Effect of Contact-Based Interventions on Stigma and Discrimination: A Critical Examination of the Evidence

Anthony F. Jorm, Ph.D., D.Sc.

Contact-based interventions are commonly regarded as best practice in stigma reduction. In this Open Forum, the author used the findings from eight systematic reviews to critically evaluate the quality of the evidence for the effectiveness of such interventions. He found that trials of contact-based interventions lacked methodological rigor, reporting was biased toward positive results, the trials were subject to demand characteristics, no dose effects were observed, effects did not last, and no evidence supported behavior change. Standards for future trials are proposed and implications for reducing stigma and discrimination are discussed.

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In his classic 1954 book, *The Nature of Prejudice*, Gordon Allport (1) proposed that contact between majority and minority groups could reduce prejudice under certain conditions. These conditions were equal status of the groups during contact, the pursuit of common goals, cooperation rather than competition, and authorization by institutional supports such as law or custom. Intergroup contact theory has been influential in efforts to reduce racial prejudice, and its use has been extended to reducing prejudice toward other minority groups, including people with mental illness.

Clear evidence from community surveys indicates that having a close relationship with a person with a history of mental illness is associated with less-stigmatizing attitudes (2, 3), but the direction of causality is complex in such relationships. Contact-based interventions designed to reduce stigma typically involve brief contact with a stranger that is quite different from naturally occurring contact. Most often, the contact is combined with an educational component (contact-based education), and pure contact without an educational component is less common. Such interventions have been proposed by stigma experts as the leading method for reducing stigma and discrimination. For example, Stuart et al. (4) concluded that "contact-based education has emerged as a best practice in the field of anti-stigma programming," and Thornicroft et al. (5) noted "a clearest consensus that interventions with social contact or first-person narratives were more effective than others."

The evidence supporting contact-based interventions comes from eight systematic reviews and meta-analyses of trials on stigma reduction that show positive short-term effects (6–13) and cover a range of participant populations, stigmatized mental illnesses, and measures of stigma. (A table summarizing the main findings on contact-based interventions from these meta-analyses is available as an online supplement.) However, a closer examination shows weak supporting evidence and reveals the possibility that contact-based interventions are ineffective. Reasons to doubt the evidence on contact-based interventions are described below.

Trials Lack Methodological Rigor

The methodological quality of the trials was generally low (7, 12). Many of the trials lacked control groups. Even when randomized trials were carried out, the quality was limited. For example, Morgan et al. (12) rated 15 out of 17 randomized studies as "weak" in quality. The SPIRIT (Standard Protocol Items: Recommendations for Interventional Trials) (14) and CONSORT (Consolidated Standards of Reporting Trials) (15) statements were written to improve the quality of planning and reporting of clinical trials, but these statements are seldom used in trials of contact-based interventions.

Reporting Is Biased

Standard contemporary practice is to preregister clinical trials to avoid selective reporting of positive results. This practice is also becoming more common in nonclinical psychological research (16). However, most contact-based intervention trials are not registered. Some statistical methods (e.g., funnel plots and "trim and fill") attempt to detect and compensate for selective reporting by assessing whether small nonsignificant findings are reported less often than expected (17). Results from these methods indicate potential publication bias in studies of contact-based interventions. The meta-analysis of

Morgan et al. (12) found 17 studies with postintervention data on attitudes toward people with mental illness, but results from these statistical methods suggested that five studies were potentially missing, reducing the estimated effect size from a Cohen's d of 0.39 to 0.24. Similarly, Maunder and White (13) found evidence that smaller studies and studies showing a negative effect on stigma were missing, although the authors concluded that positive findings on contact interventions were unlikely to be due to publication bias.

Trials Are Subject to Demand Characteristics

The purpose of trials on contact-based interventions is likely to be obvious to participants, and therefore the trials are subject to demand characteristics. Consider the design of a typical trial. First, participants complete a series of questionnaires about stigma. They are then randomly assigned to either a group that watches a video showing a consumer that deals with issues like stigma and recovery from mental illness or to a control group that watches a video about a topic unrelated to mental illness. Then both groups complete the same questionnaires again. From the point of view of participants, the connection between the content of the video and the content of the questionnaires is obvious, and it would not be surprising if they reported more positive attitudes toward people with a mental illness in order to conform to the expectations of the researcher.

Studies that ask participants to imagine contact with a person who has a history of mental illness do not differ in effect from those that evaluate face-to-face contact (12, 13), supporting the possibility that demand characteristics are operating. Although it has been suggested that imagined contact might work by reducing intergroup anxiety and creating a behavioral script for interaction in memory (18), it is less plausible that it would work as well as face-to-face contact with a person. If contact were the active factor, rather than demand characteristics, face-to-face contact might be expected to have a larger effect than imagined contact on attitudes toward people with a mental illness.

Lack of Dose Effect

Effective contact interventions should produce a "dose effect," with greater benefits from longer contact or from contact with multiple persons with a mental illness. However, Morgan et al. (12) found no association between the benefits of intervention and the duration of contact, ranging from 1 to 105 minutes. Maunder and White (13) found that the benefits did not vary with the number of out-group members participants encountered nor the variety of mental illnesses represented in the group. Similarly, no difference in outcome was found between interventions with multiple forms of contact and those with a single form (12). Furthermore, if contact made a difference, it should enhance other antistigma interventions. However, interventions that involve both contact and education do not appear to differ from those that involve education alone (11, 12).

Effects Do Not Last

Finally, the benefits of effective interventions are expected to persist at least for some time. However, the effects of contact with people with a mental illness have been found to diminish greatly or to disappear over several weeks (5, 10, 12).

Lack of Evidence for Behavior Change

The results from attitude questionnaires are a soft outcome and arguably a proxy or mediator of the real outcome of interest, which is discrimination or supportive actions toward people with a history of mental illness. However, many of the systematic reviews of contact-based stigma interventions have noted the lack of evidence for effects on behavior (7, 10, 12, 13).

Evidence on Contact With Other Minority Groups

It may be argued that there is extensive evidence that contact-based interventions result in more positive attitudes toward other minority groups and that this evidence indirectly supports the use of contact-based interventions in reducing stigma and discrimination toward people with mental illness. For example, a classic meta-analysis of the evidence from 515 studies by Pettigrew and Tropp (19) concluded that contact reduced prejudice across a range of target groups and contexts. However, more recently, the strength of the evidence was questioned by Paluck and colleagues (20), who found only 27 studies that involved random assignment and that measured outcomes at least 1 day after intervention. Although these studies found a positive effect of contact, larger studies produced smaller effects, indicating publication bias. The only three studies that involved a preanalysis plan found no effect. Paluck et al. (20) concluded that "the jury is still out regarding the contact hypothesis and its efficacy as a policy tool."

Recommendations and Implications

The evidence on the effectiveness of contact-based interventions is weak. Future trials should register their protocols, adhere to the SPIRIT and CONSORT statements (14, 15), and include credible comparison groups that control for potential demand characteristics. The primary outcomes should be behavioral, with attitudes treated as a secondary outcome or as a mediator of behavior change. Potential behavioral outcomes include donations to mental health charities, signing up for follow-up activities related to mental health, short-listing people with a history of mental illness for job interviews, and nondiscriminatory dating selections. Furthermore, outcomes need to be measured over months (or even years) after intervention in order to evaluate lasting

benefits. More attention is needed to determine the conditions under which contact has positive effects (e.g., Allport's conditions) (1) and the mediators of change. On the basis of the broader literature on contact-based interventions, Pettigrew and Tropp (19) have proposed that the effects of contact are mediated by enhanced knowledge of the outgroup, reduced anxiety about intergroup contact, and increased empathy and perspective-taking. However, the investigation of such mediators has been neglected in relation to stigma and discrimination toward people with mental illness. An additional challenge with contact-based intervention is its dissemination on a national scale, which may be more difficult than for other approaches, such as education. Further research is needed on the implementation and dissemination of such interventions under real-world conditions. This analysis requires methodologies appropriate for the development and evaluation of complex interventions, including process evaluation to understand implementation issues, such as how context influences outcomes and mediators of effect.

Reducing stigma and discrimination has been identified as an important goal in national and international policy documents. Achieving these goals requires immediate action based on the best available evidence, however inconclusive it is. However, given the current evidence base, it is premature to settle on contact-based interventions as the preeminent approach over others, such as education and community campaigns.

AUTHOR AND ARTICLE INFORMATION

Centre for Mental Health, Melbourne School of Population and Global Health, University of Melbourne, Melbourne. Send correspondence to Dr. Jorm (ajorm@unimelb.edu.au).

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