

What works and why in interventions to strengthen social cohesion: A systematic review

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Abstract

COVID-19 has highlighted worldwide the importance of a strong social and political fabric. Those countries that fared best were ones where there was community connection, belonging, a volunteering ethos, and a belief in the legitimacy of official institutions, all deemed critical aspects of social cohesion. It has become clear that understanding and strengthening social cohesion in times of stability is critical to successfully navigate crisis. Despite its importance, evidence from many countries indicates that this important “social glue” is fragile and at risk, requiring consistent investments to maintain and strengthen it. Governments and communities around the world are looking to evidence-based strategies to strengthen social cohesion. To facilitate this goal, a systematic review is conducted of four major databases identifying 52 studies with high-quality evidence of what works and why. We also included the results of three systematic reviews that had investigated the impact of social capital and/or social cohesion on health-related variables specifically to broaden our search and enrich our findings ($n = 21$; total = 73). Using themes identified across governments, it is possible to classify the strengths and limitations of existing research. It becomes clear that the most common effective strategies were (1) awareness raising and countering existing stereotypes and (2) offering opportunities for positive contact and a more co-operative assessment of intergroup relations. Missing are leadership processes that can (re)define group-based values, norms, and behaviors. Specific intervention strategies are outlined as well as directions for future research.

1 | INTRODUCTION

Social cohesion is argued to be challenged by societal changes such as migration, demographic changes to smaller families, longer work days, and lower housing density. Between 1960 and 2020, the number of migrants has risen from 79 million to 281 million (International Organization for Migration, 2020). This means more religious, ethnic, racial, and cultural encounters among people

which under certain circumstances may result in less social cohesion (Kende et al., 2022). Included are refugees, with increasing numbers having to flee their war-torn countries to safer countries. According to the (UNHCR) (2020) 100 million people are now displaced which means 1 in every 78 people on earth has been forced to flee to somewhere safer, if possible. To make matters worse, more countries and communities are affected by natural disasters due to the climate change (Haskett, 2022). In

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part, as a reaction to change, uncertainty, and disruption there has been a rise in far-right and right-wing populism across the world including the United States, Brazil, France, Germany, Italy, and Poland (Berberoglu, 2021).

Social cohesion is a multifaceted concept that seeks to capture the quality of social relations and interactions amongst members of society embedded in power relations. As Chan et al. (2006) defined, social cohesion is “a state of affairs concerning both the vertical and the horizontal interactions among members of society as characterized by a set of attitudes and norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations.” (p. 290). Social cohesion then is an attribute that applies to collectives/groups, not individuals.

Although there are some disagreements over some components of social cohesion (e.g., economic equality, multiculturalism, shared values), as it is indicated in Chan and colleagues' definition, there is a collective agreement on some components of it. These include social relation, vertical and horizontal trust, social identification, and a willingness to act for the betterment of the group through helping others (e.g., volunteering) and political participation (see, e.g., Bernard, 1999; Chan et al., 2006; Dragolov et al., 2018; Schiefer & van der Noll, 2017; Stanley, 2003). It is an interdisciplinary area of enquiry with contributions from across the social and behavioral sciences (e.g., sociology, economics, demography, political science, and psychology, Dragolov et al., 2018; Forsyth, 2021).

Despite wide interest, it remains less clear what a community or government should do specifically to attenuate social cohesion decline or bolster it. It is this issue that is the focus of this systematic review. We aim to provide a current examination of strategies that can strengthen social cohesion that (1) builds on a recent G20 report (see details below) and (2) incorporates much (overlooked) group-level theory and research in social psychology (e.g., social identity, contact theory). There is a general lack of integration with theoretical models of group-based motivation and behavior despite it offering much potential. As Lewin is often quoted “it is usually easier to change individuals formed into a group than to change any one of them separately” (p. 228). The contribution of group psychology and intergroup relations sits separately to interest in social cohesion which is limiting progress. The goal of this research is to integrate relevant theoretical works and present a systematic review of various manipulations/interventions aimed at strengthening social cohesion.

2 | G20 REPORT: SOCIAL COHESION, GLOBAL GOVERNANCE AND THE FUTURE OF POLITICS

We draw on the G20 report for several reasons. First, this report was produced by the task force whose aim was to “mitigating the risks of social and political crises and produce a more cohesive, fair and inclusive society” (p. 33). This report was the result of a multi-disciplinary approach and a collaborative endeavor undertaken by several institutions such as the Hertie School of Governance,

International Panel on Social Progress (IPSP), Council for international Relations (CARI), Center for the Implementation of Public Policies Promoting Equity and Growth (CIPPEC), and Kiel Institute for the World Economy. Second, this task force also reviewed various interventions through which scholars and policymakers had strengthened social cohesion. Finally, recommendations made by this task force were in line with widely accepted models of social cohesion (see, e.g., Chan et al., 2006; Dragolov et al., 2016, 2018). It is timely to ask whether these remain relevant or other initiatives need to capture attention in working out how to strengthen social cohesion.

The G20 made nine recommendations to strengthen social cohesion (Grimalda & Tänzler, 2018). These recommendations include (1) further support for facilitating people's participation in associations and community work, (2) providing opportunities for citizens to get involved in the implementation of public goods, (3) offering educational programs providing students with the opportunity to engage in community work and association membership, (4) facilitating the opportunities for citizens' political engagement and improve the institutional reception to bottom-up initiatives, (5) following a strategy of inclusive growth, (6) improving immigrants' integration in society, (7) improving reciprocal tolerance across social groups, (8) engaging in a public dialogue with the media, broadly defined, to discard the diffusion of so-called “fake news,” and (9) identifying sensitive areas for trust in governments and implement policies to improve consensus (Grimalda & Tänzler, 2018, see Table 5).

This list can be further conceptualised as highlighting community or social interactions, economic strategies, or governance concerns. Recommendations 1, 2, and 3 relate to opportunities for increased citizen-to-citizen contact including across ethnic and other divides through joining groups, helping, and volunteering. These activities have the potential to facilitate integration of newcomers and build reciprocal tolerance (Recommendations 6 and 7). Recommendations 5 and 6 can be conceptualised as strengthening employment options and skills to enable full participation. Recommendations 4, 8, and 9 concern governance, media regulations, and the way the public-government relations are managed in ways that build trust. The research focus to date and the material in this review largely concern recommendations 1, 2, and 3 (which also facilitate recommendations 6 and 7). Over half of the nine G20 recommendations then are central to this review.

The current research utilises a systematic review of empirical research as a way to shed further light on the methods that effectively strengthen social cohesion and the mechanisms that underpin them. The critical question examined in the current systematic research then becomes: what initiatives, programs, and interventions serve to bring about such outcomes? Furthermore, in a context where almost any efforts might produce some positive impacts on the desired outcomes, it becomes critical to explore which methods are maximally efficacious in creating and sustaining social cohesion.

Many interested parties, from academics to policy makers and community leaders will benefit from knowing more about the types

of interventions that lead to the best results (improved social cohesion in this case) in ways that are sustainable and efficient. There are two main considerations; (1) the content of an intervention; what specific content is being targeted and communicated to bring about social and behavioral change and (2) the methods or processes that are used to bring about such change. Drawing on insights from the psychotherapy literature, there may be *common factors* that contribute to strengthening social cohesion regardless of the knowledge/content or action of a particular initiative (*specific content factors*). Some examples of common factors are: the extent to which community members trust those who implement the intervention (see, e.g., Legge et al., 2020; Ophiyandri et al., 2013), the extent to which participants are engaged in the intervention (see, e.g., Jaramillo et al., 2021), and experience an increased sense of being respected as well as developing an expanded social network and stronger social ties (Schweinsberg et al., 2016). Differentiating between these specific and common factors may help policy makers and scholars identify the “active agents” in bringing about increases in social cohesion.

We also make a further distinction between two types of interventions; those that (1) manipulate antecedents of social cohesion to strengthen it (e.g., increase economic equality through better access to social services, promoting multiculturalism) and/or (2) aim to directly change one or more components or subfactors of social cohesion (e.g., trust, social ties, and volunteerism). In the current systematic review, the focus is on high-quality, evidence-based research. Importantly, we introduce some well-researched, evidence-based social psychological theories (i.e., social identity theory/self-categorization theory, social psychology of leadership, co-operative intergroup relations), as these theories have been largely overlooked but may be important in facilitating innovations. These are outlined in the next section before details of the methods and results of the review.

3 | SOCIAL IDENTITY THEORY AND SELF-CATEGORIZATION THEORY

According to social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner et al., 1987), people's self-concept consists of both personal and social identity. Social identity comes into play when people see themselves as a member of a social group (e.g., sexual orientation, race, ethnicity, religion, nation, sports team, etc.) and that group is self-relevant and meaningful. One of the key concepts in this approach is identification which refers to the extent to which people define their sense of self in relation to being a group member.

Much of the research over the last 20 years has focused on explaining how self-perception shifts from personal to social identity and its far-reaching consequences for cognition, motivation, behavior, and well-being. High identifiers are more likely to use group norms, values, and rules as their guiding principles (Spears et al., 2001). Furthermore, experiences of solidarity, cooperation, tolerance, trust,

and helping—which overlap with indicators of social cohesion—have been shown to emerge when an aggregate of individuals share a salient and meaningful group-based social identity. What matters is that oneself and others are perceived to be members of the same ingroup (“we” and “us”) versus outgroup members (“them”). It is also possible under certain conditions for ingroup-outgroup distinctions to be negotiated within a higher-order shared superordinate group (e.g., Gaertner et al., 1990; Reynolds, 2017; Reynolds et al., 2015).

Social cohesion can be conceptualized as an outcome of shared social identity. Social cohesion is one aspect of a positive functioning group. When a group functions well members feel they belong and the group is important and meaningful, they want to help other group members and engage with the structures (e.g., social and political institutions) by which the group functions. The structures and representations of the group are considered legitimate. The more the group functions in ways that are inclusive and respectful to all members the more widely it will be endorsed. There is a virtuous cycle of horizontal and vertical trust, belonging and members acting to support the betterment of the group through participation and volunteerism. Often social cohesion is mapped onto societal entities where there is the potential for various subgroups with diverse interests but it is possible to see how these same principals apply to many groups; small and large.

Understood in these terms efforts on the part of leadership to craft an inclusive sense of “us” is vital to social cohesion as it is a product of such processes. It is important to recognize that citizens and community members look to their political and social leaders as role models and agenda setters. This means that it is not always communities and community members that should be the target of change; social and political leaders and institutions also play a critical role (see G20 recommendations 8 and 9). It is leadership and important social and political institutions that create social norms which eventually may lead to social cohesion or social anomie (e.g., Haslam et al., 2020; White et al., 2021). Leadership can operate through social influence processes to establish social norms that encourage and even consider multiculturalism, intergroup trust, and civic participation as a given in the community. For example, leadership that represents and shapes certain social identities (who “we” are, what “we” do, and where we should go as a community) may establish and reinforce certain norms supportive of community cohesion (Haslam et al., 2020). This role of leadership, though, has been largely overlooked in social cohesion theory and research. By drawing on such identity processes there may be new pathways through which social (rather than individual) identity may impact on social cohesion.

4 | CONTACT THEORY

Gordon Allport's intergroup contact hypothesis (1954) contends that intergroup contact is an influential way to decrease intergroup prejudice. Allport put forth four conditions, known as “positive factors,” under which intergroup contact reduces outgroup prejudice:

equal status between groups, common goals, intergroup cooperation, and the support of authorities, law, or custom. Recent research, however, suggests that although these factors facilitate positive intergroup relations, they are not necessary for reducing intergroup prejudice (see, e.g., Paolini et al., 2021; Pettigrew & Tropp, 2005).

Various reasons have put forth as to why intergroup contact reduces prejudice. Some researchers explain it by applying dissonance theory (Brewer & Brown, 1998; Brewer & Miller, 1996). Engaging in positive interactions with people toward whom we have negative attitudes creates a discrepancy between our attitudes and behaviors. To alleviate the psychological discomfort by this discrepancy people change their attitudes in line with their positive interactions. Some believe that gaining more information about the outgroup is the mechanism through which prejudice reduction happens (Forbes, 1997). The information often serves to counter-stereotypes and reduce intergroup threat and anxiety (Kanas et al., 2015; Pettigrew & Tropp, 2005). Wright and colleagues' (1997) work on extended contact has demonstrated cross-group interactions can affect ingroup and outgroup norms such that community members learn that members of their ingroup desire contact and that members of the outgroup expect and welcome it.

To strengthen social cohesion a context needs to be created that allows and encourages community members to interact with one another to increase interpersonal and intergroup trust (Paluck et al., 2019). Through such interaction researchers and policy makers strive to craft a sense of "we-ness." In fact, Putnam drawing in part on the social identity analysis of intergroup relations has emphasized the importance of building a broader sense of "we" as a superordinate group (Putnam, 2007). The aim here is to focus less on ethnic and racial subgroup differences and more on national symbols and common experiences. In this sense, intergroup contact is a gateway to a new superordinate social identity.

The G20 review and recommendation, in the main endorse the building of co-operative and cohesive group relations through contact experiences. There is less of a focus on group psychology, leadership, and interventions that serve to build a shared social

identity (whether explicitly or not). A key aim of this systematic review is to provide an update and possible extension on the G20 recommendations. In the next section, the methods that underpin the systematic review are outlined along with the results and their implications.

5 | METHOD USED TO SEARCH FOR STUDIES

5.1 | Search and retrieval

Drawing on Okoli and Schabram's (2010) guidelines for conducting a systematic literature review, we searched for relevant literature in January 2021. As such, the goal was to identify all empirical research, published over a recent 10-year period in peer-reviewed journals between January 1 2010, and November 31 2020 (see below for further details on the rationale for this time frame). An included study must examine the effects of an intervention on social cohesion, either at the community or national level and be in English.

Based on previously identified papers, an online search was conducted using four databases: PsycINFO, Social Science Abstracts, PsycARTICLES, Academic Search Premier. Key terms, Boolean rules, and other features we used in the search can be found in Table 1. The time limit for all search words was set from January 1, 2000 to November 31, 2022 except for one search word (i.e., prejudice reduction) which given the volume of material was restricted from January 1, 2010 to November 31, 2022.

It is important to note that we do not use social cohesion and social capital as synonyms. Social cohesion is a broader concept than social capital. Social capital is mainly concerned with the bonding (within-group social relations) and bridging (between-group social relations) social capital. These elements are captured in horizontal and vertical trust as two components of social cohesion.

Results of the search strategy are summarized in Figure 1. After removing duplicate records, 1568 papers remained for review. A coder

TABLE 1 Key terms used in online search with other relevant information.

	Key terms	Boolean term	Search field	# of studies	# of duplicates
1	Community resilience	N/A	SU: Subject term or key term	292	6
2	Prejudice reduction	N/A	SU	36	1
3	Prejudice reduction	N/A	AB: abstract	338	10
4	Social cohesion, field experiment	AND	AB, AB	12	2
5	Social cohesion, intervention	AND	AB, AB	743	11
6	Social cohesion, randomized trial	AND	AB,	0	0
7	Social cohesion, social capital, intervention	AND, AND	AB, AB, AB	72	8
8	Social cohesion, social capital, intervention	AND, AND	SU, SU, SU	112	1
9	Social solidarity, social cohesion, intervention	AND, AND	AB, AB, AB	2	0
				1607	39

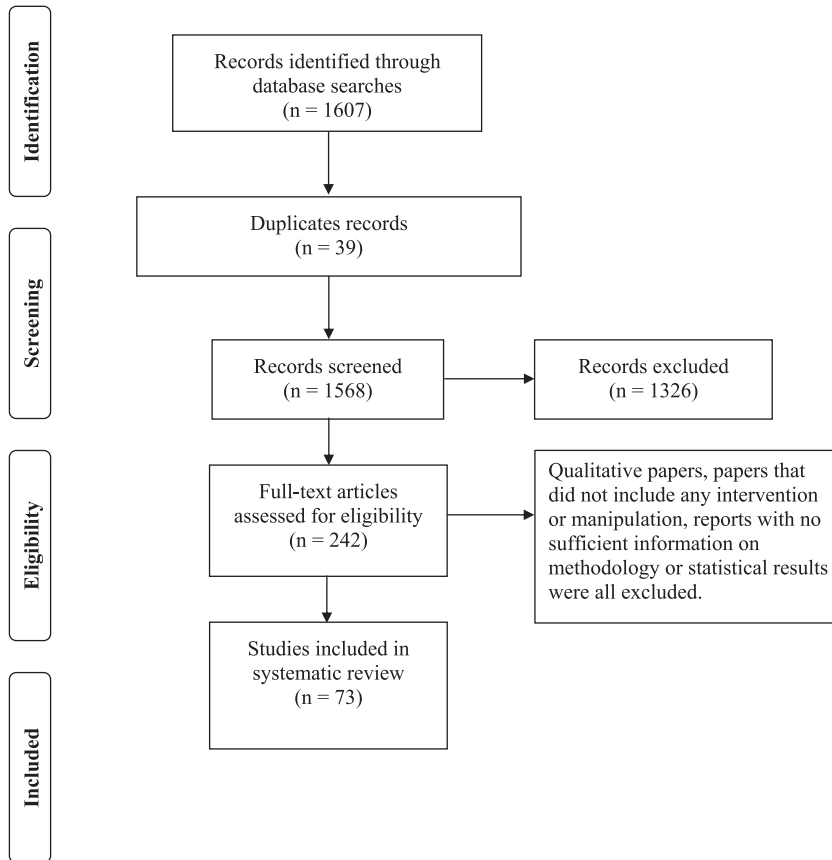


FIGURE 1 Search strategy and results.

reviewed the abstracts using two eligibility criteria: whether an intervention was implemented and whether one of the components of social cohesion (i.e., social relations, vertical and horizontal trust, identification, engaging in the betterment of the group) had been measured as one of the dependent variables in the study, be it the main or auxiliary variable. It is important to note that the main target of the intervention did not have to be strengthening social cohesion. If there was an intervention in place and social cohesion was measured as one of the dependent variables the study was considered eligible to be included in the systematic review. To make sure that the coder and authors shared the same understanding of social cohesion, the first author provided the coder with a well-established model of social cohesion (Chan et al., 2006) as a guide. Moreover, whenever the coder was not sure whether a dependent variable could be interpreted as one of the components of social cohesion, the first author and the coder discussed this between themselves and came to an agreement. After this review, 242 studies remained to be fully examined (i.e., full-text assessment). A full-text review of these 242 papers led to the inclusion of 73 papers in our systematic review. To ensure the quality of our systematic review we used AMSTAR criteria to conduct our review (Shea et al., 2007, 2009, see Table 2).

Moreover, to broaden our search and enrich our findings we also looked at a paper (Ehsan et al., 2019) in which authors conducted a systematic review of all systematic reviews. Papers that had been included in three systematic reviews were collapsed and analysed (i.e., Coll-Planas, Nyqvist, et al., 2017; Flores et al., 2018; Villalonga-Olives

TABLE 2 AMSTAR's criteria for assessing the methodological quality of systematic reviews.

	Applied
1 Was an "a priori" design provided?	Yes
2 Was there duplicate study selection and data extraction?	Yes
3 Was a comprehensive literature search performed?	Yes
4 Was the status of publication (i.e., gray literature) used as an inclusion criterion?	Yes
5 Was a list of studies (included and excluded) provided?	Only included studies were reported
6 Were the characteristics of the included studies provided?	Yes
7 Was the scientific quality of the included studies assessed and documented?	Yes
8 Was the scientific quality of the included studies used appropriately in formulating conclusions?	Yes
9 Were the methods used to combine the findings of studies appropriate?	Not applicable
10 Was the likelihood of publication bias assessed?	Not applicable
11 Was the conflict of interest stated?	Not applicable

et al., 2018). We assessed all papers in these systematic reviews to see whether they can be included in our systematic review. After examining 60 papers (17 from Villalonga-Olives et al., 2018; seven from Flores et al., 2018; and 36 from Coll-Planas, Nyqvist, et al., 2017), 21 papers were retained for analysis. Those papers that did not implement any intervention, were duplicated, qualitative, written in language other than English, or did not measure social cohesion as their dependent variable were excluded (31 papers). Due to lack of information eight papers could not be found. For characteristics of the aforementioned studies, see supplemental material. Combining the 52 papers resulted from our search with 21 papers extracted from three systematic reviews, 73 papers remained for our evaluation.

5.2 | Results

We first extracted seven basic characteristics of papers that met our inclusion criteria (i.e., year of publication, the country in which each intervention has been implemented, social cohesion-relevant variables included in the paper, the way these variables have been measured, Cronbach's α , the role of social cohesion as a variable in the paper (i.e., whether it is a mediator or a moderator, or etc.), and the number of participants. This information is reflected in Table 3. Further, to evaluate the scientific rigor of each study we examined the main characteristics of research designs (i.e., study design, whether the study included control condition, the magnitude of the effect of the intervention, intervention length, the aim of the intervention, and the interventional material in our evaluation, see Table 4) adopted for each paper. Among those studies that reported significant results (47 out of 73 studies), nine reported effect size (see Table 4). There were five studies with moderate or high effect size ($0.13 < \eta_p^2 < 0.48$, Cohen's $d = 0.57$; Cohen, 1988; Lenhard & Lenhard, 2016). All these studies were field experiments.

Moreover, we examined the “processes” used to implement the intervention and whether they maximised participants' identification and engagement with the intervention. We further assessed whether community members were consulted regarding the approach and content of the intervention and had some ownership or buy-in of the intervention (i.e., bottom-up approach, see Tables 5 and 6). The top-down approach indicates that it was the researchers who deemed a certain issue as a problem and designed a study to address it. The frequency at which the articles in this systematic review aligned with the nine recommendations made by the G20 can be found in Table 7. It is important to note that some interventions used more than one G20-recommended strategy to increase social cohesion.

5.3 | Social cohesion: The content of interventions

To advance the evidence base for strengthening social cohesion, we sought to identify the most effective interventions. As a result, we focused on those studies that produced significant results. Given that in much of research the effect size was not reported other criteria

were utilized. The lack of reporting of the effect size information is problematic, in and of itself, as it further increases the difficulty of comparing social cohesion interventions. We analysed the content of interventions based on those strategies recommended for strengthening social cohesion outlined by the G20 report (Grimalda & Tänzler, 2018), the social psychological research on conflict and cooperation in intergroup relations and in particular contact theory, and additional intervention themes identified by the current authors.

For analysing the content of interventions, we first, collected all the intervention descriptions we could find in each manuscript. Second, each description was categorized in three abovementioned categories, that is, (1) nine recommendations made by the G20, (2) well-established theories in social psychology that were relevant to strengthening social cohesion (e.g., social identity theory, contact theory) and (3) added intervention themes identified by current authors (e.g., using leisure and play in an intervention and creating opportunities for social interactions/support and increasing social ties). These emergent author-led themes could not be found directly either in the G20 recommendations or in the relevant and well-established theories in social psychology. Each description may or may not fall under one or more categories mentioned above (see Supporting Information: Material S1). A summary of the number of papers related to each themes can be found in Table 7. It is important to note that we counted any educational program, not just educational programs for school students, toward the second recommendation made by the G20. As can be seen in Table 7, “Offer educational programs providing students with the opportunity to engage in community work and association membership,” “Facilitate the constitution and the participation in associations and community work,” “Improve reciprocal tolerance across different ethnic and social groups,” and “Comply with a strategy of inclusive growth” are the most frequent G20 recommendations with instances of usage identified as 42, 20, 14, and 13, respectively (out of a total of 145 instances across all papers). Among social psychological theories contact theory was identified in all interventions.

To demonstrate concretely what a successful intervention looks like, in the following section, we present five examples of papers in which we could find a detailed description of interventions which are typical of the “how” social cohesion is strengthened. In choosing these examples we endeavored to use diverse interventions (field and laboratory experiments with and without control groups, top-down and bottom-up interventions, interventions implemented in various countries) to present a representative sample of all the papers that were included in our systematic review.

5.4 | What interventions works and why? Exemplary interventions

5.4.1 | Example 1: Implementing a community-based, service coordination and delivery intervention with urban, minority parents (Ferguson et al., 2018)

Ferguson et al. (2018) adopted a community-based, service-coordination and delivery intervention (CONNECT Program) to

TABLE 3 Overview of studies' characteristics and their quality.

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
1	A community-based intervention program to enhance neighborhood cohesion: The Learning Families Project in Hong Kong	Shen et al.	2017	Hong Kong	Neighborhood cohesion	Sampson et al. (1997)	$\alpha = .93-.95$ for the scale at baseline and follow-up surveys in both estates	DV (non-sig)	978
2	A dual identity-electronic contact (DIEC) experiment promoting short- and long-term intergroup harmony	White et al.	2012	Australia	Intergroup bias, Intergroup anxiety, Prejudice, Outgroup friendship	Intergroup bias (Image Affect Scale) Intergroup anxiety Prejudice (The Cultural Issues Scale (CIS)) Outgroup friendship (Turner et al., 2007)	Intergroup bias ($\alpha = .83-.88$ for Muslims and .93 to .94 for Christians) Intergroup anxiety ($\alpha = .76$ to .83 for Muslims and .83 to .87 for Christians) Prejudice ($\alpha = .73$ to .83 for Muslims and .80 to .85 for Christians) Outgroup friendship = .57 to .73 for Muslims and .72 to .81 for Christians	DV	220
3	A videosharing social networking intervention for young adult cancer survivors	McLaughlin et al.	2011	USA	Bridging social capital, bonding social capital Bonding social capital Social support Family interaction	Bridging social capital (Williams, 2006) Bonding social capital (Williams, 2006) Social support was derived from the Social Support for Adolescents Scale Family interaction (Family interaction scale)	Bridging social capital (0.98) Bonding social capital (0.86) Social support (0.93) Family interaction (0.73)	IV	14
4	Altering Key Characteristics of a Disseminated Effective Behavioral Intervention for HIV Positive	Kalichman et al.	2007	USA	Group cohesiveness	Four items assessed perceptions of group cohesiveness (e.g., "There was a feeling of togetherness in the group"; "I had a good feeling about the other people in the group")	N/A	DV (non-sig)	253

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
5	Adults: The "Healthy Relationships" Experience An integrated approach to mental health and disaster preparedness: A cluster comparison with earthquake-affected communities in Nepal	Welton-Mitchell et al.	2018	Nepal	Social cohesion	Two items: "People in this community are willing to help their neighbours" and "People in this community generally don't get along with each other"—reverse coded	$r = .25$	Mediator	240
6	Building Developmental Assets to Empower Adolescent Girls in Rural Bangladesh: Evaluation of Project Kishoree Kontha	Scales et al.	2013	Bangladesh	Empower Adolescent Girls	"I seek advice from my parents" "I am involved in a sport, club, or other group"	I seek advice from my parents ($\alpha_{T1} = .65$, $\alpha_{T2} = .61$). I have a safe neighborhood (Empowerment, $\alpha_{T1} = .48$, $\alpha_{T2} = .48$ I am involved in a sport, club, or other group ($\alpha_{T1} = .18$, $\alpha_{T2} = .36$)	DV	662
7	Building school-based social capital through "We Act—Together for Health"—a quasi-experimental study	Stjernqvist et al.	2018	Denmark	Cognitive social capital was measured as: Horizontal social capital (trust and support in pupils); vertical social capital (trust and support in teachers); and a sense of belonging in the school	WHO's "Health Behaviour in School Children" (HBSC) 2014 horizontal social capital (three items) vertical social capital (three items) sense of belonging in the school (three items)	Horizontal social capital (0.72). Vertical social capital (0.81) vertical social capital (0.81) sense of belonging in the school (0.85)	DV	548

(Continues)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
8	Building social capital in postconflict communities: Evidence from Nicaragua	Brune et al.	2009	Nicaragua	Participation and membership, trust and solidarity, social harmony, and sociability	Trust most people in general Neighbors ready to assist Social interaction Feelings of closeness Spirit of participation Community participation	Not reported	DV	408
9	Building social cohesion between Christians and Muslims through soccer in post-ISIS Iraq	Mousa	2020	Iraq	Social cohesion	Attend mixed dinner event (3 weeks to 5 months postintervention) Train with Muslims at least once a week (6 months postintervention) Patronize restaurant in Mosul (1–4 months postintervention) Donate \$1 survey compensation to church versus neutral nongovernmental organization (2 weeks to 5 months postintervention) Vote for Muslim player to receive sportsmanship prize (2 weeks to 5 months postintervention) Register for mixed team in the future (2 weeks to 5 months postintervention)	The Cronbach's α for each index was between .5 and .7	DV	183–459
10	Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia	Fearon et al.	2009	Liberia	Levels of trust, patterns of community activity, and the extent of associational life.	World Bank's Social Capital Assessment Tool	0.82	DV	42 communities
11	Can social capital be intentionally generated? A randomized trial from rural South Africa	Pronyk et al.	2008	South Africa	Social capital	World Bank's Social Capital Assessment Tool	0.55 for community support, 0.6 for solidarity, and 0.7 for collective action.	DV	53–306
12	Community development and HIV/STI-related	Kerrigan et al.	2008	Brazil	Perceived social cohesion and mutual aid	Perceived social cohesion and mutual aid Eight items: Level of group connectedness and caring and	$\alpha = .86$	DV and IV (Perceived social cohesion)	500

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	vulnerability among female sex workers in Rio de Janeiro, Brazil					potential for instrumental, emotional and material support		changes was used to predict condom use, but change in perceived social cohesion was also measured as an outcome of intervention	
13	Community development as health promotion: Evaluating a complex locality-based project in New Zealand	Adams et al.	2007	New Zealand	Social cohesion and social capital	Not reported	Not reported	Mediator	N/A
14	Community organizing and community health: Piloting an innovative approach to community engagement applied to an early intervention project in south London	Bolton et al.	2015	UK	Social capital	The Adapted Social Capital Questionnaire, an adaptation of the World Bank's Social Capital Integrated Questionnaire	Not reported	DV	15
15	Comparing direct and imagined intergroup contact among children: Effects on outgroup stereotypes and helping intentions	Vezzalia et al.	2015	Italy	Negative outgroup stereotypes Outgroup helping intentions	Assessed with four items, asking participants how many outgroup members (immigrant children) are nice (reverse-scored), good (reverse-scored), bad and dirty three items were used, adapted from Vezzali et al.	.78 and .84	DV	149
16	Comparing the effectiveness and durability of contact- and skills-	Bergera et al.	2018	Palestinian-Israel	Readiness for social contact Positive and negative intergroup feelings	Participants were instructed to indicate their willingness to perform five activities (e.g., meet, play) with members of the ethnic outgroup	0.88, 0.91, and 0.93 for the preintervention, postintervention,	DV	148

(Continues)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	based prejudice reduction approaches				Outgroup stereotyping	The degree to which students experienced different emotions (i.e., positive: Secure, calm; negative: Anxious, threatened) toward members of the Jewish-Israeli outgroup	and follow-up surveys, respectively.		
						Palestinian-Israelis' outgroup stereotypes were assessed by Kaminsky and Bar-Tal's "Stereotyping" measure			
17	Contact-Based School Intervention Program: Enhancing Cooperation Intention and Reducing Prejudice toward Roma	Petrik et al.	2020	Slovakia	Intergroup trust cooperation tendency	"I think Roma people living on the edge of poverty can be trusted" "I would be able to consider cooperating with a Roma person living on the edge of poverty in the future," and "Organizations employing Roma people living on the edge of poverty do not put local inhabitants in danger"	Not reported $\alpha = .74$ $\alpha = .77$	DV	150
18	Do community empowerment and enabling state policies work in practice? Insights from a community development intervention in rural Scotland	Markantoni et al.	2018	Scotland	Social individual resilience Social community resilience	How do locals engage with other community members, if they feel happy and a part of their community the extent to which community members engage with the community, and their determination to act together	Not reported	DV	345
19	Effect of a physical activity program potentiated with ICTs on the formation of friendship networks of children in a middle-income country	Montes et al.	2020	Colombia	Friendship network constructed for each classroom over each time period.	In-degree = # of times that a student was nominated by other students. Out-degree = # of times that the student nominated others. Degree = sum of the in and out degree. Clustering coefficient = probability that the two students sharing a friendship will form a triad friendship with another student which indicates the degree to which friends of friends will become friends. Closeness	N/A	DV	125

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
20	Effects of health intervention integration within women's self-help groups on collectivisation and healthy practices around reproductive, maternal, neonatal, and child health in rural India.	Saggurti et al.	2018	India	Group cohesion Collective action	centrality = mean shortest distance from a student to all other students. Group cohesion: (a) whether any SHG member accompanied the respondent for antenatal care (yes/no); (b) whether any SHG member made a visit within 2 days after delivery (yes/no); (c) whether the respondent received RMNCH information from any SHG member other than through the intervention sessions (yes/no). Collective action: (1) better health services for mother and child from local health center; (2) services/schemes meant for the poor, for example, for the Janani Suraksha Yojana (JSY) scheme; (3) on-time delivery of incentives from the government; (4) opening of bank accounts; (5) availability of family planning services	N/A	DV	545
21	Effects of social capital building on social network formulation among the rural poor: A case study from Peru	Torres-Vitolas	2018	Peru	General trust Trust in institutions Associational activity	General trust was measured through a Likert-scale from respondents' agreement with four trust statements from the "Integrated Questionnaire for the Measurement of Social Capital" (Grootaert et al., 2004)	N/A	DV	96
22	Effects of social networks intervention in type 2 diabetes: A partial randomised study	Shaya et al.	2013	USA	Secondary outcomes included: Perceived cohesion Social network connectedness	Perceived cohesion: Chin et al. (1999) social network connectedness: Social network index questionnaire including no. high contact roles, no. people in social network and no. embedded social networks).	Not reported	Secondary DV	138
23	Effects of the Your Family, Your Neighbourhood Intervention on	Brisson et al.	2019	USA	Social cohesion and neighborhood social control	Social cohesion: 4 items (e.g. "People around here are willing to help neighbors") neighborhood social control: 5 items (e.g. "How likely is it	Not reported	DV	53

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	neighbourhood social processes					that your neighbors would do something about children who were skipping school and hanging out on a street corner?")			
24	Emotion expression and intergroup bias reduction between Muslims and Christians: Long-term Internet contact	White et al.	2015	Australia	Intergroup bias	Image Affect Scale (IAS) that consists of 20 images, 10 related to the religious ingroup (Muslim or Christian) and 10 images related to the religious outgroup (Christian or Muslim) to measure intergroup bias. Participants were asked to rate as fast as possible how they feel about each image on a Likert-scale from 1 (Extremely unpleasant) to 8 (Extremely pleasant).	Cronbach's α reliability was .83 for Muslims and .93 for Christians at Time 1.	DV	220
25	Enhancing health through access to nature: How effective are interventions in woodlands in deprived urban communities? A quasi-experimental study in Scotland, UK	Thompson et al.	2019	Scotland	Better community awareness/cohesion perceptions of neighborhood social cohesion	Measured by three times from the English Citizenship Survey including trust of neighbors, neighborhood belonging, and whether people in the community would band together to improve things.	NA	Secondary DV	6317
26	Evaluating Community Partnerships Addressing Community Resilience in Los Angeles, California	Williams et al.	2018	USA	Trust among partners Density or the number of connections reported between organizations Activity coordination Hours spent on coalition activities by partner organization staff	Trust among partners: (measured as an index of three questions asking about the extent to which each of the other organizations in the coalition is reliable, supports the mission of the coalition, and is open to discussion) Activity coordination: (1) process activities in which partners engage in simple ways such as attending meetings together; (2) cooperative activities in which partners engage in process activities as well as share information about their own activities; (3) coordinated activities	NA	DV	16 communities

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
27	Examining Student Social Capital in a Comprehensive School-Based Health Intervention	Jordan et al.	2016	USA	Student's social capital	Number and frequency of social ties with peers, teachers, guardians/family members related to the health principles learned in the program. Measured by student Social Capital instrument.	NA	DV & IV	188
28	Experimental Effects of Program Management Approach on Teachers' Professional Ties and Social Capital	Quinn & Kim	2018	USA	Social Capital, professional ties between teachers	Social ties which is operationalised as the number of times a single teacher consulted other teachers related to the program.	NA	DV	27 schools
29	Health impacts of environmental and social interventions designed to increase deprived communities' access to urban woodlands: a mixed-methods study	Thompson et al.	2019	Scotland	Perceptions of the local neighborhood and social cohesion	Standard questions from the English Citizenship Survey	NA	DV	5460 (wave 1, n = 2117; wave 2, n = 1672; wave 3, n = 1671)
30	How Dynamic Are Exercise Group Dynamics? Examining Changes in Cohesion Within Class-Based Exercise Programs	Dunlop et al.	2012	Canada	Changes in social and task cohesion over time	Cohesion was measured using the PAGEQ a 21-item instrument that assesses social and task cohesion along both individual and group dimensions.	$\alpha = .87$	DV	395

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
31	How effective is the health-promoting school approach in building social capital in primary schools?	Sun & Stewart	2007	Australia	Social Capital	Social Capital Index, which was developed and empirically tested by	.87	DV	967
32	How to increase earthquake and home fire preparedness: The fix-it intervention	Joffe et al.	2016	USA and Turkey	Social cohesion, trust (in education, armed forces, government, scientists, and churches), perceived level of corruption (of the government and construction industry).	Trust: Measured by asking the participant how much trust they had in several institutions including education, armed forces, government, scientists and the church used a reduced version of the scale used to measure social cohesion in European countries	Not reported	DV	288
33	Implementing a Community-Based, Service Coordination, and Delivery Intervention With Urban, Minority Parents	Ferguson et al.	2016	USA	Community social capital (measured by Neighbourhood trust and neighborhood connections)	Neighbourhood Trust Scale of the Social Capital Index Neighbourhood Connections Scale of the Social Capital Index	The Cronbach's α for these five items was .61 at baseline and .77 at follow-up	Neighbourhood Trust Scale. DV	80
34	Increases in Network Ties Are Associated With Increased Cohesion Among Intervention Participants	Gesell et al.	2016	USA	Social network (questions categorised as [1] advice nominations, [2] discussion nominations), perceived cohesion	Bollen and Hoyle's previously validated cohesion scale (1) advice nominations: "In your GROW group, who would you go to outside of sessions for advice on making your family healthier (being more active, eating healthier, and getting more sleep)?" and (2) discussion nominations: "In your GROW group, with whom do you discuss these issues (being more active, eating healthier, and getting more sleep) outside of sessions?"	Not reported	DV	611

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
35	Intergroup contact in computer-mediated communication: The interplay of a stereotype-disconfirming behavior and a lasting group identity on reducing prejudiced perceptions	Avidrez et al.	2015	Spain	Changes in stereotyped attributions subtle prejudice	Stereotypicality measure Pettigrew and Meertens' subtle prejudice scale	($\alpha = .71$) ($\alpha = .80$)	DV	104
36	Investing in Communities: Evaluating the Added Value of Community Mobilization on HIV Prevention Outcomes Among FSWs in India	Kuhlmann et al.	2014	India	Social cohesion collective efficacy	Social cohesion: For example, Sharing issues, relying on fellow FSWs collective efficacy: For example, FSWs would work together if problem affected the group	N/A	Mediator	1986
37	Leader behaviors, group cohesion, and participation in a walking group program	Izumi et al.	2015	USA	Group cohesion leader behavior	A modified version of the Physical Activity Group Environment Questionnaire (PAGE-Q)40 was used to measure group cohesion. A 21-item survey was developed to measure group members' perceptions of community health promoters' leader behaviors	$\alpha = .85$ $\alpha = .88$	Mediator	603
38	"More Than a Game": The Impact of Sport-Based Youth Mentoring Schemes on Developing Resilience toward Violent Extremism	Johns et al.	2015	Australia	Attitude change	Interviewer generated Questions	NA	DV	60

(Continues)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
39	Pathways to Increasing Adolescent Physical Activity and Wellbeing: A Mediation Analysis of Intervention Components Designed Using a Participatory Approach	Corder et al.	2020	UK	Group cohesion	Assessed by an adapted social network modeling tool in which participants were provided with a list of tutor group members on a laptop and were asked to select up to five names of their friends from the list provided. These data were used to derive in-degree (the number of people identifying the participant as a friend) and out-degree (the number of friends that participant lists as a friend)	NA	Mediator	1319
40	Pathways to mental health improvement in a community-led area-based empowerment initiative: Evidence from the Big Local 'Communities in Control' study, England	McGowan et al.	2019	UK	Social Cohesion and areas belonging	Not reported	N/A	Mediator	48
41	Reconciling after civil conflict increases social capital but decreases individual well-being	Cilliers et al.	2016	Sierra Leone	Forgiveness and trust of former civil war rivals, social capital	How much do you trust rebel excombatants? How much do you trust migrants to this community? For example: People are honest and can be trusted	N/A	DV	2383
42	Reducing prejudice and promoting positive intergroup attitudes among elementary-school children in the context of the Israeli–Palestinian conflict	Berger et al.	2016	Israel	Readiness for social contact, Negative feelings about the other, Discriminatory tendencies toward the other, Negative stereotyping of the other, Discriminatory tendencies towards Ethiopians, Negative	"Stereotyping" measure developed by Kaminsky and Bar-Tal "Emotional Prejudice" scale developed by Teichman et al. Discriminatory tendencies among children were assessed by a measure developed by Berger et al. To assess readiness for social contact, we used an instrument developed and implemented in previous studies	Stereotyping: Cronbach's α coefficients ranged from .85 to .91 for the Israeli–Jewish, Israeli–Palestinian and Israeli–Ethiopian scales.	DV	322 (126 inter-vention)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
43	Reducing violence in poor urban areas of Honduras by building community resilience through community-based interventions.	Hansen-Nord et al.	2016	Honduras	Social capital	NA	<p>Negative feelings to outgroup: $\alpha = .81$, $.84$, and $.84$ for the preintervention, postintervention, and follow-up surveys, respectively)</p> <p>Discriminatory Tendencies: $r = .78$</p> <p>Readiness for social contact:</p> <p>Cronbach's α for this scale were $.88$, $.91$, and $.93$ for the preintervention, postintervention, and follow-up surveys, respectively</p>	DV	162
44	Strategies for preventing youth violence facilitating collective efficacy among youth and adults	Ohmer	2016	USA	Social capital and cohesion, including (1) neighborhood activism, (2) neighborhood integration, (3) neighborhood relations, and Informal social control, including (1) likelihood to intervene and (2) attitudes-intervening.	<p>Neighborhood activism: Talked to a person or group causing a problem in the neighborhood</p> <p>Neighborhood integration: How many adults (age 18 and over) in your neighborhood do you recognize by sight?</p> <p>Neighborhood relations: How often do you and other people in your neighborhood borrow things from each other (e.g., tools, bikes, books, food, etc.)?</p>	<p>Neighbourhood activism (0.77) neighbourhood integration (0.80) before the training, 0.74 after the training, and 0.68 after the community project.)</p> <p>neighbourhood relations (0.87)</p>	DV	20

(Continues)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
45	Sustaining a Global Social Network: A quasi-experimental study	Benton & Ferguson	2017	USA	Network density, network diameter, average path length	Informal Social Control: Likelihood to Intervene.	Informal Social Control: Likelihood to Intervene. This scale was adapted from two scales, the neighborhood action/willingness to intervene scale ($\alpha = .71$), and the collective efficacy scale (Sampson et al., 1997; $\alpha = .80-.91$).		28
46	Teaching tolerance or acting tolerant? Evaluating skills- and contact-based prejudice reduction interventions among Palestinian-Israeli and Jewish Israeli youth	Brenick et al.	2019	Israel	Ratings of degree of acceptability of exclusion under four different conditions (i.e., undifferentiated exclusion, group-based exclusion, group-undefined, group-based exclusion-parent sanctioned, group-based exclusion-peer sanctioned) selecting five different categories of justifications (i.e., societal, moral, psychological, stereotypes, empathy towards excluder)	"How good or bad is it to exclude X and include Y?": (1) when no reason was specified (undifferentiated exclusion), (2) "...because X is Palestinian?" (group-based exclusion GBE, undefined), (3) "... because [the protagonist's] parents say to exclude X because he is Palestinian?" (GBE, parent-sanctioned), (4) "... because [the protagonist's] friends say to exclude X because he is Palestinian?" "Why is it good or bad if the protagonist and his friends don't let X join the game?" A series of eight possible justifications, divided into five categories, were provided for participants to select from, and they were able to select up to three responses for why they thought the exclusion was good or bad. Participants' selection(s) of	$\alpha_{P-I, T1} = .94$, $\alpha_{T2} = .95$, $\alpha_{T3} = .94$; $\alpha_{I-I, T1} = .96$, $\alpha_{T2} = .96$, $\alpha_{T3} = .96$	DV	302

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
47	Testing the efficacy of OurSpace, a brief, group dynamics-based physical activity intervention: A randomised controlled trial	Evensbach et al.	2016	USA	Perceived cohesion based on four dimensions: (1) attraction to group-task (ie, "I like the exercise done in this group"), (2) attraction to group-social (ie, "I enjoyed my social interactions within this online exercise group"), (3) group integration-task (ie, "our group is united in its beliefs about the benefits of the exercises offered in this program"), and (4) group integration-social ("members of our group would likely spend time together after the program ends").	"Modified Physical Activity Group Environment Questionnaire (PAGEQ)"	"scores for attraction to group-task ($\alpha = .74$), attraction to group-social ($\alpha = .85$), group integration-task ($\alpha = .80$), and group integration-social ($\alpha = .76$)"	Mediator	135
48	The acceptability and efficacy of using iPads in music therapy to support wellbeing with older adults: A pilot study	Engelbrecht & Shoemark	2015	Australia	Social isolation	Friendship Scale: "It has been easy to relate to others"	$\alpha = .83$	Secondary DV	5

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
49	The challenges of impact evaluation: Attempting to measure the effectiveness of community-based disaster risk management	Sarabia et al.	2020	Honduras	Social cohesion measure	Availability of community preparation plan, Community reaction in case of emergency, Emergency committees active in the community, Community participation in drills, Organisation at the community level in response to hazards	Not reported	DV	810
50	The day after: The organizational consequences of innovation implementation in experimental schools	Gilad-Hai et al.	2016	Israel	Social cohesion	Chatman's questionnaire	$\alpha = .89$	DV	870
51	The influence of musical training on acculturation processes in migrant children	Frankenberg et al.	2016	Germany	Social Integration Class Atmosphere	The extent of a child's feeling of being accepted as a "full-fledged member of the group" by his or her peers (Rauer & Schuck) Class Atmosphere which assesses a child's perception of the social relationships within the classroom.	Social Integration: $\alpha_{T1} = .74$, $\alpha_{T2} = .79$ Class Atmosphere: $\alpha_{T1} = .68$, $\alpha_{T2} = .75$	DV	159
52	We pledge to improve the health of our entire community: Improving health worker motivation and performance in Bihar, India through teamwork, recognition, and nonfinancial incentives	Grant et al.	2018	India	Social cohesion	Trust, respect, and rapport among team members, as well as teamwork attitudes, such as belief that working as a team makes one's job easier	Not reported	DV	983
53	Promoting social capital to alleviate loneliness and improve health	Coll-Planas L et al.	2015	Spain	(1) Subjective Social Participation Index. (2) Social Loneliness Subscale. (3) Social Resources Inventory	(1) Social Resources Inventory in Older Adults: This was used to measure the impact on social support, as a cognitive aspect of individual social capital.	Not reported	Mediator	38

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	among older people in Spain				in Older Adults (Relationship with Friends), (4) Number of weekly outings, (5) Number of visits to Nurse in last 12 months.	<p>(2) Subjective Social Participation Index: This measured the impact on social participation, as a structural aspect of individual social capital, examples include During the week and on weekends do you call other people to go outside?</p> <p>Do you like to participate in leisure activities that are organized in your neighborhood/town?</p> <p>(3) The use of health services was retrieved from computerised medical records.</p> <p>(4) Social Loneliness subscale from 11-item De Jong Gierveld Loneliness Scale (De Jong Gierveld & Van Tilburg, 2010): "There are plenty of people I can rely on when I have problems"; "There are many people I can trust completely"</p> <p>(5) Number of weekly outings (self-report Q).</p>			
54	Health Effects of a Farming Program to Foster Community Social Capital of a Temporary Housing Complex of the 2011 Great East Japan Earthquake	Takahashi et al.	2015	Japan	Social network and community social capital	<p>Sense of purpose in life: The K-1 Scale was included in our self-administered questionnaire survey.</p> <p>The K-1 Scale consists of four factors: (1) self-actualization and motivation (challenging spirit with purpose and motivation toward everything) (2) satisfaction with life (challenging spirit with self-awareness of making a contribution to others), (3) motivation to live (sense of self-progression), and (4) sense of existence (sense of being approved of by others).</p>	Not reported	DV	39
55	Effect of physical exercise on workplace social capital: cluster	Andersen et al.	2015	Denmark	Bonding, bridging, and linking social capital	<p>(1) Bonding Social Capital: Two sample questions out of nine questions for bonding social capital are: "In our team, we agree on what is the most</p>	Standardized Cronbach's α of .90 (bonding social capital), .87	DV	200 (111 Intervention, 89 control)

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	randomized controlled trial					important in our work tasks"; "There is a feeling of unity and cohesion in my team." (2) Bridging Social Capital: Two sample questions of a total of six for bridging social capital are: "Is there a good working relationship between your team and the other teams/departments?"; "We have trust in the ability of the other teams to do the job well."	(bridging social capital), .91 (linking A social capital), and .88 (linking B social capital).		
56	Inducing a health-promoting change process within an organization: The effectiveness of a large-scale intervention on social capital, openness, and autonomous motivation toward health	Van Scheppingen et al.	2014	Netherlands	Bonding social capital	Assessed by a three-item subscale of the social capital scale developed by Kouvonon et al. using 5-point Likert scales. An example is "We have a 'we are together' Attitude"	.72	DV	324 (194 inter-vention)
57	In search of links between social capital, mental health, and psychotherapy: A longitudinal study in Rwanda	Verduin et al.	2014	Rwanda	Adapted-social capital assessment tool (A-Scat)	(1) Social Capital: Short version of the Adapted Social Capital Assessment Tool, (Short A-SCAT), because of its proven validity in various contexts, its limited length, and the presumed relevance of its items for the Byumba context. Items of the Short A-SCAT address received support from groups or individuals, whether and how people connect with leaders, how they feel connected to others in their living area, and how they get along. For example: "Are you an active member of any group?"	Not reported	DV	200 (100 Int, 100 control)
58	The effect of cognitive therapy on structural social capital: Results	Hall et al.	2014	Democratic Republic of Congo	Selected items from the integrated questionnaire for measurement of	Selected items from the Integrated Questionnaire for the Measurement of Social Capital	The Cronbach α for 2 locally relevant domains of from Questionnaire for	DV	405

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
59	Do home-visit programs for mothers with infants reduce parenting stress	Fujiwara et al.	2012	Japan	social capital (group membership and participation by asking if women were a member of any locally relevant groups and with what frequency)	<p>(1) Social inclusion: Questions asked how often a woman (1) had people visit her in her home and (2) visited people in their home. 4-point Likert scale.</p> <p>(2) Group participation: We measured group membership and participation by asking whether women were a member of any of nine locally relevant groups, and, if so, to quantify the frequency that they participated in meetings related to each of these groups.</p> <p>(3) Network Size: We measured financial social network size by asking "If you suddenly needed a small amount of money—For example, enough to support your household for 1 week—how many people could you turn to who would be willing to provide this money?"</p> <p>We measured instrumental support network size by asking "If you suddenly faced a long-term emergency, such as a family death or harvest failure, how many people could you turn to who would be willing to assist you?"</p> <p>We evaluated emotional support seeking by asking how often they (1) "talk about problems with friends or family members," and (2) "talk about problems with women who have experienced similar traumas." —4 point Likert scale.</p>	measurement of social capital was .71.	N/A for social capital (only provided Cronbach α for stress and perceived emotional support)	347

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	and increase social capital in Japan?					scale. Similar questions were used in previous studies.			
60	Building social capital in postconflict communities: Evidence from Nicaragua	Brune et al.	2009	Nicaragua	For the cognitive elements of social capital: Feelings of trust and solidarity, social harmony and sociability. For structural elements: Participation in groups and meeting load. Also explored impact of interventions in civic participation in governance processes.	(1) Structural Social Capital: Structural components of social capital with three survey questions: Participation in community groups (1 if yes to "Do you participate in a community group"), frequency of attendance at meetings ("meeting load"; log of sum of meetings across groups per month), and contributions made to the groups to which respondents belong ("1 if participant has contributed resources to group in which they belong." (2) Cognitive components of social capital: (a) trust ("In general do you trust most people?") and solidarity ("Do you think most people in this village are willing to help you if needed") (b) social harmony (How strong is the feeling of closeness in your neighborhood?) (c) sociability ("In the last month have you met with people in a public place to talk or eat or drink?") (3) Citizenship: (a) Civic Participation ("In past month have you worked with others in village to do something for benefit of community?") (b) Empowerment (in the last year have you donated money or goods to an NGO)	Not reported	DV	407 people surveyed. Study included 3 communities. Two intervention sites: Pantasma (55 HH; population 878), and Waslala (56 HH, population 1100). And one control: Cinco Pinos (87 HH, population 592).
61	Building social capital with women in a socially disadvantaged community	Griffiths et al.	2009	Australia	Social capital items	Interviewer-generated questions assessed: (1) access to facilities (2) Willingness to help ("do you feel like your neighbours are willing to help one another?") etc.	Not reported	DV and mediator	327

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
62	Intervention against loneliness in a group of elderly women: An impact evaluation	Andersson	1985	Sweden	Social contacts, self-esteem, loneliness, use of services	(1) Social contacts: Social contacts were assessed by an 'objective' measure of how often the subjects have met (a) children, (b) grandchildren, (c) brothers and sisters, (d) other relatives, (e) neighbors and (f) friends, in the last 6 months since the intervention. (2) Loneliness: Loneliness is measured by the UCLA Loneliness Scale-short version, which is a well-documented and widely used instrument. (3) Self-esteem: In the present study a four-item index from the Garde and Westlander eight-item self-esteem scale is included too. The scale has a four-point response format and a sample item is: "Do you sometimes go fretting for a long time about things which you would have liked to have done differently?" (4) Use of services: One of the activity measures, "participation in organized activities," is a checklist of whether or not the subjects in the last 6 months since the intervention have participated in any activities organized by six types of organizations.	Measures of health resources: 0.79	DV	108 (68 in intervention, 40 in control group)
63	Befriending Carers of People with Dementia: Randomised Controlled Trial	Charlesworth et al.	2008	England	QOL, mental health, Perceived support	Perceived Support: Multidimensional Scale of Perceived Social Support (MSPSS): This 12-item scale is broken into three-factor groups (source of social support): Family, friends, and significant other. This scale is scored on a 1 (very strongly disagree) to 7 (very strongly agree) Likert-type scale. Statements in the family factor group include: "My family really tries to help me."	Not reported	DV	236 (116 in intervention group, 120 in control group)

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TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
64	Intergenerational interaction, social capital, and health: Results from a randomised controlled trial in Brazil	De Souza & Grundy	2007	Brazil	Trust in family, neighborhood, health status, perceptions of honesty, selfish of others	<p>Statements in the friend factor group include: "I can count on my friends when things go wrong."</p> <p>Statements in the significant other factor group include: "There is a special person who is around when I am in need."</p> <p>(1) Trust: The domain of trust was assessed through direct questions about trusting family, and people in general, with four categories: "Trust completely," "trust with reservations," "do not trust," and "do not trust at all." Two additional questions derived from the American General Survey used were: For example, "Do you think most people would try to take advantage of you if they had a chance or would they try to be fair?"</p> <p>An additional question on (2) perceptions of honesty was also included: "Generally speaking do you think people are honest?"</p> <p>(3) Perception of neighborhood and reciprocity ("assessed by asking if respondents perceived neighbours as being helpful")</p> <p>(4) Selfishness of others: A question asked about people in general "Would you say that most of the time people try to be helpful or are they mostly looking out for themselves?"</p>	Not reported	DV	519 (253 adolescents, 266 elderly)
65	Social Support intervention after stroke: Results of a randomized trial	Friedland & McColl	1992	US	Social support, network support	(1) Social Support: Four aspects of social support—source, quantity, quality, and type—were measured in the study. Source, quantity, and quality of support were measured using the Social Support Inventory for Stroke Survivors (SSISS)	Only provided for the Sickness impact profile = 0.94	DV	Total sample pool of 107, at 2nd follow up (48 exp, 40 control), 3rd follow

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
						(2) Network support: Types of support were assessed using the Interpersonal Support Evaluation List (ISEL) the ISEL is a 40-item questionnaire that asks subjects about the availability of network members to provide support in each of the following four areas: Appraisal, belonging, tangibility, and self-esteem			up (43 exp, 35 control)
66	The Baltimore Experience Corps Trial: Enhancing Generativity via Intergenerational Activity Engagement in Later Life	Gruenewald et al.	2015	US	Generative desire and generative achievement	Respondents were asked to rate their agreement (1: <i>disagree strongly</i> to 6: <i>agree strongly</i>) with 7 items assessing generative desire and 6 items assessing perceptions of current generative achievement. (1) Generative desire: For example: "I want to give back to my community" (2) generative achievement, for example, "I feel like I make a difference in my community."	(Generative desire Cronbach's $\alpha = .82$; generative achievement $\alpha = .90$).	DV	702 (Intervention = 352 allocated (284 received), control = 350)
67	The impact of diabetes education and peer support upon weight and glycemic control of elderly persons with noninsulin-dependent diabetes mellitus (NIDDM)	Wilson & Pratt	1987	US	Peer support levels	(1) Level of peer support levels were measured using an adaptation of the Arizona Social Support Schedule: Description of measure: The Arizona Social Support Interview Schedule, which provides an assessment of the subject's social network for the past 6 months. In this study, five dimensions of social support were examined; assistance received, material aid, advice, positive feedback, and people to confide in	Not reported	DV	79 (19 education group, 32 in education + peer support group (intervention), 28 in control group)
68	Effects of a program to prevent social isolation on loneliness, depression, and subjective well-	Satio, Kai, & Takizawa	2012	Japan	AOK loneliness scale, social support (self-designed), social network (self-designed)	(1) AOK loneliness scale: Can't find Scale info (2) Social network was assessed with one item that evaluated the frequency of face-to-face contact with friends or neighbors on a scale from 1 (no	Not reported	DV	63 (21 intervention, 42 control)

(Continues)



TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
	being of older adults: A randomized trial among older migrants in Japan					contact) to 6 (contact more than twice per week). This item was treated as a continuous variable (3) Group participation in group activities such as neighborhood organization, commercial organization, hobby group, or religious group was assessed with one item that ranged from 1 (not participating) to 6 (participating more than twice per week). (4) Social Support: We measured social support with four items related to emotional support and four items related to instrumental support provided by the participants' informal networks, such as family members, children who live apart from the participant, relatives, friends, or neighbors			
69	Randomized Controlled Effectiveness Trial of Reciprocal Peer Support in Heart Failure	Heisler et al.	2013	USA	Minnesota Living with Heart Failure Questionnaire, Validated Diabetes Social Support Scale adapted to reference HF.	MLHFQ—Designed to assess the health-related quality of life of patients with heart failure in adults, 21 items, 3 categories, 6-point Likert scale, with Cronbach α of .94, tests health-related quality of life and impairment to day-to-day wellbeing and lifestyle activities DSSS—Adapted to reference heart failure, asks questions to measure the heart failure-specific social support being received by family, friends, and nurses	MLHFQ = 0.94	Secondary DV	267 (136 intervention, 131 control)
70	The psychosocial effects of a companion robot: A randomized controlled trial	Robinson et al.	2013	New Zealand	UCLA Loneliness scale	(1) UCLA loneliness scale: 20-question tool used to assess subjective feelings of loneliness or social isolation. All questions are framed using "how often do you feel..." and choices include never, rarely, sometimes, and often. Scores range	Not reported	DV	40 (20 in control, 20 intervention)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
71	Effects of psychosocial group rehabilitation on loneliness and well-being of lonely, older people: Randomized controlled trial	Routasalo, Tilvis, & Pitkälä,	2009	Finland	UCLA Loneliness Scale, social network with Lubben's Social Network Scale (LSNS)	(1) Social Network using Lubbens Social network scale (LSNS): Measures social isolation by measuring frequency, size, and closeness of contacts of the respondent's social network by assessing the perceived level of support they get from friends and families Three questions on family, and three on friends. Questions are framed the same way across family/friends. Scale questions: For example: How many relatives/friends do you see or hear from at least once a month? How many relatives/friends do you feel at ease with that you can talk about private matters? (2) UCLA Loneliness scale: 20-question tool used to assess subjective feelings of loneliness or social isolation. All questions are framed using "how often do you feel..." and choices include never, rarely, sometimes, and often. Scores range from 20 to 80, with a higher score indicating greater loneliness	Not reported	DV	235 (Intervention = 117, control = 118)
72	Effects of nonprofessional home visit programs for subclinically unhappy and unhealthy older adults	McNeil	1995	Canada	Subjective health and Happiness	(1) Subjective health: Subjective health is a single-item measure that assesses the individual's perception of his or her overall physical health. A 6-point, Likert-type scale ranging from poor to excellent was used in this study. (2) Happiness: The Memorial	Not reported	DV	30 (10 in walking intervention condition, 10 in home visit

(Continues)

TABLE 3 (Continued)

ID	Paper title	Author(s)	Year of publication	Country	Variable included in the systematic review	How was the variable measured?	Cronbach's α	Social cohesion measured as ...	N
73	Impact of psychosocial intervention on the quality of life of elderly cancer patients	Mantovani et al.	1996	Italy	Quality of life and functional living index	University of Newfoundland Scale of Happiness (MUNSH). The MUNSH is a 24-item, self-report measure of psychological well-being that has been validated on samples of elderly individuals from urban, rural, and institutional settings. (1) QOL: Spitzer's Quality of Life Index (QLI) for the global objective evaluation of QL (Spitzer et al., 1981). (2) Functional living: The Functional Living Index-Cancer (FLIC)	Not reported	DV	72

increase "urban, minority parents' human capital, financial capital, community social capital, and service utilization." (p. 708). To obtain these goals three primary steps were taken: "(a) employ community residents to serve as CONNECT peer outreach workers in eight local community centers to engage families., (b) facilitate referrals for families to human service providers and community supports, and (c) offer psychoeducational workshops.to families that are conducted by service providers and informed by data from focus groups with community residents."

In step one, the researchers recruited local community members as peer outreach workers to facilitate their access to families who were in need, evaluate their needs, make proper referrals, and ensure that they followed through those referrals. Although these outreach workers had "minimal formal training," they "participated in several social service trainings to enhance their skills (e.g., training for screening clients for Food Stamp assistance at community centers) and received ongoing supervision from the program director." This means that they were "adept at "connecting" with their community constituencies (i.e., parents and youth) and successfully engaging their respective constituents in needed services" (p. 711). Outreach workers "walked the streets of the host community and visited public spaces (e.g., parks, outdoor food markets) and public accommodations (e.g., businesses, houses of worship) to engage residents" (p. 711). After identifying community members' needs, referrals were made to formal agencies.

In the second step, staff members tracked the following areas after each referral has been made "through follow-up conversations with both clients and providers: (a) service retention, (b) service awareness, (c) number of formal and informal service referrals offered by staff, (d) number of formal and informal service referrals used by clients, (e) frequency and duration of service use, (f) client satisfaction with referrals provided, and (g) presenting problem(s) for referral resolved" (p. 711). Moreover, they did not solely rely on deficit approach (i.e., what they lack), they "also help[ed] families to identify, strengthen, and mobilize existing sources of informal help from the community," the strengths-based approach. To do so, they used "assessment tools such as ecomaps with parents to diagram their family's most important relationships and sources of support."

In the third step, they offered monthly psychoeducational workshops. Both host-agencies (two focus groups) and outreach workers (eight focus groups) were consulted to determine the most needed psychoeducational workshops.

What makes this intervention effective is (1) recruiting community residents as outreach workers with whom community members could identify more easily (they were one of "them"), (2) determining community members' needs based on their reports (a bottom-up approach), (3) referring families in need to proper agencies that could address those needs, (4) keeping track of referrals to ensure that families follow it through, (5) offering psychoeducational workshops to both community members and service providers to make sure that community members know what social supports are available, which social supports and agencies they need to receive, and how they can do that, and (6) adopting strengths-based rather than deficit-based

TABLE 4 Selected studies research designs' characteristics.

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
1	Quasi-experimental between subjects	1	$d = 0.07$	24 × 2-h Resident Training programs from June to November 2011. Six booster sessions held 6 weeks later from July to Dec 2011. 14 × Learning programs (1–2 h each) June to November 2011	Neighborhood cohesion	Learning families Project—Based on the social-ecological model that proposes dynamic interrelations between personal and environmental factors
2	Field-experimental study employed a single-cohort longitudinal approach across three-time intervals	1		9 × Classroom Sessions weekly	Intergroup harmony	It integrates dual identity recategorization and intergroup contact tenets
3	Preintervention and postintervention within-subject design	0	Bridging social capital ($b = 0.52$) Bonding social capital ($b = 0.40$) Social support ($b = -0.65$) Family interaction ($b = -0.55$)	6 months (phone plan is free), and another 6 months (but must pay monthly)	Health through social capital	Leveraging social capital theory
4	Between participant's design	1		5 sessions	Health through social capital	Based on social cognitive theory and focuses on developing and practicing new skills and building self-efficacy and positive expectations. Altering the facilitators and gender/sexuality composition of groups
5	Quasi-experimental between participants design	0	0.4	3-day intervention	Mental health and disaster preparedness	Based on a model initially developed for use with earthquake survivors in Haiti, integrating mental health and disaster preparedness in intervention
6	Field experiment with pretest and posttest	1	39% change in empowerment and support scores from T1 to T2 for Cohort 1	2-h sessions 5–6 times per week (After school) for 6 months	Empowering Adolescent Girls in Rural Bangladesh	The Developmental Assets framework
7	Quasi-experimental controlled preintervention and postintervention	1		40 lessons over 2–4 months including follow-up 6 months later	Social capital	Health Promoting School (HPS) approach based on social capital literature
8	Tween participants field experiment	1			Social capital	Developing management and leadership (M&L) skills of community members
9	Between participants field experiment	1		2 months as part of "mixed" soccer team	Social cohesion	Contact hypothesis
10	Between participants field experiment	1		18 months (September 2006–February 2008)	Social Cohesion	Community-driven reconstruction (CDR) programs

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
11	Between participants field experiment	1		3.75 years (June 2001 to March 2005)	Social capital	Microfinance-based community intervention
12	Within participants field experiment	0		Intervention activities from the five areas conducted over 18-month period.	Protective sexual behaviors	Community mobilization and development
13	Within participants field experiment	0		In total there were 23 meetings of participating mothers, of 2.5 h duration	Health promotion	Community-organizing methodology
14	Within participants field experiment	0		3 consecutive 1-h weekly meetings with questionnaire administered 1 week later	Social support for mothers who are pregnant	Direct and imagined intergroup contact
15	2 × 2 experimental intervention	0	Direct contact on negative outgroup stereotype: $\eta_p^2 = 0.08$ imagined contact on negative outgroup stereotype: $\eta_p^2 = 0.12$ direct contact on outgroup helping intention: $\eta_p^2 = 0.13$ imagined contact on outgroup helping intention: $\eta_p^2 = 0.08$	This study was conducted between September 2015 and December 2016 in Jaffa, the oldest part of the Tel Aviv-Yafo municipality. The contact intervention consisted of 12 bimonthly meetings of ethnically mixed students each was 4 h Skills and social studies met 12 times bi-monthly of only 45 min	Outgroup stereotypes and helping intentions	Skills training and contact-based approaches
16	Between-group intervention	1	$\eta_p^2 = 0.13$		Prejudice reduction	
17	Between-group intervention	1	Intergroup trust: $\eta_p^2 = 0.04$ cooperation tendency: $\eta_p^2 = 0.075$	6 × sessions in intervention	Enhancing Cooperation Intention and Reducing Prejudice	Improving knowledge of the outgroup
18	Between-group intervention	1		N/A	Strengthening community empowerment	Community development initiatives (such as the EU LEADER Program) and mixed-Methods Analytical Resilience Framework and empirical findings of Steiner and Markantoni and Steiner et al.
19	Between-group intervention	1		3 months (July to November 2013)	Social cohesion	Potential cohesion effect of a physical activity (PA) school-based intervention potentiated using text messages (SMS)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
20	Within participants quasi-field experiment	1		A total of 1182 groups were sampled from rural areas of 35 blocks in eight districts of Bihar, India from April to June 2013, and the same groups were followed over a period of 12 months for this evaluation.	Promote healthy maternal and newborn practices	Behavior change health intervention Demand or community-driven approaches and community groups—collectives, community-based organisations (CBOs)
21	Longitudinal community-based field experiment	0			Social capital	
22	Between-group intervention	1			Improvement of type 2 diabetes management	Self-management programs and programs organised as group interventions compared to one-to-one basis
23	Between participant's quasi-experimental design	1		10x weekly sessions	Improved perceptions of neighborhood social cohesion and informal neighborhood social control	Your Family, Your Neighbourhood (YFN) is a dual-generation, manualized intervention, and the skills-based curriculum focuses on fostering family health and well-being
24	Field experiment with pretests and posttests	1	$\eta_p^2 = 0.13$	8x internet sessions of approx. 1 h	Intergroup bias reduction	The use of the internet for improving intergroup relations
25	Quasi-experimental design with interventions	1		Repeat, cross-sectional surveys of individuals resident in intervention and control communities, with three waves of data collection in the early summer of 2013 (baseline, Wave 1), 2014 (Wave 2), and 2015 (Wave 3) respectively, to assess outcomes	Enhancing health	A logic model to consider how physical and social interventions focused on community natural environments
26	Within-between participants field experiment (two experimental groups)	0		We used a social network analysis tool called PARTNER to measure the growth and development of the coalitions and their interactions in the 16 communities over a 12-month period	Resilience building	Social network survey to measure the number, type, and quality of relationships among organizations
27	Within participants field experiment	0	Not enough information to calculate the final ES	Regular school year	Health Intervention	School children and their patterns of social interaction within a school health program
28	Between participants with immediate follow-up effects and 1 year later	0		Compare two versions of READS—Core READS and Adaptive READS—which were randomly assigned to	Social capital and ties	Social network theory

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
29	Quasi-experimental and included three intervention and three matched control sites as part of a longitudinal, mixed-methods study	1		Phase 1: 6 months Phase 2: 9 months	Health promotion	Beneficial effects of green space on mental health
30	Longitudinal community-based natural intervention	0		Convene once a week for at least 8 weeks	Social cohesion	Dynamic nature of group cohesion, using an exercise group
31	Longitudinal community-based intervention	1		2 years	Health promotion	Health-promoting school approach
32	Cross-cultural, quasi-experimental, nonrandomised, controlled, longitudinal, face-to-face intervention study, with a pretest–posttest design	1		6-h workshop on natural hazard preparedness	Earthquake and home fire preparedness	Based on the theory of planned behavior and protection motivation theory
33	Pre–posttest single group design and mixed methods as well as incorporated principles of community-based research	1		11 months	Human capital: Highest grade completed and general health status	Social capital framework
34	Community-based randomized controlled trial	1		6 weeks (of an ongoing lifestyle intervention)	Social cohesion	Sociometric nominations and social networks
35	Between-group intervention	1		1 h	Reducing prejudiced perceptions	SIDE model, based on social identity theory
36	Precommunity and postcommunity intervention	0		N/A	HIV prevention	Community mobilization approaches
37	Multisite cluster randomized controlled study with a lagged intervention and outcome measurements at baseline, 4, 8, and 32 weeks	1		32 weeks	Health Intervention	Community Health Promoter leader behaviors and group cohesion
38	Preintervention and postintervention	0		12 months	Resilience toward Violent Extremism	Using a community-based resilience model cultural isolation

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
39	Two-arm parallel-group cluster randomised controlled trial (RCT), boys and girls	0		12 weeks	Physical Activity and Wellbeing	Intervention is based on self-determination theory and codedigned with students and teachers
40	Preintervention and postintervention	0	NA	6 months between data collection	Mental health improvement	Engaging and empowering communities and community control
41	Natural experiment	1		Surveys both 9 months and 31 months after the ceremonies took place, enabling us to determine both short-run and long-run effects. In wave two, endline surveys were conducted once, ~18 to 19 months after the ceremonies. The evaluation timeline, which spanned the 2011–2014 period	Social cohesion	Reconciliation efforts
42	Between (exp and control) and within (before, after, and follow-up)- group design. Questionnaire 0–4-point scale	1	$\eta^2_p = 0.17-0.48$	The ECEP was implemented from September 2012 to June 2013 and followed 15 months after the program was terminated	Reducing prejudice and promoting positive intergroup attitudes	Based on three models: the contact model (intergroup contact theory), the information model (social learning theories), and the developmental model (social-cognitive developmental theory)
43	Quasi-experimental design preimplementation and postimplementation of the intervention	0		3 years (2011–2014)	Reducing violence	Community empowerment; increased by participation, leadership, and organizational structures
44	Within-subjects design. Three-time steps (1) before training, (2) after training, (3) after community project	0	$\eta^2_p = 0.071$	Three phases Phase 1: 5 months of consensus organizing Phase 2: 6 x 90 min sessions over 6 weeks Phase 3: 4 months Total = approx. 10–11 months	Preventing youth violence	Community-based intervention designed to facilitate collective efficacy by engaging youth and adult residents in a disadvantaged neighborhood and theory of social disorganization
45	Repeated measures, block group, control-intervention, quasi-experimental design	0	NA	1-week	Increase connectivity using technology Social cohesion	Connectivity using digital communication
46	Between subject's design, control group, and two levels of intervention (skills training intervention and	1	Refer to the paper for full report on effect size	Conducted between September 2015 and December 2016 in Jaffa	Prejudice reduction	Assigned to a social-cognitive/emotional skills-based intervention, a skills- and contact-based intervention (i.e., skills, skills + contact)

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
47	skills + contact intervention) and within-subjects design (pretest, posttest, follow up) Between subjects (4 conditions); control (1) and intervention (3); standard social support, group dynamics-based-low presence, group dynamics-based-high presence	1		Brief experimental intervention	Physical activity	Group dynamics-based interventions include team-building activities (e.g., group goal setting)
48	Between participants intervention	0	Traditional Music instrument, $r = .31$ ipad, $r = -.71$	5 × 60 in sessions (one per week)	Wellbeing	Social connectedness and positive self-esteem through technology
49	Between subjects: Control and treatment	1		N/A	Reduce disaster-induced loss, damage, injuries, fatalities, and resource degradation	A methodological approach to enabling more rigorous evidence-based decision-making in community-based disaster risk mitigation
50	Between subject's design; control group	1	$\eta_p^2 = 0.14$	N/A	Social cohesion	Based on theoretical models of social exchange and "conservation of resources" (Hobfoll, 1989)
51	Quasi-randomized	1		4 years: completed a measure of acculturation twice—once at the beginning of the second or third school year in the fall of 2009 (T1) and once again an average of 18 months later (T2)	Social integration	Social effects of musical group activities of children and adolescents
52	Cluster randomized control trial (RCT)	1		N/A	Improving health worker motivation	Employee motivational theory and health worker motivation theory
53	Longitudinal	1	Not reported	15 weeks (1.5 h per week)	Promoting social capital to tackle loneliness	Social cohesion approach of social capital theory emphasising interaction between older persons and their social environment. Moreover, strategies based on a behavior change model and care coordination were integrated in which the program was based on social cognitive theory, complemented by socioecological model, from an empowerment perspective

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
54	Case-Control Study	0	Not reported	Intervention ongoing long-term. Psychosocial variables measured before intervention in June 2012, and during in August 2012 = 3–4 months	To evaluate the effects of an intervention on physical and mental health in terms of bone mineral density (BMD) and a sense of purpose in life.	In theory, social participation may not only improve physical and mental health but also increase community social capital, i.e., as Putnam defined, "the collective value of all 'social networks' and the inclinations that arise from these networks to do things for each other." Empirical evidence also suggests that social capital may play an important role in disaster resilience
55	Cluster randomized controlled trial	1	Control versus Intervention (between-group difference at follow up): (1) Bonding social capital effect size = 0.31	10 weeks	This study investigates the effect of physical exercise on social capital at work	Researchers have investigated the qualitative characteristics of social capital at work and a variety of studies have investigated methods for improving different aspects of social capital. However, all these approaches attempt to intervene directly and broadly on work-related social relationships between employees in teams and between employees and their superiors. In the present study, we use an indirect approach by investigating whether improved social capital emerges in situations that are not related to the daily work tasks, that is, physical exercise in work groups
56	Quasi-experimental design	1		18 months	To examine the effectiveness of an organizational large-scale intervention applied to induce a health-promoting organizational change process	This study is based on a whole population approach and bases a social change process on organisational change theories to improve organizational bonding social capital
57	Quasi-experimental design w/ preintervention and postintervention measurements	1	For civic participation there was a 7% increase of mean scores (from 6.59 to 7.78) versus a 2% increase (from 7.74 to 8.03) in the control group ($p < .001$)	3 months	Sociotherapy as an approach to promote social capital by creating meaningful social structures in which	The study presented here was performed within the framework of a psychosocial community intervention (community-based sociotherapy) aimed to enhance social bonding (Richters et al., 2005)

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
58	Cluster-randomized trial	1	Cohens D: group participation (0.22)	11 weeks (2-h weekly group sessions)	<p>people can find and practice (self) respect.</p> <p>Evaluate changes in social capital following group-based cognitive processing therapy (CPT) for female survivors of sexual violence</p>	<p>Women who experience sexual violence are at increased risk of mental health problems and social maladjustment. In the Republic of Congo, sexual violence is as high as 40%.</p> <p>In low-resource settings, people may rely on informal community social ties to meet mental health needs. Individuals endowed with more social capital have greater mental and physical health outcomes. This is, to the studies knowledge, the first that evaluates the impact of an evidence-based psychotherapy program implemented to improve sexual violence-related distress through structural social capital in a low-resource and high-conflict area</p>
59	Follow-up intervention study	1	Calculable	4 months	<p>The objective of the Home visit program is a health check-up for the newborn and the mother and consultation on parenting in general.</p> <p>Home Visit Service for Newborns does not include intervention elements intended to directly to reduce maternal stress, but through teaching infant care skills, we may expect that maternal stress will be reduced.</p> <p>Further, the home visit assists mothers with infants to establish connections with their local public health</p>	<p>According to a review of 21 studies, home-visit programs for parents at risk of maltreating their children resulted in a 40% reduction in child maltreatment outcomes among the program participants compared with those who did not participate in a home-visit program. This intervention was considered effective since it provided parents with information on child health and development and enabled them to develop problem-solving skills.</p> <p>High levels of interpersonal interaction through this intervention is proposed to foster trust and social capital and reduce stress</p>

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
60	Case-control study	1	Not reported	2 years	To evaluate interventions designed to improve the levels of social capital in postconflict communities in Nicaragua and to relate those increases to health and governance issues	This is the one of the few studies that rigorously and quantitatively documents the effectiveness of deliberately planned efforts to increase the level of social capital in postconflict communities in developing countries which have low levels of social capital. Second, this is the first study of its kind that assesses the effect of social capital on public or community health behaviors
61	Cross-sectional survey design admin. At baseline and follow up	0	Not reported	Ongoing but follow-up analysis is a year later	Determine the specific needs of socially isolated groups and those with the poorest health status and to initiate community activities to build social capital focusing on community strengths and addressing the risk and protective factors within the community.	We take the view that social capital is both individual and community based and has both behavioral/structural (participation) and attitudinal/cognitive (trust) dimensions. Activities aimed at increasing social capital must therefore focus on both the individual, in terms of trust and reciprocity, and the wider community, in terms of participation and involvement
62	Follow-up intervention study	1	Stepwise multiregression: number of years on same job (integration/work) produced a change in loneliness of $B = 0.393$ ($R^2 = 0.15$, $f(1,31) = 5.67$)	4 meetings	Reduce loneliness in elderly women via increasing perceptions of personal control, social comparisons, and the provision of a confidant	In the model suggested here a distinction is made between emotional estrangement (experienced lack of intimacy) and social estrangement (experienced lack of relatedness to the social environment). While the feeling of emotional estrangement might be alleviated with the help of someone close, the feeling of social estrangement is probably reduced most effectively by the process of social comparison (provision of meaning) and by regaining personal control (sustaining of morale); therefore intervention included group level The intervention program-designed to strengthen the social network is based

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
63	RCT	1	Not reported (used previously reported effect sizes as reference)	Varies: 6 months minimum	Improve psychological wellbeing and quality of life for family carers of people with dementia	<p>on three sociopsychological concepts: (a) availability of a confidant, (b) social comparison, and (c) personal control. These concepts have been suggested to be connected with loneliness also from other starting points</p> <p>Social aspects of burden include loss of relationship with the recipient of care and reduced social network owing to stigma or lack of opportunities to socialise. In addition, chronic illness can result in family conflicts that reduce the available emotional support, and family and friends may "distance" themselves physically or psychologically from carers. Carers can feel lonely, and loneliness has been associated with increased mortality and physical and psychiatric morbidity</p>
64	Participation in activities between adolescents and elderly	1	Calculable	14 weeks	Improve social capital and health and elicit methodological insights for intergenerational programs	<p>The study hypotheses were supported by findings from previous small-scale qualitative studies which suggested that older people who participated in intergenerational programs reported increases in feelings of trust and solidarity, improvements in self-rated health and family relationships. The aim of the study was to see whether participants in the program had better scores on relevant indicators of the cognitive components of social capital, and on self-rated health, at the end of the intervention. A secondary aim was to see whether a controlled trial was appropriate to evaluate this kind of intervention and to contribute to methodological improvements in the evaluation of intergenerational programs</p>
65	Randomized controlled trial	1	Calculable	6 sessions	Improve social support and psychosocial outcomes for stroke survivors	<p>Social support as buffer against stress. It is to be viewed in a phenomenological context, based on the belief that support</p>

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
66	Follow-up intervention study	1	(1) Generative achievement: ES of 2.399 (2) Generative Desire ES of 2.018. These effect sizes can be interpreted against the following conventions: small: >0.20, medium: ~0.50, large: >0.80.	2 years	The BECT is a dual-effectiveness trial of the impact of the EC program on older adult participants and on children in public elementary schools receiving the program. EC is designed to attract older adult participants through the opportunity for generative engagement and then to operate via cognitive, physical, and psychosocial pathways to enhance the health and well-being of older adult volunteers while simultaneously promoting the academic and psychosocial well-being of elementary schoolchildren and the climate and social capital of the school and community in which the EC program resides	Previous EC trials provided good evidence for positive impact of intervention on social support, memory function, and physical activity levels
68	Between-participants	1	Calculable	10 weeks (10 1-h weekly sessions)	weight loss and glycaemic control for elderly diabetes patients	is effective only to the extent that it is perceived. Social support is multidimensional in scope and draws on various types, sources, and dimensions of support Dietary modification, the treatment of choice for obese persons with NIDDM, is rarely effective. The purposes of the current study were: (1) to determine whether supportive behavior could be elicited from elderly peers in a diabetes education class and (2) to determine the

(Continues)

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
69	Longitudinal	1	Not reported	Eight weeks (4 fortnightly sessions)	Reduce loneliness and depression and improve subjective well-being in older migrants in Japan	Based on concept of community gatekeepers—prevent isolation by increase community knowledge and network with other participants and community gatekeepers. The lack of social support and involvement in community activities are also closely related to social isolation. Berkman et al. proposed a conceptual framework in which social networks generate social support and social engagement
70	Randomized controlled trial	1	Loneliness: $\eta_p^2 = 0.18$	12 weeks (1 h biweekly sessions)	Improving quality of life, reducing depression and loneliness using a companion robot in a rest home/hospital setting.	Previous work has found companion robots may reduce loneliness and improve QOL. The aim of this research was to address some of the shortcomings of the previous research with Paro (the companion Roboy) by using a randomized controlled trial, and in a Western country. This study aimed to explore how the psychosocial effects of Paro could be compared with a control group. This was largely exploratory and didn't have a strong theoretical framework
71	Randomized controlled trial	1	Not reported	3 months (once a week)	This paper is a report of a study to explore the effects of psychosocial group nursing intervention on older people's feelings of loneliness, social activity, and psychological well-being.	The theoretical framework of our intervention was based on the Geriatric Rehabilitation Nursing Model, in which the aged person and professional actively work in a close, equal interaction. The results of the interaction depend on the person's commitment to the goals and the professional's commitment to support the person to achieve the goals

TABLE 4 (Continued)

ID	Study design	Control group	Effect size	Intervention length	Aim of intervention	Intervention material
72	Within and between-participants (2 intervention conditions, 1 control)	1	Not reported/calculable	6 weeks of 2x weekly sessions of 20–40 of walking or home-visit conversations	Use home visits to improve subjective health and happiness of subclinically unhappy and unhealthy older adults.	Research has shown that although all sources of social activity are important to the general psychological well-being of older adults, there are also specific effects. For example, although family ties may be crucial to the prevention of loneliness or more serious psychopathology such as suicidal ideation, nonfamily social interactions are more important to older adults' subjective sense of well-being such as happiness, at least in the short term
73	Between-participants	0	Not reported	Approx. 5 months provided on 6-h weekly basis divided into 2–3 sessions (130 h into 42–63 sessions).	The study was carried out with the aim of assessing the impact of three different types of intervention; namely a psychopharmacological treatment alone, the same treatment plus social support carried out by volunteers (SSV), and a third treatment modality also including structured psychotherapy (SP), on improving the QL of elderly cancer patients with symptoms of anxiety and/or depression related to their disease and cancer treatment	Psychopharmacological intervention approach to reduce distress

TABLE 5 Recommendations made by G20 to strengthen social cohesion.

	Intervention directionality	Theoretical approach
Facilitate the constitution and the participation in associations and community work	Top-down	Contact-based
Offer educational programs providing students with the opportunity to engage in community work and association membership	Top-down	Equality- and contact-based
Citizen involvement in the implementation of public goods	Bottom-up	Participation-based
Facilitate the opportunities for citizens' political engagement and improve the institutional reception to bottom-up initiatives	Bottom-up	Participation-based
Comply with a strategy of inclusive growth	Top-down	Equality-based
Improve integration of immigrants in society	Top-down	Contact-based
Improve reciprocal tolerance across different ethnic and social groups	Top-down	Contact-based
Engage in a public dialogue with the media, broadly defined, to discard the diffusion of so-called "fake news"	Top-down	Knowledge- and trust-based
Identify sensitive areas for trust in governments and implement policies to improve consensus	Top-down	Trust-based

approach to community service providers and community members. The design of the study was pre-posttest single group design. Community social capital and service utilisation were significantly increased as a result of the intervention.

5.4.2 | Example 2: Building developmental assets to empower adolescent girls in rural Bangladesh: Evaluation of project Kishoree Kontha (KK) (Scales et al., 2013)

Scales et al. (2013) implemented the KK project to better girls' lives by promoting social competency and support for staying in school. The intervention was based on an intensive after-school peer education program for 6 months (recommendation 2, see Table 5 for all the recommendations made by the G20). Each session lasted for 2 h for 5 or 6 days each week. It can be classified as a program that fits within four of the recommendations made by the G20 (recommendations 1, 2, 3, and 5) and one of the research-led intervention themes (i.e., using leisure and play). Participants were from 460 Bangladeshi villages. Using different learning methods (i.e., role play, games, questioning, lecture, and discussion), educational materials (i.e., life skills, general and reproductive health, nutrition, safe drinking water, sanitation, personal hygiene, safe motherhood, effects of early marriage, child rights, and violence against women, language, and mathematics) were offered while participants were encouraged "to organize and to facilitate community-level events (e.g., sports, social, and cultural programs)." (recommendations 1 and 3). Dance and singing were used as entertainment activities aiming at social networking. Workshops were held not only for participants but for their parents as well. Parents were informed about types of education their girls were going to receive. Peer education was conducted in a designated place in participants' houses. By the end of the program, an action

plan was implemented to incorporate project lessons for each of the participants in their daily lives.

Another focus of the KK project was on the relationship between parents and the girls. Participants discussed with their parents what they learned from the project. The project tailored its intervention material to participants' level of literacy. For example, "Non-literate or semi-literate girls used a self-learning guide or module (with the Bengali alphabet, words, sentences, text and number examples, and examples of simple calculations), and were mentored by another school-going girl" (p. 173).

Key features of this intervention are (1) aiming at increasing various types of capital, (2) tailoring the intervention to participants' needs, (3) using peer educators as an effective way of information delivery, (4) engaging participants' family in the program, (5) using leisure and play as a vehicle to learning and network formation, and (6) incorporating a translation phase where lessons were grounded in participants daily lives. The design of the study was experimental with a control group. The results showed that the developmental assets (i.e., human and social capital) increased in the intervention group with an average effect size.

5.4.3 | Example 3: A dual identity-electronic contact (DIEC) experiment promoting short- and long-term intergroup harmony (White & Abu-Rayya, 2012)

This intervention is one of the few that is explicitly based on clear theory drawing on both the social identity approach (Tajfel & Turner, 1979) and contact theory (Allport, 1954). In this intervention, researchers assessed the effects of both contact theory (outgroup vs. ingroup contact) and dual identity recategorization (ingroup + superordinate [i.e., Muslim/Australian or Christian/Australian] vs. ingroup identity only [i.e., only Muslim or only Christian] on group harmony. In doing so, they adopted the dual identity E-contact [DIEC] framework

TABLE 6 Characteristics of successful interventions.

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
A dual identity-electronic contact (DIEC) experiment promoting short- and long-term intergroup harmony	93.18	Top-down	Improve reciprocal tolerance across different ethnic and social groups
Building Developmental Assets to Empower Adolescent Girls in Rural Bangladesh: Evaluation of Project Kishoree Kontha	90	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Can Development Aid Contribute to Social Cohesion after Civil War? Evidence from a Field Experiment in Post-Conflict Liberia	98.79	Bottom-up	"Community-driven reconstruction" (CDR) programs
Can social capital be intentionally generated? A randomized trial from rural South Africa	90% in the intervention arm and 84% in the comparison arm	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership Comply with a strategy of inclusive growth
Comparing the effectiveness and durability of contact- and skills-based T prejudice reduction approaches	97.97	Top-down	Improve reciprocal tolerance across different ethnic and social groups
Contact-Based School Intervention Program: Enhancing Cooperation Intention and Reducing Prejudice toward Roma	97	Top-down	Improving reciprocal tolerance across different ethnic and social groups
Do community empowerment and enabling state policies work in practice? Insights from a community development intervention in rural Scotland	50	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Effects of a Physical Activity Program Potentiated with ICTs on the Formation and Dissolution of Friendship Networks of Children in a Middle-Income Country	67.93	Top-down	Physical activity (PA) school-based intervention
Effect of health intervention integration within women's self-help groups on collectivization and healthy practices around reproductive, maternal, neonatal, and child health in rural India	73	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Effect of social networks intervention in type 2 diabetes: a partial randomised study	98.57	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership

(Continues)

TABLE 6 (Continued)

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
Effects of the Your Family, Your Neighborhood Intervention on Neighborhood Social Processes	70	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership Improving reciprocal tolerance across different ethnic and social groups
Emotion expression and intergroup bias reduction between Muslims and Christians: Long-term Internet contact	85–93	Top-down	Improving reciprocal tolerance across different ethnic and social groups
Enhancing Health Through Access to Nature: How Effective are Interventions in Woodlands in Deprived Urban Communities? A Quasi-experimental Study in Scotland, UK	Baseline = 73%, Wave 2 = 74%, Wave 3 = 64%	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership Citizen involvement in the implementation of public goods
Health impacts of environmental and social interventions designed to increase deprived communities' access to urban woodlands: a mixed-methods study	70	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
How effective is the health-promoting school approach in building social capital in primary schools?	N/A	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership Improving reciprocal tolerance across different ethnic and social groups
How to increase earthquake and home fire preparedness: the fix-it intervention	78.5	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Implementing a Community-Based, Service Coordination and Delivery Intervention With Urban, Minority Parents	61	Bottom-up	Offer educational programs providing students with the opportunity to engage in community work and association membership Comply with a strategy of inclusive growth
Increases in Network Ties Are Associated With Increased Cohesion Among Intervention Participants	55	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Intergroup contact in computer-mediated communication: The interplay of a stereotype-disconfirming behavior and a lasting group identity on reducing prejudiced perceptions	100	Top-down	Improve reciprocal tolerance across different ethnic and social groups

TABLE 6 (Continued)

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
Leader behaviors, group cohesion, and participation in a walking group program	91–65	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
Reconciling after civil conflict increases social capital but decreases individual well-being	87–93	Top-down	Truth and reconciliation
(42) Reducing prejudice and promoting positive intergroup attitudes among elementary-school children in the context of the Israeli–Palestinian conflict	90.63	Top-down	Improve reciprocal tolerance across different ethnic and social groups
Teaching tolerance or acting tolerant? Evaluating skills- and contact-based prejudice reduction interventions among Palestinian-Israeli and Jewish-Israeli youth	98.01	Top-down	Improve reciprocal tolerance across different ethnic and social groups
Testing the Efficacy of OurSpace, a Brief, Group Dynamics-Based Physical Activity Intervention: A Randomized Controlled Trial	100	Top-down	Improve integration of immigrants in society
The challenges of impact evaluation: Attempting to measure the effectiveness of community-based disaster risk management	N/A	Top-down	Offer educational programs providing students with the opportunity to engage in community work and association membership
"The day after": The organizational consequences of innovation implementation in experimental schools	83–100	Bottom-up	-----
The influence of musical training on acculturation processes in migrant children	100–66	Top-down	The impact of a music program on elementary school-aged migrants' cultural orientation
"We pledge to improve the health of our entire community": Improving health worker motivation and performance in Bihar, India through teamwork, recognition, and nonfinancial incentives	100	Top-down	"Team-Based Goals and Incentives" (TBGI), was to improve the performance of frontline health workers and the coverage, quality, and equity of Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH + A) services they deliver
Promoting social capital to alleviate loneliness and improve health among older people in Spain	68% completed the intervention	Bottom-up (Mix of both—researchers came with ideas and structure but allowed citizens to adapt program)	Facilitate the constitution and the participation in associations and community work Offer educational programs providing students with the opportunity to engage in community work and association membership. 3-Citizen

(Continues)

TABLE 6 (Continued)

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
Health Effects of a Farming Program to Foster Community Social Capital of a Temporary Housing Complex of the 2011 Great East Japan Earthquake	N/A	Bottom-up	involvement in the implementation of public goods Encourage reciprocal tolerance across different social groups facilitating the constitution, retention, and advancement of social relations and social ties
Effect of physical exercise on workplace social capital: cluster randomized controlled trial	18%–76% The relative participation in each cluster (i.e., the percentage of workers randomized relatively to the total number of workers at each department) ranged from 18% to 76%	Top-down	Citizen involvement in the implementation of public goods Facilitate the constitution and the participation in associations and community work Improve workplace social capital using indirect method (workplace exercise groups)
Inducing a Health-Promoting Change Process Within an Organization: The Effectiveness of a Large-Scale Intervention on Social Capital, Openness, and Autonomous Motivation Toward Health	60%	Top-down	Facilitating the constitution, retention, and advancement of social relations and social ties within functional teams at work Develop social capital within the workplace and encourage discussions around health to promote healthy behaviors
In search of links between social capital, mental health, and psychotherapy: a longitudinal study in Rwanda	81%	Top-down	Facilitate the constitution and the participation in associations and community work Offer educational programs providing students with the opportunity to engage in community work and association membership
The effect of cognitive therapy on structural social capital: results from a randomized controlled trial among sexual violence survivors in the Democratic Republic of the Congo	405 women in study. In total, 87% of the women completed at least 1 follow-up assessment and 57% completed both. Does not distinguish bw exp and control group	Top-down	Provide treatment to improve (mental) health which allows one to reintegrate in community (Comply with a strategy of inclusive growth)
Do home-visit programs for mothers with infants reduce parenting stress and increase social capital in Japan?	"Follow-up rate for target population was 37%"	Top-down	Provide education and support on health or community-related issues (Comply with a strategy of inclusive growth)
Building social capital in postconflict communities: evidence from Nicaragua	Follow-up to baseline N/A due to use of systematic random design methodology. Participation for each community given, NOTE, participation here is defined as percentage	Bottom-up	Facilitate the constitution and the participation in associations and community work

TABLE 6 (Continued)

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
<p>Building social capital with women in a socially disadvantaged community</p>	<p>of respondents that have contributed money, goods, materials and/or labor to the group they belong. Pantasma = 48.1% Waslala = 57.1% Cinco Pinos = 56.3%</p> <p>Note: This was a large-scale study in a community in which over 2500 households were contacted both at baseline and follow-up, with about 350 agreeing to complete the survey</p> <p>Fifty-six (17%) of the women responding to the follow-up survey had also completed the baseline survey, and 92 had attended at least one activity organized in conjunction with the Villawood Icebreakers Project</p>	<p>Bottom-up (to a large degree)</p>	<p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Citizen involvement in the implementation of public goods</p> <p>Identify sensitive areas for trust in governments and implement policies to improve consensus</p> <p>Facilitate the opportunities for citizens' political engagement and improve the institutional reception to bottom-up initiatives</p> <p>Facilitate the constitution and the participation in associations and community work</p> <p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Citizen involvement in the implementation of public goods</p> <p>Comply with a strategy of inclusive growth</p>
<p>Intervention against loneliness in a group of elderly women: An impact evaluation</p>	<p>87.5%</p>	<p>Top-down</p>	<p>Facilitating the constitution, retention, and advancement of social relations and social ties</p> <p>Improve reciprocal tolerance across different ethnic and social groups</p> <p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Facilitating the constitution, retention, and advancement of social relations and social ties</p>
<p>Intergenerational interaction, social capital, and health: Results from a randomised controlled trial in Brazil</p>	<p>90%</p>	<p>Top-down</p>	<p>Facilitating the constitution, retention, and advancement of social relations and social ties</p> <p>Improve reciprocal tolerance across different ethnic and social groups</p> <p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Facilitating the constitution, retention, and advancement of social relations and social ties</p>
<p>Social Support intervention after stroke: Results of a randomized trial</p>	<p>89.5% for experimental group</p>	<p>Top-down</p>	<p>Facilitating the constitution, retention, and advancement of social relations and social ties</p> <p>Facilitate the constitution and the participation in associations and community work</p> <p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Citizen involvement in the implementation of public goods</p>
<p>The Baltimore Experience Corps Trial: Enhancing Generativity via Intergenerational Activity Engagement in Later Life</p>	<p>62%</p>	<p>Top-down</p>	<p>Facilitating the constitution, retention, and advancement of social relations and social ties</p> <p>Facilitate the constitution and the participation in associations and community work</p> <p>Offer educational programs providing students with the opportunity to engage in community work and association membership</p> <p>Citizen involvement in the implementation of public goods</p>

(Continues)



TABLE 6 (Continued)

Study title	Participation rates across group/conditions (%)	Research design	Adopted strategies based on the G20 recommendations
The impact of diabetes education and peer support upon weight and glycemic control of elderly persons with noninsulin-dependent diabetes mellitus (NIDDM)	55%	Top-down	Improve reciprocal tolerance across different ethnic and social groups Facilitating the constitution, retention, and advancement of social relations and social ties Offer educational programs providing students with the opportunity to engage in community work and association membership Facilitating the constitution, retention, and advancement of social relations and social ties
Effects of a program to prevent social isolation on loneliness, depression, and subjective well-being of older adults: a randomized trial among older migrants in Japan	95%	Top-down	Improve integration of immigrants in society Improve reciprocal tolerance across different ethnic and social groups Facilitating the constitution, retention, and advancement of social relations and social ties
The psychosocial effects of a companion robot: a randomized controlled trial	85% (3 deaths)	Top-down	Use of technology to build social capital Facilitating constitution, retention, and advancement of social relations and social ties.
Effects of psychosocial group rehabilitation on social functioning, loneliness and well-being of lonely, older people: randomized controlled trial	Not reported, only reported post-intervention that "40% of intervention group continued meetings for one year postintervention"	Top-down	Facilitate the constitution and the participation in associations and community work Offer educational programs providing students with the opportunity to engage in community work and association membership Facilitating constitution, retention, and advancement of social relations and social ties.
Effects of nonprofessional home visit programs for subclinically unhappy and unhealthy older adults	Not reported ("The attrition rate of the sample over time was negligible"—only reference in paper)	Top-down	Provide opportunities for social contact to reduce loneliness

TABLE 7 The number of themes adopted in successful interventions.

	Themes	# of themes adopted in interventions
The G20 recommendations	(1) Facilitate the constitution and the participation in associations and community work	20
	(2) Offer educational programs providing students with the opportunity to engage in community work and association membership	42
	(3) Citizen involvement in the implementation of public goods	9
	(4) Facilitate the opportunities for citizens' political engagement and improve the institutional reception to bottom-up initiatives	1
	(5) Comply with a strategy of inclusive growths	13
	(6) Improve integration of immigrants in society	2
	(7) Improve reciprocal tolerance across different ethnic and social groups	14
	(8) Engage in a public dialogue with the media, broadly defined, to discard the diffusion of so-called "fake news"	0
	(9) Identify sensitive areas for trust in governments and implement policies to improve consensus	0
Relevant well-researched social psychological theories	Social identity theory	6
	Contact theory	10
	Interdependent theory	2
Authors-made themes based on intervention materials	Leisure and play (creating an opportunity for community members to come together in a social event, creating an opportunity for children/students to interact and play with each another)	10
	Creating opportunities for social interactions/support and increasing social ties	16

in which Muslims and Christians had to virtually work together on a task ["saving water to help the Australian environment," p. 599]). This program although conducted within a school can be classified as an example of recommendations 2 and 7 of the G20 report (i.e., 2) providing opportunities for citizens to get involved in the implementation of public goods (saving-water), and (7) improving reciprocal tolerance across social groups (through contact). It is also an example of the research-led theme of creating opportunities for social interactions/supports and increasing social ties.

Religious identity of Muslim and Christian high school students were primed to reach a solution that may lead to a "sustainable future for Australia." (i.e., water-saving, energy-saving, or recycling solution). The intervention lasted for 8 weeks consisted of eight 1-h sessions. First, the importance of water in each religion was emphasised and then in a virtual group of four (with both Muslim and Christian students) they were asked to think of a solution for water-saving in a cooperative manner. The results of the intervention were evaluated at two-time points (i.e., 2 weeks and 6 months after the end of the intervention).

At the outset of the intervention, students were familiarised with the structure of intergroup activities using a 40-page "Harmony Program" manual. After teaching the doctrines of Islam and Christianity, the two first sessions were specified to "getting-to-know-you questions and friendship-building exercises." Two sessions were then designated as "30–45 min of synchronous internet contact

between the cross-religious group members" to focus on water-saving ideas. Each pair were asked to present their poster to the class on the ninth session. All participants were in the same room.

What makes this intervention successful is (1) emphasizing on commonalities among Muslims and Christians, the importance of water in this case for both Muslims (wozoo) and Christians (baptism), (2) creating a cooperative (and not a competitive) environment, (3) and setting a common goal by creating a superordinate identity (Australian) for participants that allows them to also retain their religious identity (dual identity approach). In this way, participants did not see any contradiction between their religious identity and Australian identity.

This field-experimental study "employed a single-cohort longitudinal approach across three-time intervals" (p. 601). Results of the study showed a significant decrease in intergroup bias (e.g., ingroup favoritism) and intergroup anxiety while intergroup knowledge increased significantly. These effects were observed between T1 versus T2 and T1 versus T3. There was also a significant interaction between time and condition. Participants in DIEC (as opposed to the control) condition had less intergroup bias between T1 versus T2 and T1 versus T3. Muslim participants who were in the DIEC condition "reported a greater decrease in intergroup bias than the Muslim Control and the Christian DIEC and Control conditions between" T1 versus T2 and T1 versus T3.

5.4.4 | Example 4: Effects of a program to prevent social isolation on loneliness, depression, and subjective well-being of older adults: A randomized trial among older migrants in Japan (Saito et al., 2012)

The aim of the intervention was “to improve the health and well-being of the elderly participants by preventing social isolation.” (p. 541). This research can be classified as an example of three recommendations made by the G20 (recommendations 1, 5, and 6) and one of the research-led themes, that is, creating opportunities for social interactions/supports and increasing social ties. These researchers first conducted a survey to “get a grasp of their [participants'] needs, demands and preferences.” This means that just like all previous interventions, the intervention was tailored to the needs and demands of potential participants. However, in some cases (e.g., White & Abu-Rayya, 2012) the need evaluation was conducted through a top-down approach and in other cases it was by a bottom-up approach. Later in this paper, we discuss the advantages of the bottom-up approach. After creating groups of elderly migrants educational, cognitive, and social support were offered. The researchers also communicated with relevant city departments to get information on existing community resources and services they can provide to elderly people. They then made connections with community leaders and members to get more information about participants needs. Community leaders who had experience in leading group activities and community members who previously participated in their pilot program were recruited as volunteer supporters. In four 2-h sessions they (a) introduced the content of intervention, (b) discussed about participants' relocation experiences, (c) asked participants of their needs, and (d) arranged a city tour to both show participants public facilities and historical places. They also involved community “gatekeepers” to get their help to “make connections between the study participants and community services.”

The design of the study was a field experiment with a control group. The effect of the intervention was measured at two-time points (i.e., 1 and 6 months after the intervention). The intervention significantly increased social support and familiarity with services. It also significantly decreased perceived loneliness. As a project that involved approximately eight hours of participants time these are noteworthy outcomes. The research also highlights the benefits of a rigorous design where the impact can be assessed and compared to a nonintervention control group.

Example 5: “The day after” The organizational consequences of innovation implementation in experimental schools (Gilad-Hai & Somech, 2016)

This intervention focused on the effects of educational innovation on functioning of the school community. In a 5-year longitudinal study, researchers compared three types of schools, that is, those who implemented the innovation, those who were in the midst of

implementation, and those who did not implement it. In line with West and Farr (1990) they defined innovation as “the intentional introduction and application within a role (work), group or organization of ideas, processes, products or procedures which are new to the relevant unit of adoption, designed to significantly benefit the individual, the group, the organization or wider society” (p. 9). The innovation in this case was a new policy put in place by the ministry of education where it was easier to implement grassroot changes. Therefore, school staff were able to design both its organizational and pedagogical models based on their needs at the time. After receiving the approval from the ministry of education, schools were supported by this ministry of education “through a package of human and economic resources (e.g., advisors, consultations, support, training, funds, etc.).” After completing the intervention, school staff were required to continue applying the new model but with no additional resources from the government. Moreover, it was expected new innovations would be shared to other schools after the experimental stage was completed. For example, one school (i.e., Ramot Chefer) developed a model called “creative dialogue” which aimed at promoting group research drawing on “the constructivist conception of the teaching-learning process” (p. 21). In the constructivist approach teaching is defined as a process of knowledge construction in which students are considered active agents who participate in the process of learning. Another school (i.e., Ein Hayam) developed the “play-learning” model through which games and experiences were developed and incorporated into teaching-learning processes. In this method, the teacher uses games as a tool to teach pupils various concepts.

The interventions are diverse and complex but there are a number of potential reasons for success including (1) the bottom-up approach, (2) receiving the support from the Ministry of education to implement the intended innovation, (3) a school staff-centered approach which makes it more likely for there to be engagement in implementation, and (4) the need-based approach of the intervention.

In summary, these examples and the wider sample in this systematic review from which they are draw highlight some important features of successful interventions. In many cases, an intervention (based on the definition above by West & Farr, 1990, p. 9) offers a new or reimagined context for positive interactions either between members of two groups or within a certain group/community. Those that are willing to invest time and energy in these enterprises can experience benefits that underpin social cohesion including new more diverse social ties/relations, trust, breaking down stereotypes, and more empathy and commonality. Drawing on Putnam's terminology, regardless of the specific aim of an intervention (e.g., promoting health outcomes), creating a platform through which community members can interact with one another may lead to more bonding (within a particular ethnic group) and bridging (across different ethnic groups) social capital.

Regarding the context of interventions, it is important to bear in mind that a given strategy such as “improving reciprocal tolerance across different ethnic and social groups” may be implemented in very different contexts (e.g., postcivil war vs. racial prejudice).

Moreover, the same strategy may be implemented differently in the same context (e.g., lab-based vs. field study). This means that a given strategy may lead to both significant and nonsignificant results depending on the research design rigor (see Table 4).

6 | DISCUSSION

6.1 | Lessons learned

In this section, we examine the characteristics of those interventions that were effective based on robust evaluation techniques. The first factor that enables an assessment of whether an intervention is effective is through reporting acceptable effect sizes was a strong research design (e.g., including a control condition, random assignment, etc.).

Second, most successful interventions adopted either a theory-driven framework or a some combination of actions aligned with the G20 recommendations (see Table 7). Relying on well-established theory for designing an intervention and ensuring that the intervention is appropriately designed and implemented is crucial for its success. The theory-driven interventions have drawn predominantly on the extensively and empirically supported contact theory (Banas et al., 2020; Paolini et al., 2021; Paluck et al., 2019; Paluck & Green, 2009; Putnam et al., 2004), and social capital theory (Putnam, 2000).

Third, as we showcased with five examples most top-down interventions took an equality-based approach, meaning that researchers tailored their interventions to close the inequality gap within and among communities. Community needs were determined either through within-community assessment or third-party researcher assessments. A key differentiating factor appears to be whether an external party is designing interventions to “do-to” or “do-with” the community.

Fourth, people's engagement/identification with the intervention is another aspect that is common among interventions that produced significant results and large effect sizes (peer-to-peer education and recruiting community members as liaisons as indicated in our examples). There are two forms of such engagement; (a) community members engagement in defining the most important problem they grapple with in their community and (b) engaging in offering a solution to it.

Fifth, it seems that both bottom-up and top-down approaches have the capacity to increase social cohesion. In the context of intergroup conflict adopting a top-down approach may be most successful. This approach can be identified when the community members play a minimal role in designing and implementing the intervention. In many cases, it could well be that researchers and policymakers can bring insights from relevant theory and previous experience that are outside of the scope of community members' expertise. Ideally such knowledge can be shared in ways that enable community members to incorporate such learnings in their own problem definition and solution generation. The ASPIRE framework is

one such model where individuals' and subgroup members' perspectives and interests serve as a bottom-up resource to form mutual understanding and common aspirations and goals (Haslam et al., 2003; see also Cvitanovic et al., 2020)

It is important to reiterate that a given approach to strengthen social cohesion can be successful in one context and unsuccessful in another. For example, interventions such as opportunities in schools for students to engage in community work to strengthen social cohesion have been successful in some studies (see Table 6) while the same approaches did not produce significant results in other research (Shen et al., 2017). This speaks to the validity of several distinctions we made regarding the quality of studies. The rigor of the study (e.g., including a control condition, controlling for extraneous variables, etc.) helps identify the specific aspect of an intervention (i.e., independent variable) that strengthens social cohesion, not other extraneous variables. Moreover, we made a distinction between the content of an intervention and the process through which the intervention is implemented. Despite choosing a well-founded approach to strengthen social cohesion, we might not obtain significant results due to improper execution of the implementation (i.e., fidelity). The broader context in which the research takes place also matters. Community-based social cohesion interventions even if successful may not be able to buffer social conflict and political polarization leveraged by political leadership and contestation vying for support (Reynolds et al., 2015; White et al., 2021).

It is clear that the process of implementation of an intervention through addressing direct needs and codesign, can serve to motivate engagement and participation but it remains unclear how to reach those who are less interested. For some of these reasons, school-based interventions could be efficient because they are universal. Attempts by leadership at crafting a shared sense of group identity defined by respect and inclusion could have wide benefits amongst those unlikely to voluntarily access a specific intervention. Leadership plays a direct role in social influence and shaping the way members understand themselves as group members but there is limited research to date.

All in all, based on the results of our systematic review and examples we provided above, the likelihood of successful implementation of interventions designed to improve social cohesion is augmented by the following factors: adopting a well-established theory as a foundation of the intervention, implementing an experimental design, whether in the laboratory or in the field, with a control condition, engaging members of the target community in the process of implementation, involving community members both in identifying the most urgent issue(s) need to be addressed in the community and implementing the intervention (i.e., codesigning the intervention), ensuring that the content of the intervention is closely connected to the adopted theory, using the current strengths of the community to overcome the issues at hand, designing an implementation with which community members could identify, and finally, adopting well-established measure of social cohesion.

6.2 | Shortcomings and new directions for research

Broadly speaking, we can make a distinction between research issues and practical issues. Research issues concern the research design, theories adopted in interventions while practical issues concern with ways in which we can/should implement the intervention. We separately discuss shortcomings of each of these areas.

6.3 | Research issues

Even in cases in which the research had drawn on well-established theories, there are a number of issues that prevent a direct impact on relevant policy. In an extensive review of contact theory, for example, Paluck et al. (2019) listed a series of issues with existing research, some of which can be found also in the social cohesion domain. Most research does not report sufficient detail of implemented interventions to allow other researchers to evaluate and replicate the intervention. A problem compounded by the replication crisis in the psychological sciences (Chambers, 2017). Moreover, the quality of evidence-based investigations is highly variable. Across this field there are examples where sample sizes are too low, the duration of the intervention is inconsistent. Also, there are studies that did not use randomization while others did not include a control condition in their design, operationalized and measured the key constructs including social cohesion differently. This situation leaves researchers, policy experts within government, and community leaders at a loss as to what exactly can be done to strengthen social cohesion.

Considering the fact that there are a high number of extraneous variables in large-scale interventions, it is integral to ensure that the effect observed in intervention programs is a result of the intervention-based manipulation. A major concern here is that by manipulating even one variable in an intervention, a cascade of variables may be changed which in turn may obscure the process through which social cohesion is strengthened. This situation is problematic because the underpinning process through which social cohesion is improved remains opaque. By including a control condition, it is possible to be more certain that the implemented intervention is responsible for the increased cohesion and not something else such as time or any other common variables between the experimental and the control condition. Reporting the effect size is specifically helpful to policy makers since it allows them to see the magnitude of the effect each specific intervention produces. It is unlikely to be worthwhile spending precious resources to implement an intervention that does not have a justifiably strong effect on social cohesion. Producing a significant result is not enough to justify the implementation of an intervention if the effect on social cohesion is small. Policymakers should weight the cost of an intervention against its effect and decide whether it is worth implementing or not.

Additionally, in the field of social cohesion there is also confusion about the antecedents, components, and consequences of social cohesion (Chan et al., 2006). In some studies, antecedents of social cohesion (e.g., education and equal access to social services) have

been manipulated or subjected to a certain intervention while others have manipulated a specific component of social cohesion itself (e.g., social relations). As a result, it is difficult to compare the effectiveness of different strategies. As noted earlier even the recommendations for the G20 report do not systematically identify that certain recommendations relate to interventions (Recommendation 3 offering educational programs providing students with the opportunity to engage in community work and association membership) while others are in fact desired outcomes (Recommendation 7 improving reciprocal tolerance across social groups).

6.4 | Practical issues

There is a tension between top-down and bottom-up approaches and the degree to which the former disregards the agency of community members, which may in turn limit the impact of the intervention. The process utilised in bottom-up and codesign approaches, as indicated in some of the examples we detailed above, are capable of bringing about wider benefits both to community members and social and political institutions. It is through bottom-up approaches that people feel that they matter, that they can add value to the community in which they live, and that they feel valued and heard by the social and political institutions (Haslam et al., 2003; Tyler & Blader, 2003). This may also lead to more trust in political and social institutions.

Moreover, the level of intervention (i.e., policy level, community level, organizational level, interpersonal level, intrapersonal level, and intergroup level) and the match between the context in which an intervention is implemented (e.g., schools, war-torn cities, poverty-stricken communities, etc.) and the type of intervention itself have been overlooked (Schölmerich & Kawachi, 2016). Drawing on Schölmerich and Kawachi (2016) we argue that multilevel interventions and interventions that bring about structural changes (e.g., community service providers, ministry of education policies) within the nation/community/group/family may be more efficacious than single-level and interpersonal interventions. Considering the population turnover in multicultural countries, it is more feasible, at least in long term, to implement structural rather than interpersonal interventions to strengthen social cohesion. In addition the specific features of the broader social or political environment—the social context—is not itself a subject of investigation which means it is not clear which kind of intervention to strengthen social cohesion might be more effective given these broader environmental considerations. For example, strengthening social cohesion in schools, communities hit by a natural disaster, or communities who have been victimized during a civil conflict may or may not demand different strategies.

The current systematic review sheds some lights on, and points to, some theories, directions, strategies, and interventions that are more likely to lead to strengthened social cohesion. However, it also reveals significant gaps with both the theoretical and research methods and the limited evidence base. More interdisciplinary research on social cohesion, especially with a focus on well-established social psychological theories is needed. Despite the importance of social cohesion for the

prosperity of individuals and communities and functioning political systems, the underlying scaffolding provided by academic research to support communities to strengthen it is missing. We hope this systematic review could inspire more integrative and interdisciplinary work on social cohesion going forward.

7 | CONCLUSION

We conducted a systematic review to examine the strengths and shortcomings of research on the effects of various interventions on social cohesion. Analysing 73 studies that met our inclusion criteria, we found that even though there are interventions that successfully strengthened social cohesion, there are a lot of areas in need of improvement. Integrating social psychological theories (e.g., social identity and self-categorizing theories, leadership, norms, and contact theory) into the current literature is a major but necessary task which should lead to significant advance. Moreover, future research should focus more on developing larger scale and rigorous research designs including, but not limited to, reporting the effect size, using bottom-up rather than top-down approach, including control conditions in the research design, planning and ensuring a large enough sample of participants, implementing multi-level interventions, and further agreement on what constitutes social cohesion and how we should measure it. Finally, there should be a greater focus on structural and leadership changes that lead to more cohesive societies rather than exclusively focusing on the manipulation or changing residents of communities or schools. A challenge is developing and showcasing how leadership can serve to nurture and represent a new sense of “us” that is diverse, inclusive and respectful.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

ETHICS STATEMENT

All studies conducted in the current article have been approved by the Human Research Ethics Committee of Australian National University.

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SUPPORTING INFORMATION

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