settings, stigma can manifest as a violation to fundamental human rights,¹⁶ including the right to health.^{17,18} Poor quality of care can in turn act as an important barrier to help-seeking by people with mental illness and their family members.¹⁹ For example, people with mental disorders might delay or stop seeking treatment or terminate treatment prematurely for fear of labelling and discrimination, or because of experiences that treatments are not effective or respectful.^{20,21} In

societies where services are scarce and support systems are inadequate, families might feel forced to resort to physical measures such as chaining or confinement to restrain relatives with mental illness in the absence of a locally available or acceptable alternative.²² Stigma and discrimination also affects family members and carers,²³ and has been termed stigma by association, affiliate stigma, or courtesy stigma. Stigma of this type can lead to direct discrimination, feelings of shame, and self-blame, much like the internal consequences of mental health stigma faced by people with mental disorders.²⁴ In societies where the cohesion of family networks is strong, the effect of stigma by association can be more severe and can include economic consequences, affect work or marital prospects.²⁵

Literature search methods

We assimilated information from systematic reviews on various types of anti-stigma intervention that could provide good evidence for short-term effectiveness in high-income countries. We then focused our literature search on primary studies of medium-term to long-term outcomes, and on the effectiveness of anti-stigma interventions in low-income and middle-income countries (LMICs), two research areas that have not previously been reviewed. We searched six electronic databases for potentially relevant abstracts published before January, 2013, using various search terms (panel). Full details of the study eligibility criteria, and the data analysis methods used are provided in the appendix. Quantitative study characteristics are shown in table 1.

We identified eight systematic reviews and 8143 quantitative studies for consideration in this Review (figure).

Short-term effectiveness of interventions in high-income countries: evidence from systematic reviews

The studies included in the systematic reviews had substantial methodological and clinical heterogeneity, and consequently meta-analysis was rarely undertaken. The data suggested that interventions are usually able to produce short-term to medium-term knowledge and, though less often, attitudinal improvements.^{26,27} Variation in the results might be due to differences in the intensity of interventions that aim to increase knowledge compared with those aiming for attitude change, or might reflect the use of different methodological approaches. Four reviews present data or comments on the overall pattern of effect sizes, and the interventions were found to have small-to-moderate effects.^{26,28,29} We noted a clearest consensus that interventions with social contact or first person narratives were more effective than others (such as, for example, factual data about the occurrence of mental illnesses).^{26–30} Moderators of effects to understand which types of contact work best have also been explored^{26,29} (such as social contact, which moderately disconfirms a pre-existing

stereotype), but there is a need for more research in this area.²⁹ Some interventions have the potential to cause harm such as an increase in stigma³¹ (eg, using a biological or genetic explanation of the cause of mental illness), and these interventions should be further investigated. Most reviews were critical of the methodological quality of the included studies,^{26,28,32,33} which emphasises the need for more randomised trials and robust methods, the use of invalidated measures, and the absence of follow-up beyond the immediate post-intervention period in many studies. Some reviews highlighted the poor quality of the interventions, which were sometimes delivered with training, manualisation, or fidelity checks,²⁹ or did not have theoretical underpinning and developmental research.^{26,28} Key evidence gaps included the dearth of studies from LMICs, paucity of evidence on discrimination outcomes^{26,28} and cost-effectiveness,²⁶ and the need for more research on multi-exposure, multi-component, and long-term interventions.^{26,33}

Interventions targeted to the general public

Systematic reviews, controlled interventions, repeated cross-sectional surveys and longitudinal panel studies have been used to determine the effect of targeting the general public to reduce stigma. Until very recently these studies have assessed knowledge or attitude change, or both, but have not assessed the impact on behaviour. A meta-analysis by Corrigan and colleagues²⁹ that includes 79 intervention studies to address public stigma demonstrated that both education and social contact were effective in reducing stigmatising attitudes and intended behaviour. Corrigan and colleagues²⁹ concluded that live contact was superior to filmed contact, and, for adults contact was more effective than education. Mass media campaigns in Norway³⁴ and England³⁵ produced moderate improvements in knowledge and attitudes in the study in Norway, and in attitudes alone in the study in England, which focused specifically on depression. A broader campaign by the Royal College of Psychiatrists in England, Every Family in the Land,³⁶ produced modest knowledge change in the general population but no attitudinal improvement. A series of important studies in Australia³⁷⁻⁴¹ assessed the effects of mental health first aid delivered to whole populations. Overall, these studies showed a fairly consistent pattern of benefit for attitude change, and weaker evidence for knowledge improvement.³⁷⁻⁴¹

A depression-specific initiative, beyondblue, produced positive changes in public attitudes and knowledge.⁴² Differential uptake of the intervention (which consisted of mass media messages and local town hall educational meetings) was compared by states and territories across Australia. Research showed that people in areas with higher exposure to the beyondblue initiative showed greater recognition of depression and more frequent recognition of depression in people they knew. Like Minds Like Mine⁴³ is a programme to increase social inclusion and reduce stigma and discrimination for

	Number of studies
Study type	
Randomised controlled trial	22 (28%)
Repeated cross-sectional population survey with control group	3 (4%)
Repeated cross-sectional population survey without control group	10 (13%)
Longitudinal panel study with control group	2 (3%)
Pre-post controlled†	14 (18%)
Pre-post controlled‡	6 (8%)
Pre-post uncontrolled	23 (29%)§
Participant type	
Armed forces	3 (4%)
School students	19 (24%)
University students	12 (15%)
Health-care professionals	10 (13%)
General population	18 (23%)
Mental health service users	8 (10%)
Other	10 (13%)
Countries income group	
High income	67 (83%)
Upper-middle income	10 (13%)
Lower-middle income	3 (4%)
Low income	0
Time to final follow-up	
<1 month	8 (10%)
1 month	14 (18%)
1-5 months	21 (26%)
6 months	15 (19%)
6 months-1 year	7 (9%)
1-5 years	10 (12%)
6-10 years	5 (6%)
Intervention type	
Mental health education or information	40 (50%)
Mental health education or information and direct contact	13 (16%)
Mental health education or information and indirect contact	5 (6%)
Mental health education or information and direct and indirect contact	4 (5%)
Direct contact	2 (2%)
Entertainment and art	3 (4%)
Psychoeducation	6 (7%)
Psychotherapy	5 (6%)

*Includes studies in low-income and middle-income countries with less than a 4 week follow-up. †Pre-post studies with a control group analysed between-groups. ‡Pre-post studies with a control group analysed within-groups.

Table 1: Quantitative study characteristics*

people with experience of mental illness. This programme has also indicated clear improvements in knowledge and attitude outcomes. Population-level awareness campaigns in Austria and Germany have produced moderate benefits in attitude outcomes, but no improvements in knowledge.⁴⁴

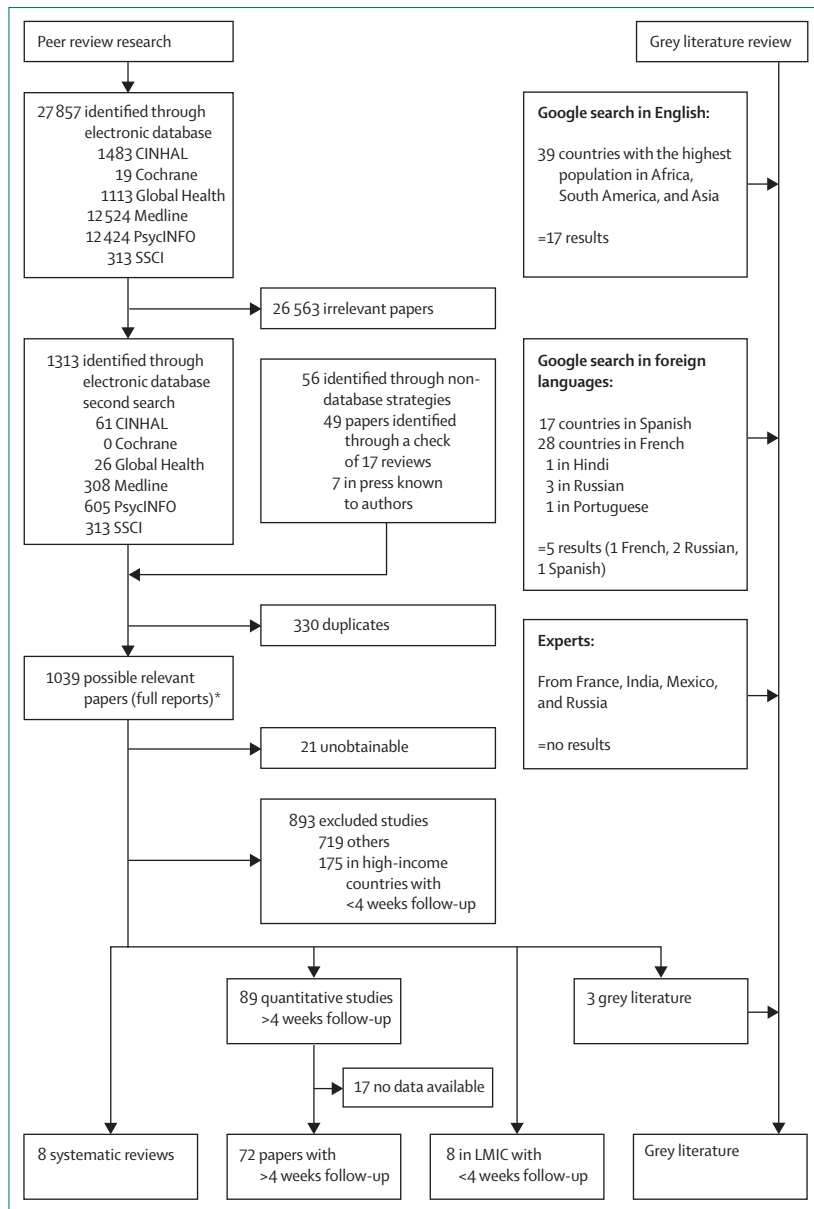


Figure: Flow chart for selection of papers and sources included in the review
LMIC=low-income and middle-income country.

Data analyses from repeated cross-sectional population surveys of public attitudes in England and Scotland between 1994 and 2003, when the See Me programme was operational in Scotland, but there was no stigma-related campaign in England, showed that attitudes in England substantially deteriorated while attitudes in Scotland showed little change.⁴⁵ Recent evaluation of the Time to Change campaign, which has been in operation since 2008 to reduce stigma in England, was the first to assess behaviour change. At the population level, there was a significant improvement in intended behaviour, and a non-significant trend for improvement in attitudes ($p=0.08$), with no changes in knowledge or reported

behaviour.⁴⁶ There were also substantial reductions of reported discrimination experienced by mental health service users.⁴⁶ Across 21 life areas measured with the Discrimination and Stigma Scale,⁴⁶ there was a reduction in the median number in which people reported discrimination, from five to four. Specific life areas in which fewer people reported discrimination in 2011 compared with 2008 included family, friends, social life, and the experience of being shunned.

Interventions for people with mental illness

Interventions have also been developed and tested that aim to reduce self-stigma among people with mental illness.⁴⁷ There is evidence to suggest that such interventions are effective. For example, Mittal and colleagues³² showed that of the 14 studies assessed, eight conferred benefits in terms of self-stigma reduction, usually with effect sizes in the range 0.2–0.5 (conventionally considered to be small to moderately large effects). Most self-stigma reduction strategies consist of group-level psychoeducational sessions some of which might include cognitive-behavioural elements.^{48,49} These strategies have also been shown to offer benefit to people who are at risk of developing psychotic symptoms.⁴⁹ Mittal's review³² did not report the length of follow-up, however, our analysis provided insufficient evidence of effectiveness beyond 4 weeks follow-up.

Interventions for students

Anti-stigma interventions for school and college students have been studied in several countries. Interventions primarily involved either mental health education, or education combined with direct contact with someone who has a mental health problem. A systematic review of anti-stigma interventions for those at school, reported that overall the methodological quality of the studies is mixed, with only two randomised trials, leading one reviewer to find it difficult to draw overall conclusions.³³ Results from the meta-analysis by Corrigan and colleagues²⁹ showed that although direct contact was the most effective approach for adults, this was not the case for adolescents and educational approaches were probably more beneficial for this group.²⁹ We examined the pattern of findings in the primary studies with more than 4 weeks follow-up targeted at school students and found that this group favoured educational approaches over those including direct contact. None of these studies assessed behavioural outcomes. The studies that assessed knowledge change showed benefit, most of which was short-term improvements in attitudes related to people with mental illness. However, in studies that conducted medium-term follow-up assessments, the benefit is often diminished or lost.^{50–53}

A systematic review of anti-stigma interventions for college students, mainly in high-income countries, found that for both knowledge and attitudes, the benefits are sustained over the medium-term in only about half of the

studies.²⁷ Results from our analysis showed that short-term improvements in knowledge are common and favourable attitude changes are also often found.^{34–37}

Interventions with health-care staff

There is accumulating evidence that, perhaps paradoxically, many people with mental illness report that health personnel, providing both mental and physical health services, are an important source of stigma and discrimination in many countries worldwide.^{58,59} Mental health professionals could be stigmatisers, stigma recipients, and agents of destigmatisation.⁶⁰ Systematic disregard for the physical health needs of people with mental illness includes the problem of misattribution of physical and mental health complaints, so-called diagnostic overshadowing,⁶¹ and this misattribution might contribute to the substantially lower life expectancy of people with mental illness.^{14,15} Indeed, some studies find that health-care practitioners, including psychiatrists and family physicians, report more negative ratings of people with mental illness than the general public.^{62,63}

Interventions to reduce stigmatisation among health-care staff are uncommon.²⁸ For example, we found only one published study⁶⁴ that assessed changes in trainee practitioner behaviour.⁶⁴ Interventions are most often mental health education or information approaches. Overall, these interventions mostly result in short-term improvements in knowledge and behaviour, which is sustained at medium-term follow-up in about half of the studies.^{65–68} Recent findings suggest that filmed versions of social contact might be as effective as live contact with people with mental illness.⁶⁹ However, it is important to remember that when people with mental illness are asked whether they find stigma among health-care staff to reduce over time, they usually reply in the negative.^{41,70}

Other specific target groups

Interventions to reduce stigmatisation among a diverse range of other target groups that include military personnel,⁷¹ elite athletes,⁷² teachers,⁷³ and civil servants³⁸ have also been carried out. The findings are remarkably similar to the groups already described, with improvement in knowledge in about half of the studies, benefit in terms of attitudes in most studies, and sustained improvement at medium-term follow-up for about half of the reports.

Stigma-related intervention studies in low-income and middle-income countries

Stigma-related intervention studies in LMICs are uncommon, generally of poor quality and have only short-term follow-up, which is in line with research in other aspects of global mental health.⁷⁴ We identified 13 studies from LMIC settings, eight with less than a 4 week follow-up and five with longer-term follow-up. Six of the LMIC studies were from upper-middle income countries and two were from lower-middle income countries. There

were no studies meeting our criteria from low-income countries. Four studies were aimed at school and university students, two from caregivers of people with schizophrenia, and two from health-care professionals. Interventions were mainly mental health education or information, although there were also two psycho-education interventions for caregivers and two studies used entertainment or arts interventions. Of the eight studies from an LMIC setting with less than a 4 week follow-up, three were randomised trials, one of which was a cluster randomised trial analysed within groups, four were uncontrolled pre-post studies, and one was a post-test only control group experimental study. Of the eight studies included there were 13 intervention groups, three measuring knowledge outcomes and ten measuring attitude outcomes. None of the studies measured behavioural outcomes. One of the three interventions in which knowledge outcomes were measured showed evidence of benefit in most of the results and two showed no evidence of benefit. From the interventions for which attitude outcomes were measured, the majority showed evidence of benefit in the majority of findings, one showed evidence of benefit in the minority of findings and overall one intervention found evidence of disbenefit.^{75–79} LMIC studies of health-care staff and student interventions in Turkey,^{53,54} China,⁵⁶ India,⁶⁷ and the study working with people with mental illness in China⁴⁹ found remarkably similar results, such as moderate or substantial improvements in attitudes but not knowledge among the respective target groups.

Studies that examined medium-term and long-term effectiveness

Most studies that measured outcomes beyond 4 weeks follow-up reported some evidence of effectiveness in improving knowledge and attitudes but not for behavioural outcomes. The different intervention types varied in their medium-term or long-term effectiveness. Mental health education or information interventions seemed to be the most effective type of intervention with regards to outcomes at 4 or more week's follow-up, although education or information combined with direct or indirect contact, also performed well, as did interventions based solely on direct contact. There was insufficient evidence to suggest that psychoeducation, psychotherapy, or interventions based on entertainment or arts would reduce stigma in the medium-term or long-term.

Discussion

The most widely used intervention types tested as potential active ingredients in the intervention studies were education or information (43 studies), and variants of social contact (12 studies)—ie, contact between people with and without mental illness²⁹ (table 2). Results from our analysis of systematic reviews supported social contact as the most effective intervention for adults. Results from our analysis of primary studies showed that

	Number of interventions (n/N)	Summary of intervention findings			
		Evidence of effectiveness	Limited evidence of effectiveness	No evidence of effectiveness	Evidence of disbenefit
All studies					
Knowledge	47/81	19 (7)	13	14	1
Attitudes	72/81	32 (13)	13	26	1
Behaviour	15/81	4 (0)	2	9	0
Education or information					
Knowledge	18/31	11	6	1	0
Attitudes	27/31	15	5	7	0
Behaviour	4/31	2	1	1	0
Education or information and direct contact					
Knowledge	8/13	4	2	2	0
Attitudes	13/13	6	3	4	0
Behaviour	0/13	0	0	0	0
Education or information and indirect contact					
Knowledge	3/5	0	2	1	0
Attitudes	4/5	1	2	1	0
Behaviour	0/5	0	0	0	0
Education or information and direct and indirect contact					
Knowledge	1/4	0	0	1	0
Attitudes	2/4	1	1	0	0
Behaviour	3/4	1	1	1	0
Direct contact					
Knowledge	1/2	1	0	0	0
Attitudes	2/2	1	0	1	0
Behaviour	0/2	0	0	0	0
Indirect contact					
Knowledge	1/2	0	0	1	0
Attitudes	2/2	0	0	2	0
Behaviour	0/2	0	0	0	0
Entertainment or art					
Knowledge	1/3	0	1	0	0
Attitudes	3/3	2	0	0	1
Behaviour	1/3	0	0	1	0
Psychoeducation					
Knowledge	3/4	1	0	2	0
Attitudes	4/4	0	0	4	0
Behaviour	0/4	0	0	0	0
Psychotherapy					
Knowledge	1/5	0	0	1	0
Attitudes	5/5	1	1	3	0
Behaviour	0/5	0	0	0	0

Evidence of effectiveness=number of interventions in which the majority of findings showed evidence of benefit for each outcome category (number of interventions showing evidence of benefit in all outcomes within each category, shown for overall findings only). Limited evidence of effectiveness=number of interventions in which limited evidence of benefit was found within each outcome category. No evidence of effectiveness=number of interventions showing no evidence of benefit within each outcome category. Evidence of disbenefit=number of interventions in which the majority of findings showed evidence of disbenefit within each outcome category.

Table 2: Intervention effects on stigma outcomes at 4 or more weeks follow-up from quantitative studies by type of stigma outcome and type of intervention

social contact is an effective intervention for adults in short-term outcome studies, but is not consistently effective for those with longer-term follow-up.

Social contact involves inter-group contact theory from the social psychology field.⁸⁰ However, Allport⁸⁰ suggested that contact between groups does not automatically give rise to improved inter-group relations. Social contact seems to be most effective when there is equal status between groups or participants, common goals for the interaction, and inter-group cooperation.⁸¹ This can lead to disconfirmation of negative stereotypical beliefs about mental illness, which could lead to behaviour change,⁸² especially because of reduced anxiety and enhanced empathy.⁸³ Is inter-group theory applicable to LMICs? In Pettigrew and Tropp's meta-analysis⁸¹ of studies examining inter-group contact and prejudice types such as racial and mental-illness-based prejudice, fewer than 30% of studies were from countries other than the US, and fewer still were from LMICs. Analyses that compared US and non-US settings found no difference in prejudice levels based on country setting, however, only four inter-group contact studies took place in countries that were LMICs at the time. Such studies in Hong Kong, Turkey, and Nigeria⁸⁴⁻⁸⁷ showed that previous contact with people with mental illness was associated with less social distance.

Evidence from other sectors possibly transferable to mental health include interventions aimed at reducing stigma in LMICs from groups with HIV/AIDS, tuberculosis, leprosy, and hepatitis C. Several strategies to reduce stigma towards HIV have been published, including education, advocacy, contact, and protest.⁸⁸ A review of anti-stigma interventions in HIV and AIDS by Brown and colleagues⁸⁹ identified only six studies conducted in developing countries, which reinforced the effectiveness of social contact.

Here, we summarise the main findings from this narrative Review. (1) At the population level, there is a fairly consistent pattern of short-term benefits for positive attitude change, and weaker evidence for knowledge improvement; (2) for people with mental illness, some group-level anti-stigma interventions show promise and merit further evaluation; (3) for specific target groups, such as students, social-contact-based interventions usually achieve short-term attitudinal improvements (but there is insufficient evidence to suggest improvements in the long term), and less often produce knowledge gains; (4) mental health-related stigma and discrimination is a heterogeneous field of study with few strong study designs and large sample sizes; (5) very little research in this field has been carried out in LMICs; (6) caution needs to be exercised in not overgeneralising lessons from one target group to another (for example, educational interventions might be more effective than social contact for young people,²⁹ (7) there is a clear need for studies with longer-term follow-up to assess whether initial gains are sustained or attenuated, and whether continuing or intermittent booster doses of the intervention are needed to maintain progress; (8) few studies in any part of the world have focused on either the service user's perspective of stigma and discrimination or on the behaviour domain

of behavioural change, either by people with or without mental illness in the complex processes of stigmatisation.

The issues described here can be used to set the agenda for future research in the field of mental-health-related stigma and discrimination. Furthermore, there is a need to examine differentiated subpopulations to identify effective interventions and their delivery platforms, which includes the use of social media forms of social contact for young people, who represent only 3.7% of participants in stigma studies.⁹⁰ Research is also needed to better understand some of the most important possible consequences of stigma, such as delayed or prevented help-seeking and access to health care,⁴⁹ potential contribution to self-harm and suicide, the denial of human rights,⁴⁶ and barriers to full social participation such as employment⁹¹ and family life.⁹² Several recent reviews have examined the impact of stigma on access to mental health care and concluded that stigma had a significant detrimental effect.^{49,93,94}

The associations between stigma and suicidality are also under-researched. We have conducted a mixed-methods analysis on the relationship between discrimination and suicidality⁹⁵ and found that among 194 individuals with depression, bipolar disorder, or schizophrenia spectrum disorders, there was a clear link between experience of discrimination and suicidality among 38% of the sample. Furthermore, 20% reported that discrimination had contributed to their making a suicide attempt. There are a-priori reasons for why associations between stigma and suicide might be important. Suicide and psychopathology are strongly associated. A meta-analysis of deaths from suicide among individuals with mental illness found that virtually all who had a mental health diagnosis had an increased risk of suicide.⁹⁶ Research has also identified a number of demographic factors associated with suicidal ideation and eventual suicide including social isolation, psychiatric hospitalisation, social and economic disadvantage, psychological vulnerability, and hopelessness, which could be associated with stigma.⁹⁷ These associations also warrant further investigation. Furthermore, research is needed to discover which interventions will best address these distal outcomes such as suicide, absence of full social participation, and denial of human rights. Interventions targeted at groups such as employers (a particularly under-researched group), the public, and professionals together with internalised stigma interventions go some way to address this. However, we are still a long way from knowing how best to address the serious consequences of stigma and discrimination.

Several important limitations of this paper need to be acknowledged. First, the source material is varied in its methodological design and quality and so a narrative review approach was used, which although informative, can often include an element of selection bias.⁹⁸ However, our analysis of the key findings from randomised trial and non-randomised trial data sources

showed that there were no clear differences in the conclusions drawn from effectiveness of studies for any outcome category. Similarly, the outcome did not change with exclusion of results from the lowest quality randomised trials. Furthermore, the main conclusions we have drawn from the wider literature, are similar to those from the systematic review papers that were included in this Review. Second, in view of the sparse literature from LMICs, generalisation of the methods and results from high-income settings and low-income settings is not advised, and primary research findings from low-income settings are needed. Third, although the weight of evidence favours short-term impact of interventions to reduce stigma, especially those based on social contact, there is not strong evidence to suggest that short-term interventions alone produce longer-term sustained benefits. Fourth, attitudes and behaviour are core components of all stigma theories, but not all include knowledge, and there is debate and mixed evidence on what constitutes destigmatising knowledge.⁹⁹ Fifth, a comparison of like-with-like outcomes is only possible to a limited extent because of the heterogeneity of measurement scales used in these studies. For example, we identified 55 different scales for the 136 outcomes measured, and very few studies of cost-effectiveness.²⁶

In view of the magnitude of the challenges for people with mental illness as a result of stigma and discrimination, there needs to be a commensurate concerted effort to fund methodologically strong research to provide robust evidence to support policy decisions on investment and interventions, not least of which will be the inter-relationships between stigma, access to care, and the mental health treatment gap.¹⁰⁰ The necessary wider policy framework is now in early stages of development.^{77,101} The WHO Mental Health Action Plan, ratified by the World Health Assembly in May, 2013, states as its vision “a world in which mental health is valued, promoted and protected, mental disorders are prevented and persons affected by these disorders are able to exercise the full range of human rights and to access high quality, culturally-appropriate health and social care in a timely way to promote recovery, all in order to attain the highest possible level of health and participate fully in society and at work free from stigmatisation and discrimination”. The Action Plan puts forward (paragraph 75) a need to prioritise “mental health promotion and prevention: provide technical support to countries on the selection, formulation and implementation of evidence-based and cost-effective best practices for promoting mental health, preventing mental disorders, reducing stigmatisation and discrimination, and promoting human rights across the lifespan”. We suggest that an urgent necessity is to conduct more high-quality research to allow this policy priority to be firmly evidence-based.

Contributors

GT, NM, SC SE-L, DR, MK, CO'R, and CH contributed to the design of the paper. NM, SC, SE-L, MD, DR, MK, RS, CO'R, CH contributed to the literature review. All authors contributed to the writing of the paper and agreed the final version of the report.

Declaration of interests

We declare no competing interests.

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