Sense of Community and Community Participation: A Meta-Analytic Review

Cosimo Talò · Terri Mannarini · Alessia Rochira

Accepted: 13 May 2013/Published online: 21 May 2013 © Springer Science+Business Media Dordrecht 2013

Abstract Many studies indicate that participation and sense of community (SoC) are associated factors enhancing community development. However, research has almost completely ignored the magnitude of the association between the two and the stability of this relationship across contexts, populations and different forms of community participation. A meta-analysis was conducted to assess the following: (a) the strength and stability of the SoC-participation relationship; (b) variations in this relationship associated with different forms of participation (i.e., civic and political); and (c) the influence of population characteristics on the SoC-participation relationship. The results showed that the SoC-participation relationship is significant, positive and moderately strong for forms of participation in the adult population and specific cultural contexts. Implications for theory and applications are discussed.

Keywords Sense of community · Participation · Meta-analysis

1 Introduction

Community participation and sense of community (SoC) are both concerned with community member engagement and active involvement in issues that affect people's lives and impact the larger community. In particular, the role of community participation in promoting local development, social justice and population health has been acknowledged in multiple areas of research, such as community development, community psychology and policy analysis. Research has specifically noted that community participation increases quality of life (Nussbaum 1999), enhances social wellbeing (Keyes 1998; Wandersman and Florin 2000), fosters social empowerment (Zimmerman and Rappaport 1988; Chavis and Wandersman 1990) and reinforces social capital (Putnam 2000; Wollabæk and Selle 2003).

C. Talò (⋈) · T. Mannarini · A. Rochira

Department of History, Society and Human Studies, University of Salento, via Stampacchia 45,

73100 Lecce, Italy

e-mail: cosimo.talo@unisalento.it



Nearly identical outcomes are associated with sense of community (SoC). Chavis and Wandersman (1990) posited that SoC can be defined as a "catalyst" for participation and community development, and research has effectively confirmed that SoC is associated with a variety of community engagement behaviors, either civic forms of community participation (Brodsky et al. 1999; Chavis and Wandersman 1990; Florin and Wandersman 1984) or conventional and non-conventional forms of political participation (Anderson 2009; Davidson and Cotter 1986; Xu et al. 2010). Hence, both community participation and SoC stand out as interrelated key factors that promote community development or actualize the capacity of communities to activate their internal human resources, solve problems and promote social empowerment.

2 Sense of Community

The literature generally agrees that SoC signifies a healthy community and exhibits an extra-individual quality of emotional interconnectedness observed in collective lives (e.g., Bess et al. 2002). In 1974, Sarason first introduced the concept of a psychological sense of community that primarily agrees with the four-dimensional model conceptualized by McMillan and Chavis (1986). This model identifies four components as crucial for the formation and development of SoC. Membership corresponds to the feeling of being part of a community; this aspect embraces the perception of shared boundaries, common history, symbols, sense of emotional safety, and personal investment in community life. *Influence* encompasses the individual perception of mutual influence, not only providing opportunities for individuals to participate in community life, make their own contributions, and perceive their impacts on the collective decisions and actions of the community but also heightening individual awareness that personal choices and decisions are affected by the community itself. Fulfillment of needs represents the benefits that people derive from their community membership and refers to the positive relationship between individuals and their communities to the extent that the community helps its members meet their personal and group needs. Finally, shared emotional connection unveils the sharing of common repertoires, such as history and significant events, and strengthens the quality of social ties.

The four-dimensional model proposed by McMillan and Chavis is the datum point for the majority of scholars interested in the investigation of SoC; the original SoC definition has been expanded to meet the specificities of the populations under scrutiny, such as adolescents (Cicognani et al. 2006) and people with mental illness (Townley and Kloss 2009), and to capture the attributes of various types of community, namely virtual communities (Blanchard 2008; Tonteri et al. 2011), schools (Vieno et al. 2005, 2007) community organizations (Hughey et al. 1999), and above all, territorial communities of different sizes (Prezza et al. 2001). However, regardless of the specific type of community considered, most scholars agree that SoC positively affects both the individual and the community (Long and Perkins 2007). Various authors have noted that SoC contributes to increases in the quality of life and enhances well-being and life satisfaction (Farrell et al. 2004; Prezza and Constantini 1998). Furthermore, studies investigating the effects of SoC across various contexts have highlighted positive associations with empowerment within organizational settings (Hughey et al. 2008), social cohesion (Wilkinson 2007), place attachment (Long and Perkins 2007) and sense of safety (Zani et al. 2001) within territorial settings.

The increasing investigation and progressive adaptation of SoC and its measurement across settings has led some authors to challenge the transferability of SoC, arguing that it



is a context-dependent construct (Hughey et al. 1999). At least two primary interconnected arguments can be expanded. Research on the conceptualization of SoC emphasizes the presence and operation of multiple senses of community (Brodsky and Marx 2001) derived from the increased complexity of individual community memberships, identities and roles. The emphasis on the multiplicity of SoC has partially shifted the focus to the examination of the relationship between sense of community, identification processes and community salience (Obst et al. 2002). Scholars have contended that the relationship between SoC and other constructs can vary across community types, as Prezza and Constantini (1998) argued with reference to the relationship between SoC and personal well-being for adolescents in a territorial community. A second significant debate considers the measurement of SoC (see Nowell and Boyd 2010 for a critical review). Several measures have been derived from the McMillan and Chavis (1986) conceptual model and adapted to assess SoC in specific community settings. The Sense of Community Index (SCI; Perkins et al. 1990) is the most popular instrument for the general measurement of SoC, regardless of the type of community investigated. Several studies have assessed the psychometric properties of such a scale (see Chipuer and Pretty 1999 for a critical review) and primarily attested to its stability across settings. Nevertheless, research has proven that the SCI fits different multidimensional structures and does not always correspond to the McMillan and Chavis (1986) four-dimensional model. Alternative solutions include the three-factor structure suggested by Long and Perkins (2003), which has been criticized for its lack of a strong theoretical grounding. The low reliability of the scale (Chavis and Pretty 1999) and its partial overlap with other constructs, such as group identification (Mannarini et al. 2012), motivate the search for additional, more adequate tools. This line of reasoning has motivated many researchers to improve the empirical measurement of SoC. New scales have been proposed to overcome the construct context-dependency and the limitations of existing measurements; these new scales include the Brief Sense of Community Scale (BSCS; Peterson et al. 2008b), the Multidimensional Territorial Sense of Community Scale (MTSOCS; Prezza et al. 2009), the Italian Sense of Community Scale (Tartaglia 2006), and a 10-item modified version of the SCI (see e.g., Obst et al. 2002; Prezza et al. 2009) with an alternative method of measurement (Brodsky 1996; Puddifoot 2003).

3 Community Participation

Different disciplines (e.g., Political Science, Social Sciences, and Community Psychology) utilize many definitions of political and social participation. Social (civic or citizen) participation has been defined as "a process in which individuals take part in decision making in the institutions, programs, and environments that affect them" (Heller et al. 1984, p. 339). Although students of comparative politics do not agree on the definition (see Conge 1988 for a review), political participation is generally referred to as an interest in political life; such interest can take many forms and can result in either indirect involvement or direct political action (Rollero et al. 2009). The most notable form is voting in elections, but political participation also includes joining a political party, running as an electoral candidate, joining a non-governmental advocacy group, or participating in a demonstration. Several classifications have been proposed by sociologists and political scientists (Almond and Verba 1963; Marsh and Kaase 1979), who have contended that political participation consists of at least two dimensions, i.e., latent participation, which includes the psychological involvement of citizens in politics (e.g., keeping abreast of political issues, discussing issues or engaging in the search for information), and manifest



participation, which includes behaviors that foster direct contact with political representatives, such as holding a political office or managing political propaganda.

Ekman and Amnå (2009) recently proposed a typology of three main categories of participation in an individual or collective form; political participation, civil participation (or latent participation) and *non-participation* (or disengagement). Each of the three categories includes two subtypes. Political participation is either formal political participation (e.g., being a member of a political organization, voting, or running for public office) or activism, also labeled extra-parliamentary political participation (e.g., signing petitions, boycotting, or demonstrating), which may be legal, as in the examples mentioned above, or illegal (e.g., civil disobedience, sabotage, or violent demonstrations). Civil participation includes social involvement (e.g., showing interest in politics and society, identifying oneself with an ideology, or adopting an engaged lifestyle) and civic engagement (e.g., recycling, reading newspapers, or volunteering in community services and community organizations). Finally, non-participation comprises active or anti-political forms (e.g., non-voting or non-political lifestyles) and passive or apolitical habits (e.g., political passivity or non-reflected non-political lifestyles). Whereas no previously mentioned typologies distinguish between stable and transient participatory behaviors, social movement theorists such as Walgrave and Klandermans (2010) claimed that this distinction draws a crucial boundary between "participation", a pool of nearly stable and repeated patterns of behaviors across contexts and time, and "mobilization", a transient set of behaviors tied to a specific situation (e.g., elections, strikes or protest movements). To gauge the different forms of participation/mobilization, the majority of the empirical studies have used ad hoc scales that list behaviors. Respondents are normally invited to assess the frequency of each of the listed behaviors in a past period of time. Many of these behaviors recur across a large number of studies, yet no validated reference scale exists.

4 SoC and Community Participation: Moderators and Mediators

Studies on the relationship between SoC and community participation have analyzed many variables as covariates, moderators or mediators. Socio-demographic variables, such as income, education (Hayghe 1991; Verba et al. 1995), length of residence (Schiff 1990; Verba et al. 1995) and age often serve as variables that reinforce the association between SoC and participation. Some studies have stated that the role of age may be curvilinear (Pillemer and Glasgow 2000), suggesting that the relationship between SoC and participation would be weak for young and elderly people and strong for adults. Nonetheless, the effect of age cohorts would vary according to the form of participation in which individuals are engaged (Putnam 2000). Findings on gender are controversial; some research highlighted differences between men and women (Chambre 1984), while other studies showed no difference (Fischer et al. 1991). In addition to socio-demographics, some authors have considered context variables such as neighborhoods and churches (Huckfeldt and Sprague 1995) and workplaces (Mondak and Mutz 2001, 2002; Mutz and Mondak 2006) as moderators of the SoC-participation relationship. Scholars have also considered psychosocial variables, such as social control (Rollero et al. 2009), social ties (Liu and Besser 2003), well-being (Itzhaky and York 2000), empowerment (Peterson et al. 2008b) and community capacity (Bowen et al. 2001). Research on SoC and political behavior has focused on the interplay between SoC, political efficacy and trust in institutions. Anderson (2010) demonstrated that social forces, such as community, exert positive and significant effects on internal and external political efficacy and personal trust in political institutions,



regardless of income, age, gender, and education. Moreover, this author emphasized that SoC increases participatory behaviors; this effect is mediated by political efficacy and trust in politics. The cited study supports the notion that SoC, community participation and political efficacy are interconnected and suggests that "the prevalence and density of kinship, friendship, and acquaintanceship networks and the level of participation in community-based organizations fosters the emergence of collective efficacy, or solidarity and mutual trust (social cohesion) among community residents combined with shared expectations for social control-related action" (Browning et al. 2004, pp. 506–507).

5 Study Goals

Despite evidence attesting to the association between SoC and community participation, the strength of this relationship is still unknown, and the direction of such a relationship is not obvious. The majority of the empirical studies have considered participation as a dependent variable, but theoretical approaches have assumed the existence of a circular relationship between these two variables: SoC enhances active citizen participation, which in turn reinforces SoC. Moreover, studies that have analyzed the association between SoC and participation have utilized diverse types of participatory behaviors to consider differences in commitment, duration and organizational features (i.e., ranging from long-term engagement in neighborhood associations to short-term campaigning or voting). Large variability exists in the measures utilized. This heterogeneity does not help to establish whether the association between SoC and participation is constant across a wide range of participatory behaviors (including mobilization behaviors), contexts and populations or conclude whether SoC plays a role in community competency and responsibility. Based on this summary, the goal of the current study was the utilization of a systematic review to test the stability and strength of the relationship between SoC and participation, specifically the association of SoC with civic and political participation. The review additionally intended to verify whether this relationship was influenced by specific characteristics of the populations under scrutiny, such as nationality, age and gender. Questions raised include the strength and stability of the SoC-participation relationship, variations in the relationships according to different forms of participation, and the influences of age, gender and nationality on the SoC-participation relationship. These questions were addressed with a meta-analysis of studies published in leading international journals in the fields of psychology, sociology, political and social sciences.

6 Method

6.1 Selection of Studies

"Sense of community" and "participation" were entered as multiple queries utilizing the keywords, descriptors, and terms included in the subject and the abstract. The following databases were probed: EBSCO, PsycINFO, PsycARTICLES, Scopus, Web of Knowledge, Social Services Abstracts, Sociological Abstracts and Worldwide Political Science Abstracts (see Table 1). The search included peer-reviewed journals in all databases and peer-reviewed journals and conference papers in Scopus. This procedure resulted in a list of 742 publications, 483 of which were excluded as duplicates. The abstracts of the remaining 259 publications were examined by three independent judges, all of whom



agreed to exclude 153 records that reported qualitative studies or did not include measures of SoC and participation. As a result, a list of 106 publications from 1980 to 2012 was obtained (Table 2). A full-text examination of the 106 publications led to the further exclusion of 81 items (68 did not report measures of SoC and participation; two utilized inaccurate measures for participation; 12 did not report the data required to calculate the effect size; and one reported the same data as a previous study by the same author), resulting in a final list of 23 publications.

Only SoC that applied to territorial communities was considered. Publications that focused on organizational (No. 67) or virtual (No. 88, 105) SoC were excluded. Studies that considered forms of participation that were neither civic nor political, such as participation in college programs (No. 30, 31, 91), web-related activities (No. 47, 88), recycling interventions (No. 48) or drug prevention programs (No. 65) were additionally excluded.

The flow diagram in Fig. 1 shows the described process.

6.2 Data Extraction

The effect size was calculated with the Comprehensive Meta-Analysis® software (CMA version 2; Borenstein et al. 2000). The following information was extracted from each study reported in the selected publications: (a) year of publication, (b) nationality of the sample, (c) data utilized to calculate the effect size (correlation coefficients or group means), (d) type of participation (i.e., civic, political or general, when the scale measures included both forms), (e) SoC measures utilized, (f) participation measures utilized, (g) sample size, (h) percentage of women in the sample, (i) population from which the

Table 1 Databases, queries and publications retrieved

Database	Query	N publications
EBSCO	AB (sense of community) AND AB (participation)	42
	SU (sense of community) AND SU (participation)	0
PsycINFO	KW (sense of community) AND KW (participation)	124
	DE (sense of community) AND DE (participation)	0
	AB (sense of community) AND AB (participation)	109
PsycARTICLES	KW (sense of community) AND KW (participation)	3
	DE (sense of community) AND DE (participation)	0
	AB (sense of community) AND AB (participation)	3
Scopus	KW (sense of community) AND KW (participation)	37
	AB (sense of community) AND AB (participation)	167
Web of knowledge	DE (sense of community) AND DE (participation)	185
Social services abstracts Sociological abstracts Worldwide political science abstracts	KW (sense of community) AND KW (participation)	72
	Total	742

AB abstract, SU subject terms, KW keywords, DE descriptors



Table 2 Meta-analysis eligible publications

No.	No. Author	Title	Full text	Included	Reasons for exclusion	N study
1	Abfalter et al. (2012)	Sense of virtual community: a follow up on its measurement	Yes	No	NM	
2	Ahern et al. (1996)	The importance of sense of community on people's perceptions of their health-care experiences	Yes	No	NM	
3	Ahern and Hendryx (1998)	Community characteristics as predictors of perceived HMO quality	Yes	No	NM	
4	Ahn et al. (2011)	Correlates of volunteering among aging texans: the roles of health indicators, spirituality, and social engagement	Yes	No	NM	
2	Albanesi et al. (2007)	Sense of community, civic engagement and social well-being in Italian adolescents	Yes	Yes	ı	2
9	Altman et al. (1998)	Psychosocial factors associated with youth involvement in community activities promoting heart health	Yes	Yes	I	-
7	Anderson (2009)	Beyond membership: a sense of community and political behavior	Yes	Yes	1	1
8	Anderson (2010)	Community psychology, political efficacy, and trust	Yes	No	SD	
6	Aref (2011)	Sense of community and participation for tourism development	Yes	Yes	ı	1
10	Barati et al. (2012)	Sense of community and citizen participation in neighborhood council in Iran	Yes	No	ND	
11	Bin et al. (2009)	Social capital development of ICT-driven communities in Malaysia	No	ı	ı	
12	Blanchard (2006)	Listserv implementation and sense of community: the relationships with increased knowledge and face-to-face interaction	Yes	Yes	I	-
13	Blanchard (2008)	Testing a model of sense of virtual community	Yes	No	NM	
14	Bowen et al. (2001)	Civic engagement and sense of community in the military	Yes	Yes	ı	1
15	Brayley and Obst (2010)	The Australian Grey Nomads—are they who we think they are? Enhancing formative research through the quantitative assessment of psychological constructs	Yes	No	NM	
16	Breunig et al. (2010)	The impact of outdoor pursuits on college students' perceived sense of community	Yes	No	NM	
17	Brewe et al. (2012)	Investigating student communities with network analysis of interactions in a physics learning center	Yes	No	NM	
18	Brown et al. (2012)	Factors that influence monitoring and resource provision among nonprofit board members	Yes	No	NM	



Tab	Table 2 continued					
No.	No. Author	Title	Full text	Included	Reasons for exclusion	N study
19	Busza and Baker (2004)	Protection and participation: an interactive programme introducing the female condom to migrant sex workers in Cambodia	Yes	No	NM	
20	Case (2011)	A gendered perspective on student involvement in collegiate clubs and organizations in christian higher education	Yes	No	NM	
21	Cassel (1999)	Voluntary associations, churches, and social participation theories of turnout	Yes	No	NM	
22	Catano et al. (1993)	Sense of community and union participation	Yes	No	NM	
23	Chang 2010	Community cohesion after a natural disaster: Insights from a Carlisle flood	Yes	Yes	ı	1
24	Chavis and Wandersman (1990)	Sense of community in the urban environment: a catalyst for participation and community development	Yes	Yes	I	1
25	Cicognani et al. (2012)	Gender differences in youths' political engagement and participation. The role of parents and of adolescents' social and civic participation	Yes	Yes	I	2
26	Cicognani et al. (2008)	Social participation, sense of community and social well being: a study on American, Italian and Iranian University students	Yes	Yes	I	3
27	Collins and Kearns (2010)	Walking school buses in the Auckland region: a longitudinal assessment	Yes	No	NM	
28	Daugherty et al. (2005)	Organizational virtual communities: exploring motivations behind online panel participation	Yes	No	NM	
29	Davidson and Cotter (1986)	Sense of community and political participation	Yes	No	N	
30	DeNeui (2003)	An investigation of first-year college students' psychological sense of community on campus	Yes	No	NM	
31	Elkins et al. (2011)	Students' perceived sense of campus community: the influence of out-of-class experiences	Yes	No	NM	
32	Ferrari et al. (2007)	Eldercare volunteers and employees: predicting caregiver experiences from service motives and sense of community	Yes	No	N	
33	Holland (2004)	Diversity and connections in community gardens: a contribution to local sustainability	Yes	No	NM	
34	Hombrados-Mendieta et al. (2009)	The impact of immigrants on the sense of community	Yes	No	ND	
35	Hsieh (2008)	a concept analysis of social capital within a health context	Yes	No	NM	



Table 2 continued

No.	Author	Title	Full text	Included	Reasons for exclusion	N study
36	Hughey et al. (2008)	Empowerment and sense of community: clarifying their relationship in community organizations	Yes	No	NM	
37	Hughey et al. (1999)	Sense of community in community organizations: structure and evidence of validity	Yes	Yes	1	3
38	Hutcheson and Prather (1988)	Community mobilization and participation in the zoning process	Yes	No	NM	
39	Itzhaky (1995)	Can social work intervention increase organizational effectiveness?	Yes	No	NM	
40	Itzhaky (2003)	Developing empowerment and leadership: the case of immigrant women in Israel	Yes	Yes	1	1
41	Itzhaky and York (2000)	Sociopolitical control and empowerment: an extended replication	Yes	Yes	I	2
42	Jacob (1996)	The North American back-to-the-land movement	Yes	No	NM	
43	Jacobs et al. (2005)	Political participation and associational life of Turkish residents in the capital of Europe	Yes	No	NM	
4	Jorgensen et al. (2010)	Income, sense of community and subjective well-being: combining economic and psychological variables	Yes	No	ND	
45	Julian et al. (1997)	Citizen participation—lessons from a local united way planning process	Yes	No	NM	
46	Kingston et al. (1999)	Sense of community in neighborhoods as a multi-level construct	Yes	No	N Q	
47	Kruger et al. (2001)	Sense of community among school psychologists on an internet site	Yes	No	NM	
48	Kurz et al. (2007)	Attitudinal and community influences on participation in new curbside recycling initiatives in Northern Ireland	Yes	No	NM	
49	Lee and Brudney (2009)	Rational volunteering: a benefit-cost approach	Yes	No	NM	
50	Lengkeek and Bargeman (1997)	Voluntary associations and leisure: at the core of social change	Yes	No	NM	
51	Levine (1989)	Working it out: a community re-creation approach to crime prevention	Yes	No	NM	
52	Li (2011)	How virtual brand community influences on consumer-based brand equity	Yes	No	NM	
53	Liu and Besser (2003)	Social capital and participation in community improvement activities by elderly residents in small towns and rural communities	Yes	Yes	1	1



· .	Table 2 continued					
n .	No. Author	Title	Full	Included	Reasons	Ν
			text		for	

14 Long and Perkins Community social and place predictors of sense of community: a multilevel and longitudinal Yes analysis analysis analysis (2007) 25 Mannarini et al. (2010) 26 McMillan et al. (1995) 27 Empowement praxis in community coalitions 28 Obst et al. (2002) 29 Ohmer (2010) 29 Ohmer (2010) 20 Ohmer (2003) 21 Pederson and Reid 22 Park and Smith (2000) 23 Park and Smith (2000) 24 Parker et al. (2001) 25 Peterson and Reid 26 Peterson et al. (2008) 27 Peterson and Reid 28 Peterson et al. (2008) 29 Peterson et al. (2008) 20 Peterson et al. (2008)	No.	No. Author	Title	Full	Included	Reasons for exclusion	N study
Mamnarini et al. (2010) Public involvement: how to encourage citizen participation Mesch and Talmud Mesch and Talmud Mesch and Talmud An exploration of sense of community participation, and place attachment: a longitudinal study (2010) Obst et al. (2002) An exploration of sense of community, part 3: dimensions and predictors of psychological Sense of community in geographical communities Ohmer (2010) Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their Yes involvement and perceived benefits from participation Pagani and Mirabello The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given: religious capital and community social dynamics: results of a Yes churchgoing protestants Paterson and Reid Citizen participation in substance abuse prevention activities Peterson et al. (2008) Peterson et al. (2008) Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	54	Long and Perkins (2007)	Community social and place predictors of sense of community: a multilevel and longitudinal analysis	Yes	No	ND	
Mesch and Talmud Obst et al. (2002) An exploration of sense of community, part 3: dimensions and predictors of psychological Sense of community in geographical communities: the ecological Perspective and theories on self- and collective efficacy and sense of community Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given': religious capital and community social dynamics: results of a Yes churchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of the factor structure debate Peterson and Reid Community survey Peterson and Reid Community sense of community: a methodological interpretation of the factor structure debate Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Sense sense of community	55	Mannarini et al. (2010)	Public involvement: how to encourage citizen participation	Yes	No	NM	
Mesch and Talmud (2010) Obst et al. (2002) An exploration of sense of community, part 3: dimensions and predictors of psychological sense of community, part 3: dimensions and predictors of psychological research inform citizen participation in poor communities: the ecological perspective and theories on self- and collective efficacy and sense of community Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of their neighborhood organization and their relationship between members' perceptions of community voluntarism among relationship processants Parker et al. (2001) Parker et al. (2001) Disentangling measures of individual perceptions of community survey Peterson and Reid community survey Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate resumement Peterson et al. (2008a) Validation of A Brief Sense of Community: further development in theory of resumenting sense of community	99	McMillan et al. (1995)	Empowerment praxis in community coalitions	Yes	No	NM	
Obst et al. (2002) An exploration of sense of community, part 3: dimensions and predictors of psychological Sense of community in geographical communities Ohmer (2010) How theory and research inform citizen participation in poor community Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- and collective efficacy and sense of community Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their re- involvement and perceived benefits from participation in neighborhood organization and their re- involvement and perceived benefits from participation Pagani and Mirabello The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given: religious capital and community voluntarism among churchgoing protestants Parker et al. (2001) To whom much has been given: religious capital and community social dynamics: results of a community survey Peterson and Reid Disentangling measures of individual perceptions of community: sense of community and citizen participation in substance abuse prevention activities Peterson et al. (2008) Measuring sense of community: further development in theory and measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	57	Mesch and Talmud (2010)	Internet connectivity, community participation, and place attachment: a longitudinal study	Yes	No	N	
Ohmer (2010) How theory and research inform citizen participation in poor community. Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- Yes and collective efficacy and sense of community. Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their Yes involvement and perceived benefits from participation and their Yes involvement and perceived benefits from participation. The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given': religious capital and community voluntarism among rehurchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of community survey Peterson and Reid Community survey Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate Yes neasurement Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	28	Obst et al. (2002)	An exploration of sense of community, part 3: dimensions and predictors of psychological sense of community in geographical communities	Yes	N _o	NM	
Ohmer (2007) Citizen participation in neighborhood organizations and its relationship to volunteers' self- Yes and collective efficacy and sense of community Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their Yes involvement and perceived benefits from participation Pagani and Mirabello The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given': religious capital and community voluntarism among churchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of community survey Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and citizen participation in substance abuse prevention activities Peterson et al. (2008) Measuring sense of community Scale: confirmation of the factor structure debate Yes measurement Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	59	Ohmer (2010)	How theory and research inform citizen participation in poor communities: the ecological perspective and theories on self- and collective efficacy and sense of community	Yes	No	NM	
Ohmer (2008) The relationship between members' perceptions of their neighborhood organization and their Yes involvement and perceived benefits from participation Pagani and Mirabello The influence of personal and social-interactive engagement in social TV web sites Yes (2011) Park and Smith (2000) To whom much has been given': religious capital and community voluntarism among Yes churchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of community survey Peterson and Reid Community survey Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and citizen participation in substance abuse prevention activities Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate Yes measurement Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	09	Ohmer (2007)	Citizen participation in neighborhood organizations and its relationship to volunteers' self-and collective efficacy and sense of community	Yes	No	NM	
Pagani and Mirabello The influence of personal and social-interactive engagement in social TV web sites (2011) Park and Smith (2000) To whom much has been given': religious capital and community voluntarism among Yes churchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of community social dynamics: results of a Yes community survey Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and C2003) Citizen participation in substance abuse prevention activities Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate Yes measurement Peterson et al. (2008) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	61	Ohmer (2008)	The relationship between members' perceptions of their neighborhood organization and their involvement and perceived benefits from participation	Yes	No	N	
Park and Smith (2000) To whom much has been given? religious capital and community voluntarism among Yes churchgoing protestants Parker et al. (2001) Disentangling measures of individual perceptions of community survey Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and Yes citizen participation in substance abuse prevention activities Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate Yes measurement Peterson et al. (2008a) Community organizations and sense of community: further development in theory and Yes measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	62	Pagani and Mirabello (2011)	The influence of personal and social-interactive engagement in social TV web sites	Yes	No	NM	
Parker et al. (2001) Disentangling measures of individual perceptions of community social dynamics: results of a Yes community survey Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and C2003) Peterson et al. (2008) Measuring sense of community: a methodological interpretation of the factor structure debate Yes Peterson et al. (2008a) Community organizations and sense of community: further development in theory and measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	63	Park and Smith (2000)	To whom much has been given': religious capital and community voluntarism among churchgoing protestants	Yes	N _o	NM	
Peterson and Reid Paths to psychological empowerment in an urban community: sense of community and citizen participation in substance abuse prevention activities Peterson et al. (2008a) Measuring sense of community: a methodological interpretation of the factor structure debate Yes measurement Peterson et al. (2008a) Community organizations and sense of community: further development in theory and measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	2	Parker et al. (2001)	Disentangling measures of individual perceptions of community social dynamics: results of a community survey	Yes	Yes	I	-
Peterson et al. (2008a) Measuring sense of community: a methodological interpretation of the factor structure debate Yes Peterson et al. (2008a) Community organizations and sense of community: further development in theory and Yes measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	65	Peterson and Reid (2003)	Paths to psychological empowerment in an urban community: sense of community and citizen participation in substance abuse prevention activities	Yes	N _o	NM	
Peterson et al. (2008a) Community organizations and sense of community: further development in theory and reasurement measurement Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	99	Peterson et al. (2006)	Measuring sense of community: a methodological interpretation of the factor structure debate	Yes	Yes	ı	2
Peterson et al. (2008b) Validation of A Brief Sense of Community Scale: confirmation of the principal theory of Yes sense of community	29	Peterson et al. (2008a)	Community organizations and sense of community: further development in theory and measurement	Yes	No	NM	
	89	Peterson et al. (2008b)	Validation of A Brief Sense of Community Scale: confirmation of the principal theory of sense of community	Yes	Yes	1	1



Table 2 continued

No.	No. Author	Title	Full text	Included	Reasons for exclusion	N study
69	Prezza et al. (2001)	Sense of community referred to the whole town: Its relations with neighboring, loneliness, life satisfaction, and area of residence	Yes	No	NM	
70	Prezza and Constantini (1998)	Sense of community and life satisfaction: investigation in three different territorial contexts	Yes	Yes	ı	3
71	Prezza et al. (2009)	The MTSOCS: a multidimensional sense of community scale for local communities	Yes	Yes	ı	1
72	Price (1985)	Work and community	Yes	No	NM	
73	Rapley and Hopgood (1997)	Quality of life in a community-based service in rural Australia	Yes	Yes	I	1
74	Raskoff and Sundeen (1998)	Youth Socialization and Civic participation: the role of secondary schools in promoting community service in Southern California	Yes	No	NM	
75	Reinhart et al. (2005)	Setting level characteristics in consumer-run organizations that enhance member outcomes	Yes	No	NM	
92	Rissel et al. (1995)	Factors which explain amount of participation in rural adolescent alcohol use prevention task forces	Yes	No	NM	
77	Rollero et al. (2009)	Sociopolitical control and sense of community. A study on political participation	Yes	Yes	ı	_
78	Rosenbaum (1987)	The theory and research behind neighborhood watch: is it a sound fear and crime reduction strategy?	Yes	No	NM	
62	Rosenbaum et al. (2005)	Loyalty programs and a sense of community	Yes	No	NM	
80	Royal and Rossi (1999)	Predictors of within-school differences in teachers' sense of community	Yes	No	NM	
81	Sánchez Vidal (2001)	Medida y estructura intema del sentimiento de comunidad: Un estudio empírico./Sense of community: measurement and internal structure: an empirical study	Yes	No	NM	
82	Semenza et al. (2007)	Community-initiated urban development: an ecological intervention	Yes	No	ND	
83	Serow (1990)	Volunteering and values: an analysis of students' participation in community service	No	ı	ı	
%	Simard (2000)	Local development and community identity: the case of Quebec City's St. Roch neighbourhood	Yes	No	NM	
82	Son et al. (2010)	Engendering social capital through a leisure club for middle-aged and older women: implications for individual and community health and well-being	Yes	No	NM	



5 .	rable 2 continued					
n .	No. Author	Title	Full	Included	Reasons	N st
			text		for	
					exclusion	

No.	No. Author	Title	Full text	Included	Reasons for exclusion	N study
98	Speer et al. (2001)	The relationship between social cohesion and empowerment: support and new implications for theory	Yes	Yes	ı	1
87	Sum et al. (2009)	Internet use as a predictor of sense of community in older people	Yes	No	NM	
88	Tonteri et al. (2011)	Antecedents of an experienced sense of virtual community	Yes	No	NM	
68	Townley and Kloss (2009)	Development of a measure of sense of community for individuals with serious mental illness residing in community settings	Yes	No	NM	
96	Trout et al. (2003)	Action research on leadership for community development in West Africa and North America: a joining of liberation theology and community psychology	Yes	No	NM	
91	Tsai et al. (2008)	Building a model explaining the social nature of online learning	Yes	No	NM	
92	Tsai et al. (2010)	Effectiveness of an online community of practice for learning to teach elementary science	Yes	No	NM	
93	Vidal (2009)	Discriminative validity of an scale of sense of community in two urban communities	Yes	Yes	1	1
4	Vieno et al. (2005)	Democratic school climate and sense of community in school: a multilevel analysis	Yes	No	NM	
95	Ville et al. (2003)	Disability and a sense of community belonging a study among tetraplegic spinal-cord-injured persons in France	Yes	N _o	NM	
96	Wandersman and Giamartino (1980)	Community and individual difference characteristics as influences on initial participation	Yes	No	N Q	
26	Wang and Tai (2011)	The influence of social presence on continual participation in online communities: the relational view based on social identity theory	Yes	No	NM	
86	Warin et al. (2000)	The power of place: space and time in women's and community health centres in south Australia	Yes	No	NM	
66	Washington and Moxley (2003)	Group interventions with low-income African American women recovering from chemical dependency	Yes	No	NM	
100	Wilson and Baldassare (1996)	Overall "sense of community" in a suburban region: the effects of localism, privacy, and urbanization	Yes	No	NM	
101	Wilson et al. (2010)	Exploring a feminist-based empowerment model of community building	Yes	No	NM	
102	Xu et al. (2010)	Sense of community, neighboring, and social capital as predictors of local political participation in China	Yes	No	NM	



Table 2 continued

No.	No. Author	Title	Fu]] text	Included	Included Reasons N study for exclusion	N study
103	Yau (2010)	Homeowners' participation in management of multi-storey residential buildings: the Hong Yes Kong's case	Yes	No	NM	
104	Yee et al. (1999)	Resident-centered care in assisted living	Yes	No	NM	
105	Yoo et al. (2001)	Exploring the factors enhancing member participation in virtual communities	Yes	No	NM	
106	Zanetell and Knuth (2004)	Participation rhetoric or community-based management reality? Influences on willingness to Yes participate in a Venezuelan freshwater fishery	Yes	No	ND	

NM no measure, ND no data, SD study duplicated



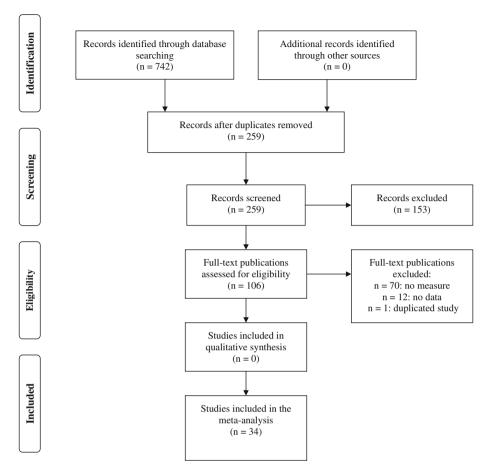


Fig. 1 Flow diagram

sample was drawn (adults, >18 years; adolescents, 14–19 years; college students; military; immigrants; mentally disabled), (j) average age of the sample, and (k) age range. Some articles included more than one study or more than one measure (No. 5, 25, 26, 37, 41, 66, and 70; see Table 2). All the studies included were based on cross-sectional data.

6.3 Statistical Methods

The relative effect size of each study was extracted for each of the relationships between SoC and participation. Therefore, some studies were included more than once, such as studies that contained sub-group comparisons or multiple measures of participation or analyzed the relationship between SoC and both civic and political participation. Cohen's d was computed for each study (or subsample of a study). The most frequent type of effect size was based on the correlation coefficients. According to Cohen's (1988) criteria, d < .10 is equivalent to a small effect, d = .25 to a moderate effect and d = .40 to a large effect (numbers are considered in their absolute value).

In our case, the effect size aimed to test the strength of the relationship between SoC and participation. CMA computed 95 % confidence intervals (CI) around the point



estimate of an effect size. The Q statistic was utilized to test the homogeneity of the specific set of effect sizes and the significance of moderators (Borenstein et al. 2000; Mullen 1989). CMA utilizes two different models to calculate the overall effect size; the fixed-effect model assumes a common effect size in all studies (*true effect size*), while the random-effect model assumes a normal distribution of the effect sizes. The random-effect model considers both the variance within each study and the variance between the studies (between-studies variance, T² [tau-squared]). The weights of each study in the random-effect model are more evenly distributed and less likely to affect the final results. The random-effect model was preferred because the studies were heterogeneous and quite different from each other.

Additionally, the Duval and Tweedie's (2000a, b) "trim and fill" method was developed to estimate the potential publication bias. Finally, subgroup analyses were performed to test the differences between the political and civic forms of participation and the types of samples, nationalities, sample sizes and participation measures that were utilized. Finally, meta-regressions were performed to explore the roles of age, sample size and percentage of women as possible moderators of the SoC-participation relationship.

7 Results

7.1 Descriptive Characteristics of the Studies

From the 23 scientific papers (published from 1990 to 2012), 34 primary studies were extracted (see Table 3), all of which utilized self-report questionnaires. Fifteen (44.1 %) primary studies were conducted in the USA, 10 (29.4 %) in Italy, 3 (8.8 %) in Israel, 2 each (5.9 %) in Spain and Iran and 1 each (2.9 %) in Australia and the UK. Consideration of the type of data utilized to calculate the effect size indicated that 29 studies (85.3 %) reported correlation coefficients, and 5 studies (14.7 %) reported group means. Civic participation was investigated in 18 studies (52.9 %), political participation in 12 studies (35.3 %) and both forms in 4 studies (11.8 %). Table 4 shows the measures of SoC and participation utilized in the studies. The most frequently utilized measure of SoC was the SCI developed by Perkins et al. (1990; 35.3 % of the studies), while the majority of studies developed ad hoc scales to measure participation (85.3 %). Data on the type of sample showed that 22 studies (64.7 %) were on adults, 5 (14.7 %) on adolescents, 4 (11.8 %) on college students and 1 (2.9 %) on immigrants, military personnel and mentally disabled individuals. The average age of the samples was 35.48 years (SD = 14.66). The average percentage of women was 56.86 (SD = 14.09), and the average size of the samples was approximately 549 subjects.

7.2 SoC-Participation Relationship

Table 5 shows the overall results of the meta-analysis based on the correlation coefficients displayed in the studies. Both the fixed model (r = .36; sig. = .00) and the random model (r = .27, sig. = .00) showed a significant, positive and moderate correlation between SoC and participation in a heterogeneous set of studies: Q(33) = 2083.77, p = .00; $I^2 = 98.42$. The procedure "one study removed" was utilized to control the impact of specific single studies, especially studies with very large samples. The analysis confirmed that no study significantly influenced the overall result. This outcome was particularly relevant to the Liu



Table 3 Publications included in the meta-analytic review

×	N Author (study)	Years	Data	Type of participation	SoC measure	Participation measure	Sample (N)	Women in the sample (%)	Sample population	Sample nationality	Mean age	Age (range)
1	Albanesi et al. (2007) (1)	2007	Correlation	Civic	SCSa	Ad hoc	999	58	Adolescents	Italy	16.1	14–19
7	Albanesi et al. (2007) (2)	2007	Correlation	Political	SCSa	Ad hoc	999	58	Adolescents	Italy	16.1	14–19
ε	Altman et al. (1998)	1998	Correlation	Civic	Ad hoc	Ad hoc	2,609	49	Adolescents	USA	14.69	I
4	Anderson (2009)	2009	Correlation	Political	SCI	Ad hoc	822	ı	Adults	USA	ı	I
2	Aref (2011)	2011	Correlation	Civic	Not spec.	Ad hoc	175	5.14	Adults	Iran	53.12	33–72
9	Blanchard (2006)	2006	Correlation	Civic	SCI	Ad hoc	266	ı	College stud.	USA	26.7	
7	Bowen et al. (2001)	2001	Correlation	Civic	Ad hoc	Ad hoc	180	41.1	Military	USA	ı	I
∞	Chang (2010)	2010	Correlation	Civic	SCI	CPS	96	61.46	Adults	UK	39.52	I
6	Chavis and Wandersman (1990)	1990	Correlation	Civic	Ad hoc	Ad hoc	420	56.8	Adults	USA	ı	18–93
10	Cicognani et al. (2008) (1)	2008	Correlation	General	SCI	Ad hoc	200	61.4	College stud.	Italy	23.4	19–28
11	Cicognani et al. (2008) (2)	2008	Correlation	General	SCI	Ad hoc	214	09	College stud.	Iran	22.6	18–34
12	Cicognani et al. (2008) (3)	2008	Correlation	General	SCI	Ad hoc	125	89	College stud.	USA	19.6	18-22
13	Cicognani et al. (2012) (1)	2012	Correlation	Civic	SCSa	Ad hoc	1,871	53.1	Adolescents	Italy	18.21	I
14	Cicognani et al. (2012) (2)	2012	Correlation	Civic	SCSa	Ad hoc	1,871	53.1	Adolescents	Italy	18.21	I
15	Hughey et al. (1999)(1)	1999	Correlation	Political	SCI	PPAR	338	72	Adults	USA	ı	I
16	Hughey et al. (1999)(2)	1999	Correlation	Political	SOCS	PPAR	338	72	Adults	USA	I	I
17	Hughey et al. (1999)(3)	1999	Correlation	Political	SCI	PPAR	259	09	Adults	USA	I	I
18	Itzhaky (2003)	2003	Correlation	Civic	SCB	Ad hoc	168	100	Immigrants	Israel	37.38	20-64
19	Itzhaky and York (2000) (1)	2000	Correlation	Civic	SCB	Ad hoc	58	61	Adults	Israel	ı	I
20	Itzhaky and York (2000) (2)	2000	Correlation	Civic	SCB	Ad hoc	86	61	Adults	Israel	I	I
21	Liu and Besser (2003)	2003	Correlation	Political	Ad hoc	Ad hoc	2,802	53	Adults	USA	74.41	I
22	Parker et al. (2001)	2001	Correlation	Civic	SCI	Ad hoc	700	ı	Adults	USA	38	18–90
23	Peterson et al. (2006) (1)	2006	Correlation	Political	SCI	Ad hoc	475	55	Adults	USA	41	I
												Ī



Table 3 continued

>	N Author (study)	Years	Data	Type of participation	SoC measure	Participation measure	Sample (N)	Women in the sample (%)	Sample population	Sample nationality	Mean	Age (range)
24	24 Peterson et al. (2006) (2)	2006	Correlation	Political	SCI	Ad hoc	378	57	Adults	USA	53.79	1
25	25 Peterson et al. (2008b)	2008	Correlation	Political	BSCS	Ad hoc	293	57	Adults	USA	53.79	I
26	26 Prezza and Constantini (1998) (1)	1998	Means	Political	ISSC	Ad hoc	110	50	Adults	Italy	40.09	1
27	Prezza and Constantini (1998) (2)	1998	Means	Political	ISSC	Ad hoc	110	55.45	Adults	Italy	37.85	1
28	28 Prezza and Constantini (1998) (3)	1998	Means	Political	ISSC	Ad hoc	116	59.48	Adults	Italy	39.56	ı
29	29 Prezza et al. (2009)	2009	Means	Civic	MTSOCS	Ad hoc	781	50.7	Adults	Italy	30.01	I
30	Rapley and Hopgood (1997)	1997	Correlation	Civic	NSCI	ICI	34	ı	Disabled	Australia	32.97	21–52
31	Rollero et al. (2009)	2009	Means	Political	ISSC	Ad hoc	225	49.3	Adults	Italy	39.59	25-60
32	Speer et al. (2001)	2001	Correlation	Civic	SCI	Ad hoc	647	59.7	Adults	USA	43.4	ı
33	Vidal (2009) (1)	2009	Correlation	Civic	SC	Ad hoc	260	56.3	Adults	Espana	47.8	1
34	Vidal (2009) (2)	2009	Correlation	Civic	SC	Ad hoc	481	51.9	Adults	Espana	44.6	ı



Table 4 SoC and participation measures used in the studies

Measure	Full name of the scale and authors	Freq.	%
Sense of Com	munity Scales		
SCI	SCI (Perkins et al. 1990)	12	35.3
SCSa	Sense of Community Scale for adolescents (Albanesi et al. 2007)	4	11.8
ISSC	Italian Scale of Sense of Community (Prezza et al. 1999)	4	11.8
SCB	Sense of community belonging (Bavly 1990)	3	8.8
SC	Sentimiento de Comunidad (Vidal 2009)	2	5.9
SOCS	Sense of Community Scale (Bachrach and Zautra 1985)	1	2.9
BSCS	Brief Sense of Community Scale (Peterson et al. 2008b)	1	2.9
MTSOCS	MTSOCS (Prezza et al. 2009)	1	2.9
NSCI	Neighbourhood SCI (Pretty et al. 1994)	1	2.9
-	Ad hoc scales	4	11.8
-	Not specified	1	2.9
Participation S	Scales		
PPAR	Political participation (Davidson and Cotter 1986);	3	8.8
CPS	Community Participation Scale (Rapley and Beyer 1996)	1	2.9
ICI	Index of Community Involvement (Form II) (Raynes et al. 1989)	1	2.9
_	Ad hoc scales	29	85.3

Table 5 General meta-analytic results

Model	Statistics for each study					Correlation and 95% CI					
	c	orrelation	Lower limit	Upper limit	Z-Value	p-Value					
	Albanesi et al 2007-1	0,210	0,130	0,287	5,058	0,000	1	ī	-	⊢ I	1
	Albanesi et al 2007-2	0,100	0,018	0,181	2,381	0,017			- -		
	Altman et al 1998	0,120	0,082	0,158	6,156	0,000					
	Anderson 2009	0,880	0,864	0,895	39,372	0,000					
	Aref 2011	0,766	0,697	0,821	13,254	0,000					━
	Blanchard 2006	-0,160	-0,275	-0,041	-2,617	0,009			-≣-		
	Bowen et al 2001	0,470	0,348	0,577	6,786	0,000					
	Chang 2010	0,500	0,333	0,637	5,297	0,000				-#-	
	Chavis et al 1990	0,310	0,221	0,394	6,546	0,000			- 1 -		
	Cicognani et al 2008-1	0,261	0,127	0,386	3,750	0,000			_ →	_	
	Cicognani et al 2008-2	0,202	0,070	0,327	2,975	0,003			-	⊢	
	Cicognani et al 2008-3	0,231	0,058	0,391	2,598	0,009				-	
	Cicognani et al 2011-1	0,189	0,145	0,232	8,268	0,000			=		
	Cicognani et al 2011-2	0,078	0,033	0,123	3,378	0,001			=		
	Hughey et al 1999-1	0,230	0,126	0,329	4,286	0,000			-	-	
	Hughey et al 1999-2	0,210	0,106	0,310	3,902	0,000			-■	⊢	
	Hughey et al 1999-3	0,250	0,132	0,361	4,087	0,000			-	-	
	Itzhaky 2003	0,410	0,276	0,529	5,596	0,000					
	Itzhaky et al 2000-1	0,290	0,034	0,510	2,214	0,027			I—	=-	
	Itzhaky et al 2000-2	0,110	-0,090	0,302	1,077	0,282				-	
	Liu et al 2003	0,500	0,486	0,514	57,072	0,000					
	Parker et al 2001	0,560	0,507	0,609	16,707	0,000					
	Peterson et al 2006-1	0,180	0,092	0,266	3,954	0,000			-=	-	
	Peterson et al 2006-2	0,120	0,019	0,218	2,335	0,020			-=-		
	Peterson et al 2008b	0,160	0,046	0,270	2,748	0,006				-	
	Prezza et al 1998-1	0,246	0,067	0,410	2,673	0,008			_ —	_	
	Prezza et al 1998-2	-0,174	-0,346	0,010	-1,855	0,064		_	╼-		
	Prezza et al 1998-3	0,208	0,031	0,372	2,296	0,022				⊢	
	Prezza et al 2009	0,117	0,048	0,186	3,307	0,001					
	Rapley et al 1997	0,220	-0,128	0,520	1,245	0,213					
	Rollero et al 2009	0,190	0,063	0,311	2,917	0,004			-	- 1	
	Speer et al 2001	0,192	0,117	0,265	4,934	0,000	ı		<u>-</u>	-	
	Vidal 2009-1	0,140	0,019	0,257	2,259	0,024	ı		<u> </u>	-	
	Vidal 2009-2	0,030	-0,060	0,119	0,656	0,512	ı				
Fixed		0,355	0,345	0,366	60,530	0,000	ı			,)	
Random		0,270	0,169	0,366	5,100	0,000	ı	ı	◀		I
							-1,00	-0,50	0,00	0,50	1,00



Table 6 Meta-analysis for subsamples and meta-regressions

Subsamples	k	R	95 % CI	Z (p values)	Q (df) (p values)	I^2	Q test (df)
Overall	34	.27	.17 .37	5.10***			
Type of participation							.09 (2)
Civic	18	.27	.18 .35	3.68***	386.58 (17)***	95.60	
Political	12	.26	03.51	2.89***	977.87 (11)***	98.88	
General	4	.31	.10 .48	2.00*	50.30 (3)***	94.04	
Type of sample							3.20 (3)
Adolescents	5	.14	10.37	1.12	16.59 (4)***	75.89	
Adults	22	.31	.20 .41	5.24***	1,339.76 (21)	98.43	
College students	4	.13	15.39	.94	2.26 (2)	11.38	
Other	3	.38	.06 .63	2.33*	28.01 (3)***	89.29	
Nation							2.87 (3)
USA	15	.32	.18 .45	4.31***	1,409.41 (14)***	99.01	
Italy	10	.14	04.32	1.53	33.27 (9)***	72.95	
Israel	3	.28	07.56	1.58	6.39 (2)*	68.70	
Other	6	.35	.11 .54	2.86***	134.29 (5)***	96.28	
N of sample							4.427 (3)
<200	12	.32	.15 .47	3,58***	127.24 (11)***	91.36	
200-400	10	.15	04.33	1,59	34.39 (9)***	73.83	
400-600	5	.17	10.41	1,23	22.60 (4)***	82.30	
>600	7	.41	.21 .58	3,79***	1,578.55 (6)***	99.62	
Participation measure	S						.02 (1)
Validated scales	5	.29	.01 .52	2.02*	8.79 (4)	54.48	
Ad hoc scales	29	.27	.16 .37	4.64***	2,061.51 (28)***	98.64	
Meta-regression	β	Std. Err.		95 % CI	Z (p values)		
Average age	.02	.01		00 .02	2.61**		
Sample size	.01		01	.00 .02	.26		
% of women	-05		00	-01.01	-1.72		

^{*} p < .05, ** p < .01, *** p < .001

and Besser (2003) study, which utilized a very large sample and elementary measures. When this study was removed, the general correlation coefficient changed to r=.26 (p=.00). Table 6 shows the results of the subsamples meta-analysis and the meta-regressions. No significant difference in relation to SoC and either civic participation (r=.27) or political participation (r=.26) emerged, while the correlation was slightly higher when the two forms were considered together (r=.31). Consideration of the type of sample indicated that the SoC-participation correlation was significant when adults (r=.31) and specific targets (r=.38) were involved (i.e., military personnel, immigrants and mentally disabled individuals) and not significant in the studies with adolescent and college students samples. Moreover, a significant correlation emerged for studies conducted in the USA (r=.32) and other nations (r=.35), but no significant correlation was found for studies conducted in Italy and Israel or studies that recruited small (r=.32) or very large samples (r=.41). Finally, no substantial difference emerged between studies



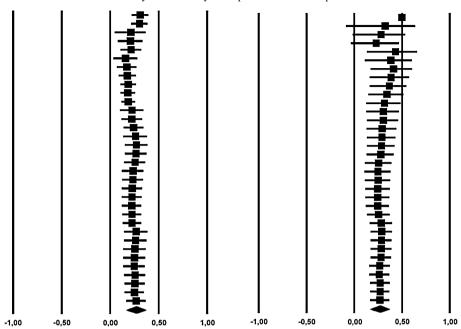


Table 7 Cumulative meta-analysis based on year of publication and sample size

that utilized validated measures of participation (r = .29) and studies that developed ad hoc scales (r = .27). The results of the meta-regression analysis showed that only the age of the sample had a significant, though mild, influence ($\beta = .02$) on the SoC-participation relationship.

Finally, a cumulative meta-analysis based on year of publication and sample size (Table 7) was performed to estimate the potential publication bias, based on Egger et al. (1997) linear regression method (t value = 1.76, df = 32) and Duval and Tweedie's (2000a, b) "trim and fill" method (zero studies "trimmed", r = .27). The results showed no publication bias.

8 Discussion

In accordance with the literature on the relationship between SoC and participation, the findings confirmed the association between the two constructs and revealed that the magnitude of association is moderate, nearly the same size for civic and political forms of engagement, and quite stable across the studies included in the meta-analysis. The analysis of the population characteristics only showed a relevant effect for age, the sole variable that slightly impacted the association between SoC and participation. The results emphasized that the significance of the association between the two constructs is only true for some of the targeted samples, namely adult populations and highly specific targets such as mentally disabled individuals and immigrants, and some of the nationalities from which the samples were drawn.



Hence, the study results overall showed that when people are involved in civic forms of engagement, protest activities, public deliberation, political campaigning or voting, they also show high levels of SoC. Though the nature of the data does not allow to make any causal inference, and therefore it cannot be assumed that SoC promotes the social and political engagement of citizens, the findings confirmed that feelings of membership, interpersonal sharing and emotional connection, i.e., the psychological dimension of being part of a territorial community, do entertain a significant relationship with active participation, and that this relationship should not be understated in community actions, planning and policies. Also the moderate magnitude of the SoC-participation association indicated that other variables besides SoC are possibly crucial in fostering social and political action. This unsurprising finding is consistent with the most established explicative models elaborated by collective action theorists, who have identified a pool of correlates and predictors of participation both at the individual and collective level (for a review of the psychosocial models, see van Zomeren et al. 2008). While research on SoC and research on political collective behavior have hitherto proceeded separately, this study suggests that an integration of theories and models from both areas might be fruitful.

Another interesting finding of the current meta-analytic review lies in the variations undergone by the SoC-participation binomial across different phases of an individual's life. These variations indicated that the connection between SoC and community engagement seems to be established in the adult population, not in adolescents and young adults. This outcome agrees with studies that highlighted how SoC increases as individuals reach the central and late stages of their life cycles (Prezza et al. 2001) and somewhat supports investigations concluding that the relationship between SoC and participation is likely to be weaker for young people and the elderly and stronger for adults (Pillemer and Glasgow 2000). The results are consistent with studies that emphasized how adolescents identify their peer groups as the most subjectively important group, rather than the community (Albanesi et al. 2007). Finally, the observed variability across countries suggests that the SoC and community engagement might be more closely interconnected in cultural contexts that assign a special value to active civic and political involvement, indicating that cultural effects can account for this variability. Though not completely unexpected, the general indication emerging from these findings reinforces the need to consider the specificity of the targets of policies and public actions.

In broader terms, this review argues that SoC should be considered as a context-dependent construct whose transferability across settings, populations and measurements is not only inherent, but potentially objectionable (Nowell and Boyd 2010; Hughey et al. 1999). Specifically, SoC seems to be a context-dependent concept at least to the extent to which target characteristics, such as age, nationality and other specific features, are included in the general definition of "context".

However, final considerations need to be taken with great caution. Indeed, we cannot exclude that, given the disproportion between the adult samples and the adolescent samples, and the US samples and the other nations' samples, a lower correlation between SoC and participation among adolescents and non-US populations could be due to chance. Further limitations of our results are due to the limited number of studies included in this meta-analysis, the lack of validated measures to assess participation, and the impossibility of considering the moderating effects of any psychosocial variable because too few studies were retrieved for each of the possible moderators.



References

(Starred references indicate publications included in the meta-analysis)

- *Abfalter, D., Zaglia, M. E., & Mueller, J. (2012). Sense of virtual community: A follow up on its measurement. *Computers in Human Behavior*, 28, 400–404.
- *Ahern, M. M., & Hendryx, M. S. (1998). Community characteristics as predictors of perceived HMO quality. *Health*, & *Place*, 4(2), 151–160.
- *Ahern, M. M., Hendryx, M. S., & Siddharthan, K. (1996). The importance of sense of community on people's perceptions of their health-care experiences. *Medical Care*, 34(9), 911–923.
- *Ahn, S., Phillips, K., Smith, M. L., & Ory, M. G. (2011). Correlates of volunteering among aging Texans: The roles of health indicators, spirituality, and social engagement. *Maturitas*, 69, 257–262.
- *Albanesi, C., Cicognani, E., & Zani, B. (2007). Sense of community, civic engagement and social well-being in Italian adolescents. *Journal of Community and Applied Psychology*, 17, 387–406.
- Almond, G. A., & Verba, S. (1963). The civic culture. Political attitudes and democracy in five nations. Princeton: Princeton University Press.
- *Altman, D., Feighery, E., Robinson, T., Haydel, K., Strausberg, L., Lorig, K., et al. (1998). Psychosocial factors associated with youth involvement in community activities promoting heart health. *Health Education*, & *Behavior*, 25, 489–500.
- *Anderson, M. (2009). Beyond membership: A sense of community and political behavior. *Political Behavior*, 31(4), 603–627.
- *Anderson, M. (2010). Community psychology, political efficacy and trust. *Political Psychology*, 31(1), 59–84.
- *Aref, F. (2011). Sense of community and participation for tourism development. *Life Science Journal*, 8(1), 20–25.
- Bachrach, K. M., & Zautra, A. J. (1985). Coping with a community stressor: the threat of a hazardous waste facility. Journal of Health and Social Behavior, 26, 127–141.
- *Barati, Z., Samah, B. A., & Ahmad, N. (2012). Sense of community and citizen participation in neighborhood council in Iran. *Journal of American Science*, 8(1), 655–661.
- Bavly, I. (1990). Participants and non-participants: Possible influences of social and personal motives on the participation in leisure time activities of people living in under-priviledged neighborhoods. Unpublished master's dissertation, Bar-Ilan University, Ramat-Gan.
- Bess, K. D., Fisher, A. T., Sonn, C. C., & Bishop, B. J. (2002). Introduction. In A. T. Fisher, C. C. Sonn, & B. J. Bishop (Eds.), *Psychological sense of community: Research, applications and implications* (p. 6). New York, NY: Kluwer Academic/Plenum Publishers.
- *Bin, I. Z., Ainin, S., & Faziharudean, T. M. (2009). Social capital development of ICT-driven communities in Malaysia. World Review of Science, Technology and Sustainable Development, 6(1), 11–27.
- *Blanchard, A. L. (2006). Listserv implementation and sense of community: The relationships with increased knowledge and face-to-face interaction. *International Journal of e-Collaboration*, 2(2), 27–45.
- *Blanchard, A. L. (2008). Testing a model of sense of virtual community. *Computers in Human Behavior*, 24, 2107–2123.
- Borenstein, M., Rothstein, D., & Cohen, J. (2000). Comprehensive meta- analysis. A computer program for research synthesis. Englewood, NJ: Biostat.
- *Bowen, G. L., Martin, J. A., Mancini, J. A., & Nelson, J. P. (2001). Civic engagement and sense of community in the military. *Journal of Community Practice*, 9, 71–93.
- *Brayley, N., & Obst, P. (2010). The Australian Grey Nomads—are they who we think they are? Enhancing formative research through the quantitative assessment of psychological constructs. *Health Promotion Journal of Australia*, 21(2), 138–142.
- *Breunig, M. C., O'Connell, T. S., Todd, S., Anderson, L., & Young, A. (2010). The impact of outdoor pursuits on college students' perceived sense of community. *Journal of Leisure Research*, 42(4), 551–572.
- *Brewe, E., Kramer, L., & Sawtelle, V. (2012). Investigating student communities with network analysis of interactions in a physics learning center. *Physical review special topics—physics education research*, 8, 010101-1–010101-9.
- Brodsky, A. (1996). Resilient single mothers in risky neighbourhoods: Negative psychological sense of community. *Journal of Community Psychology*, 16, 771–791.
- Brodsky, A., & Marx, C. M. (2001). Layers of identity: Multiple psychological senses of community within a community setting. *Journal of Community Psychology*, 29(2), 161–178.
- Brodsky, A. E., O'Campo, J., & Aronson, R. E. (1999). PSOC in community context: Multi-level correlates of a measure of psychological sense of community in low-income, urban neighbourhoods. *Journal of Community Psychology*, 27, 659–680.



- *Brown, W. A., Hillman, A. J., & Okun, M. A. (2012). Factors that influence monitoring and resource provision among nonprofit board members. *Nonprofit and Voluntary Sector Quarterly*, 41(1), 145–156.
- Browning, C. R., Feinberg, S. L., & Dietz, R. (2004). The paradox of social organization: Networks, collective efficacy, and violent crime in urban neighborhoods. *Social Forces*, 83(2), 503–534.
- *Busza, J., & Baker, S. (2004). Protection and participation: An interactive programme introducing the female condom to migrant sex workers in Cambodia. *Aids Care*, 16(4), 507–518.
- *Case, K. F. (2011). A gendered perspective on student involvement in collegiate clubs and organizations in Christian Higher Education. *Christian Higher Education*, 10(3–4), 166–195.
- *Cassel, C. A. (1999). Voluntary associations, churches, and social participation theories of turnout. *Social Science Quarterly*, 80(3), 504–517.
- *Catano, V. M., Pretty, G. M. H., Southwell, R. R., & Cole, G. K. (1993). Sense of community and union participation. *Psychological Reports*, 72, 333–334.
- Chambre, S. M. (1984). Is volunteering a substitute for role loss in old age? An empirical test of activity theory. The Gerontologist, 24, 292–298.
- *Chang, K. (2010). Community cohesion after a natural disaster: Insights from a Carlisle flood. *Disasters*, 34(2), 289–302.
- Chavis, D. M., & Pretty, G. M. H. (1999). Sense of community: Advances in measurement and application. *Journal of Community Psychology*, 6, 635–642.
- *Chavis, D. M., & Wandersman, A. (1990). Sense of community in the urban environment: A catalyst for participation and community development. *American Journal of Community Psychology*, 18(1), 55–81.
- Chipuer, H. M., & Pretty, G. M. H. (1999). A review of the Sense of Community Index: Current uses, factor structure, reliability and further development. *Journal of Community Psychology*, 6, 643–658.
- Cicognani, E., Albanesi, C., & Zani, B. (2006). Il senso di comunità in adolescenza: uno strumento di misura. Bollettino di Psicologia Applicata, 250, 13–30.
- *Cicognani, E., Pirini, C., Keyes, C., Joshanloo, M., Rostami, R., & Nosratabadi, M. (2008). Social participation, sense of community and social well being: A study on American, Italian and Iranian University students. *Social Indicators Research*, 89, 97–112.
- *Cicognani, E., Zani, B., Fournier, B., Gavray, C., & Born, M. (2012). Gender differences in youths' political engagement and participation. The role of parents and of adolescents' social and civic participation. *Journal of Adolescence*, 35(3), 561–576.
- Cohen, J. (1988). Statistical power analysis for the behavioural sciences. New York: Academic Press.
- *Collins, D., & Kearns, R. A. (2010). Walking school buses in the Auckland region: A longitudinal assessment. *Transport Policy*, 17, 1–8.
- Conge, P. J. (1988). The concept of political participation: Toward a definition. Comparative Politics, 20(2), 241–249.
- *Daugherty, T., Lee, W., Gangadharbatla, H., Kim, K., & Outhavong, S. (2005). Organizational virtual communities: Exploring motivations behind online panel participation [Electronic version]. *Journal of Computer-Mediated Communication*, 10(4), Article 9. Retrieved September 29, 2005, from http://jcmc.indiana.edu/vol10/issue4/daugherty.html.
- *Davidson, W. B., & Cotter, P. R. (1986). Sense of community and political participation. *Journal of Community Psychology*, 17, 119–125.
- *DeNeui, D. L. C. (2003). An investigation of first-year college students' psychological sense of community on campus. *College Student Journal*, 37, 224–234.
- Duval, S., & Tweedie, R. (2000a). A nonparametric "trim and fill" method of accounting for publication bias in meta-analysis. *Journal of the American Statistical Association*, 95, 89–98.
- Duval, S., & Tweedie, R. (2000b). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, 56, 455–463.
- Egger, M., Davey Smith, G., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *British Medical Journal*, 315, 629-634.
- Ekman, J., & Amnå, E. (2009). Political participation and civic engagement: Towards a new typology. *Youth, & Society* (YeS) Working Paper 2009.
- *Elkins, D. J., Forrester, S. A., & Noel-Elkins, A. V. (2011). Students' perceived sense of campus community: The influence of out-of-class experiences. *College Students Journal*, 45(1), 105–121.
- Farrell, S., Aubry, T., & Coulombe, D. (2004). Neighborhoods and neighbors. Do they contribute to personal well-being? *Journal of Community Psychology*, 32(1), 9–25.
- *Ferrari, J. R., Luhrs, T., & Lymanet, V. (2007). Eldercare volunteers and employees: Predicting caregiver experiences from service motives and sense of community. *The Journal of Primary Prevention*, 28, 467–479.
- Fischer, L. R., Mueller, D. P., & Cooper, P. W. (1991). Older volunteers: A discussion of the Minnesota senior study. The Gerontologist, 31(2), 183–193.



Florin, P. R., & Wandersman, A. (1984). Cognitive social learning and participation in community development. American Journal of Community Psychology, 12, 689–708.

- Hayghe, H. V. (1991). Volunteers in the U.S.: Who donates the time? Monthly Labor Review, February, 17–23.
- Heller, K., Price, R. H., Reinhartz, S., Riger, S., Wandersman, A., & D'Aunno, T. A. (1984). *Psychology and community change: Challenges of the future*. Monterey: Brooks/Cole.
- *Holland, L. (2004). Diversity and connections in community gardens: A contribution to local sustainability. *The International Journal of Justice and Sustainability*, 9(3), 285–305.
- Hombrados-*Mendieta, I., Gomez-Jacinto, L., & Dominguez-Fuenteset, J. M. (2009). The impact of immigrants on the sense of community. *Journal of Community Psychology*, 37(6), 671–683.
- *Hsieh, C. H. (2008). A concept analysis of social capital within a health context. *Nursing Forum*, 43(3), 151–159.
- Huckfeldt, R., & Sprague, J. (1995). Citizens, politics, and social communications: Information and influence in an election campaign. Cambridge: Cambridge University Press.
- *Hughey, J., Peterson, N. A., Lowe, J. B., & Oprescu, F. (2008). Empowerment and sense of community: Clarifying their relationship in community organizations. *Health Education and Behavior*, 35(5), 651–663.
- *Hughey, J., Speer, P. W., & Peterson, N. A. (1999). Sense of community in community organizations: Structure and evidence of validity. *Journal of Community Psychology*, 27(1), 97–113.
- *Hutcheson, J. D. Jr., & Prather, J. E. (1988). Community mobilization and participation in the zoning process. *Urban Affairs Review*, 23(3), 346–368.
- *Itzhaky, H. (1995). Can social work intervention increase organizational effectiveness? *International Social Work*, 38, 277–286.
- *Itzhaky, H. (2003). Developing empowerment and leadership: The case of immigrant women in Israel. *Affilia*, 18(3), 289–301.
- *Itzhaky, H., & York, A. S. (2000). Sociopolitical control and empowerment: An extended replication. *Journal of Community Psychology*, 28(4), 407–415.
- *Jacob, J. C. (1996). The North American Back-to-the-Land Movement. *Community Development Journal*, 31(3), 241–249.
- *Jacobs, D., Phalet, K., & Swyngedouw, M. (2005). Political Participation and Associational Life of Turkish Residents in the Capital of Europe. *Turkish Studies*, 7(1), 145–161.
- *Jorgensen, B. S., Jamieson, R. D., & Martin, J. F. (2010). Income, sense of community and subjective well-being: Combining economic and psychological variables. *Journal of Economic Psychology*, 31, 612–623.
- *Julian, D. A., Reischl, T. M., Carrick, R. V., & Katrenichet, C. (1997). Citizen participation—lessons from a local united way planning process. *Journal of the American Planning Association*, 63(3), 345–355.
 Keyes, C. L. M. (1998). Social well-being. *Social Psychological Quarterly*, 2, 121–140.
- *Kingston, S., Mitchell, R., Florin, P., & Stevenson, J. (1999). Sense of community in neighborhoods as a multi-level construct. *Journal of Community Psychology*, 27(6), 681–694.
- *Kruger, L. J., Maital, S. L., Macklem, G., Shriberg, D., Burgess, D. M., Kalinsky, R., et al. (2001). Sense of community among school psychologists on an internet site. *Professional Psychology: Research and Practice*, 32(6), 642–649.
- *Kurz, T., Linden, M., & Sheehy, N. (2007). Attitudinal and community influences on participation in new curbside recycling initiatives in Northern Ireland. *Environment and Behavior*, 39(3), 367–391.
- *Lee, Y.-J., & Brudney, J. L. (2009). Rational volunteering: A benefit-cost approach. *The International Journal of Sociology and Social Policy*, 29(9–10), 512–530.
- *Lengkeek, J., & Bargeman, B. (1997). Voluntary associations and leisure: At the core of social change. Loisir et Société/Society and Leisure, 20(1), 237–254.
- *Levine, M. D. (1989). Working it out: A community re-creation approach to crime prevention. *Journal of Community Psychology*, 14, 378–390.
- *Li, W. (2011). How virtual brand community influences on consumer-based brand equity. Paper presented at the 2011 International Conference on E-Business and E-Government. ICEE 2011. Shangai, China. Retrieved Jenuary, 17, 2013, from: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=588 1955.
- *Liu, A. Q., & Besser, T. (2003). Social capital and participation in community improvement activities by elderly residents in small towns and rural communities. *Rural Sociology*, 68(3), 343–365.
- Long, D. A., & Perkins, D. (2003). Confirmatory factor analysis of the Sense of Community Index and development of a brief SCI. *Journal of Community Psychology*, 3, 279–296.
- *Long, D. A., & Perkins, D. (2007). Community social and place predictors of sense of community: A multilevel and longitudinal analysis. *Journal of Community Psychology*, 35(5), 563–581.



- Mannarini, T., Rochira, A., & Talò, C. (2012). How identification processes and inter-community relationships affect sense of community. *Journal of Community Psychology*, 40(8), 951–967.
- *Mannarini, T., Fedi, A., & Trippetti, S. (2010). Public involvement: How to encourage citizen participation. *Journal of Community and Applied Social Psychology*, 20, 262–274.
- Marsh, A., & Kaase, M. (1979). Political action: A theoretical perspective. In S. H. Barnes & M. Kaase (Eds.), Political action: Mass participation in five western democracies (pp. 27–56). Beverly Hills: Sage.
- McMillan, D., & Chavis, D. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6–23.
- *McMillan, B., Florin, P., Stevenson, J., Kerman, B., & Mitchell, R. E. (1995). Empowerment praxis in community coalitions. *American Journal of Community Psychology*, 23(5), 699–727.
- *Mesch, G. S., & Talmud, I. (2010). Internet connectivity, community participation, and place attachment: A longitudinal study. *American Behavioral Scientist*, 53(8), 1095–1110.
- Mondak, J. J., & Mutz, D. C. (2001). Involuntary association: How the workplace contributes to American Civic Life. *Presented at the Annual Meeting of the Midwest Political Science Association*.
- Mondak, J. J., & Mutz, D. C. (2002). Talkin' at the Texaco: How workplaces help and hinder the flow of political information. Paper presented at the *Annual Conference of the Midwest Political Science Association*, Chicago, IL. April 25–28.
- Mullen, B. (1989). Advanced basic meta-analysis. Hillsdale, NJ: Erlbaum.
- Mutz, D. C., & Mondak, J. J. (2006). The workplace as a context for cross-cutting political discourse. Journal of Politics, 68, 140–155.
- Nowell, B., & Boyd, N. (2010). Viewing community as a responsibility as well as a resource: Deconstructing the theoretical roots of psychological sense of community. *Journal of Community Psychology*, 38(7), 828–841.
- Nussbaum, M. C. (1999). Women and equality: The capabilities approach. *International Labour Review*, 138(3), 227–245.
- *Obst, P. M., Smith, S. G., & Zinkiewicz, L. (2002). An exploration of sense of community, Part 3: Dimensions and predictors of psychological sense of community in geographical communities. *Journal of Community Psychology*, 30(1), 119–133.
- *Ohmer, M. L. (2007). Citizen Participation in Neighborhood Organizations and Its Relationship to Volunteers' Self- and Collective Efficacy and Sense of Community. *Journal of Community Psychology*, 36(7), 851–870.
- *Ohmer, M. L. (2008). The relationship between members' perceptions of their neighborhood organization and their involvement and perceived benefits from participation. *Social Work Research*, 31(2), 109–120.
- *Ohmer, M. L. (2010). How theory and research inform citizen participation in poor communities: The ecological perspective and theories on self- and collective efficacy and sense of community. *Journal of Human Behavior in the Social Environment*, 20, 1–19.
- *Pagani, M., & Mirabello, A. (2011). The influence of personal and social-interactive engagement in social TV web sites. *International Journal of Electronic Commerce*, 26(2), 41–67.
- *Park, J. Z., & Smith, C. (2000). "To Whom Much Has Been Given...": Religious capital and community voluntarism among churchgoing protestants. *Journal for the Scientific Study of Religion*, 39(3), 272–286.
- Parker, E. A., Lichtenstein, R. L., Schulz, A. J., Israel, B. A., Steinman, K. J., & James, S. A. (2001). Disentangling measures of individual perceptions of community social dynamics: Results of a community survey. *Health Education and Behavior*, 28(4), 462–486.
- Perkins, D. D., Florin, P., Rich, R. C., Wandersman, A., & Chavis, D. M. (1990). Participation and the social and physical environment of residential blocks: Crime and community context. *American Journal of Community Psychology*, 24, 83–115.
- *Peterson, N. A., & Reid, R. J. (2003). Paths to psychological empowerment in an urban community: Sense of community and citizen participation in substance abuse prevention activities. *Journal of Community Psychology*, 31(1), 25–38.
- *Peterson, N. A., Speer, P. W., & Hughey, J. (2006). Measuring sense of community: A methodological interpretation of the factor structure debate. *Journal of Community Psychology*, 34(4), 453–469.
- *Peterson, N. A., Speer, P. W., Hughey, J., Armstead, T. L., Schneider, J. E., & Sheffer, M. A. (2008a). Community organizations and sense of community: Further development in theory and measurement. *Journal of Community Psychology*, 36(6), 798–813.
- *Peterson, N. A., Speer, P. W., & McMillan, D. W. (2008b). Validation of A Brief Sense of Community Scale: Confirmation of the principal theory of sense of community. *Journal of Community Psychology*, *36*(1), 61–73.
- Pillemer, K., & Glasgow, N. (2000). Social integration and aging: Background and trends. In K. Pillemer, P. Moen, E. Wethington, & N. Glasgow (Eds.), Social integration in the second half of life (pp. 19–47). Baltimore, MD: Johns Hopkins University Press.



Pretty, G. M. H., Andrews, L., & Collett, C. (1994). Exploring adolescents' sense of community and its relationships to loneliness. *Journal of Community Psychology*, 18, 83–115.

- Prezza, M., Costantini, S., Chiarolanza, V., & Di Marco, S. (1999). La Scala italiana del senso di comunità [The Italian sense of community scale]. *Psicologia della Salute, 3–4*, 135–159.
- *Prezza, M., Amici, M., Roberti, T., & Tedeschi, G. (2001). Sense of community referred to the whole town: Its relations with neighboring, loneliness, life satisfaction, and area of residence. *Journal of Community Psychology*, 29(1), 29–52.
- *Prezza, M., & Constantini, S. (1998). Sense of community and life satisfaction: Investigation in three different territorial contexts. *Journal of Community and Applied Social Psychology*, 8, 181–194.
- *Prezza, M., Pacilli, M. G., Barbaranelli, C., & Zampatti, E. (2009). The MTSOCS: A multidimensional sense of community scale for local communities. *Journal of Community Psychology*, 37(3), 305–326.
- *Price, R. H. (1985). Work and community. American Journal of Community Psychology, 13(1), 1–12.
- Puddifoot, J. E. (2003). Exploring 'personal' and 'shared' sense of community identity in Durham city, England. *Journal of Community Psychology*, 1, 87–106.
- Putnam, R. (2000). Bowling alone the collapse and revival of American community. New York: Simon and Schuster.
- Rapley, M., & Beyer, S. (1996). Daily life, community participation and quality of life in an ordinary housing network. *Journal of Applied Research in Intellectual Disabilities*, 9, 31–39.
- *Rapley, M., & Hopgood, L. (1997). Quality of life in a community-based service in rural Australia. *Journal of Intellectual, & Developmental Disability*, 22(2), 125–141.
- *Raskoff, S., & Sundeen, R. A. (1998). Youth socialization and civic participation: The role of secondary schools in promoting community service in Southern California. *Nonprofit and Voluntary Sector Quarterly*, 27(1), 66–87.
- Raynes, N. V., Sumpton, R. C., & Pettipher, C. (1989). *Index of Community Involvement*. Hester Adrian Research Centre, Manchester.
- *Reinhart, C., Meissen, G., Wituk, S., & Shepherd, M. (2005). Setting level characteristics in consumer-run organizations that enhance member outcomes. *International Journal of Self-Help, & Self-Care, 4*(1–2), 137–147.
- *Rissel, C., Finnegan, J., Wolfson, M., & Perry, C. (1995). Factors which explain amount of participation in rural adolescent alcohol use prevention task forces. *American Journal of Health Promotion*, 9(3), 169–171.
- *Rollero, C., Tartaglia, S., De Piccoli, N., & Ceccarini, L. (2009). Sociopolitical control and sense of community. A study on political participation. *Psicología Política*, 39, 7–18.
- *Rosenbaum, D. P. (1987). The theory and research behind neighborhood watch: Is it a sound fear and crime reduction strategy? *Crime*, & *Delinquency*, 33(1), 103–134.
- *Rosenbaum, M. S., Ostrom, A., & Kuntze, R. (2005). Loyalty programs and a sense of community. *The Journal of Services Marketing*, 19(4), 222–233.
- *Royal, M. A., & Rossi, R. J. (1999). Predictors of within-school differences in teachers' sense of community. The Journal of Educational Research, 92(5), 259–266.
- *Sánchez Vidal, A. (2001). Medida y estructura interna del sentimiento de comunidad: Un estudio empírico./Sense of community: Measurement and internal structure: An empirical study. *Revista de Psicología Social*, 16(2), 157–175.
- Sarason, S. B. (1974). The psychological sense of community: Prospects for a community psychology. San Francisco: Jossey-Bass.
- Schiff, J. (1990). Charitable giving and government policy. An economic analysis. New York: Greenwood Press.
- *Semenza, J. C., March, T. L., & Bontempo, B. D. (2007). Community-initiated urban development: An ecological intervention. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 84(1), 8–20.
- *Serow, R. C. (1990). Volunteering and values: An analysis of students' participation in community service. Journal of Research and Development in Education, 23(4), 198–203.
- *Simard, M. (2000). Développement local et identifié communautaire: l'exemple du quartier Saint-Roch à Québec/Local development and community identity: The case of Quebec City's St. Roch neighbourhood. Cahiers de géographie du Québec, 44(122), 167–188.
- *Son, J., Yarnal, C., & Kerstetter, D. (2010). Engendering social capital through a leisure club for middleaged and older women: implications for individual and community health and well-being. *Leisure* Studies, 29(1), 67–83.
- *Speer, P. W., Jackson, C. B., & Peterson, A. (2001). The relationship between social cohesion and empowerment: Support and new implications for theory. *Health Education*, & *Behavior*, 28(6), 716–732.



- *Sum, S., Mathews, M., Pourghasem, M., & Hughes, I. (2009). Internet use as a predictor of sense of community in older people. *Cyber Psychology, & Behavior, 12*(2), 235–239.
- Tartaglia, S. (2006). A preliminary study for a new model of sense of community. *Journal of Community Psychology*, 34(1), 25–36.
- *Tonteri, L., Kosonen, M., Ellonen, H.-K., & Tarkiainen, A. (2011). Antecedents of an experienced sense of virtual community. *Computers in Human Behavior*, 27, 2215–2223.
- *Townley, G., & Kloss, B. (2009). Development of a measure of sense of community for individuals with serious mental illness residing in community settings. *Journal of Community Psychology*, *37*(3), 362–380.
- *Trout, J., Dokecki, P. R., Newbrough, J. R., & O'Gorman, R. T. (2003). Action research on leadership for community development in West Africa and North America: A joining of liberation theology and community psychology. *Journal of Community Psychology*, 31(2), 129–148.
- *Tsai, I.-C., Bosung, K., Liu, P.-J., Goggins, S.-P., Kumalasari, C., & Laffey, J. M. (2008). Building a model explaining the social nature of online learning. *Educational Technology, & Society, 11*(3), 198–215.
- *Tsai, I.-C., Laffey, J. M., & Hanuscin, D. (2010). Effectiveness of an online community of practice for learning to teach elementary science. *Journal of Educational Computing Research*, 43(2), 225–258.
- van Zomeren, N., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three Socio-Psychological perspectives. *Psychological Bulletin*, 134(4), 504–535.
- Verba, S., Schlozman, K. L., & Brady, H. E. (1995). Voice and equality, civic voluntarism in American Politics. Cambridge: Harvard University Press.
- *Vidal, A. S. (2009). Discriminative validity of an scale of sense of community in two urban communities. International Journal of Psychology and Psychological Therapy, 9(2), 161–176.
- Vieno, A., Santinello, M., Pastore, M., & Perkins, D. D. (2007). Social support, sense of community in school, and self-efficacy as resources during early adolescence: an integrative model. *American Journal of Community Psychology*, 39, 177–190.
- *Vieno, A., Perkins, D. D., Smith, T. M., & Santinello, M. (2005). Democratic school climate and sense of community in school: A multilevel analysis. *American Journal of Community Psychology*, 36(3–4), 327–341.
- *Ville, I., Crost, M., Ravauda, J.-F., & Tetrafigap Group. (2003). Disability and a sense of community belonging. A study among tetraplegic spinal-cord-injured persons in France. Social Science and Medicine, 56, 321–332.
- Walgrave, S., & Klandermans, B. (2010). Open and closed mobilization patterns: The role of channels and ties. In S. Walgrave & D. Rucht (Eds.), The world says no to war: Demonstrations against the war on Iraq (Social Movements, protest and contention) (pp. 169–193). Minneapolis: University of Minnesota Press.
- Wandersman, A., & Florin, P. (2000). Citizen participation and community organizations. In J. Rappaport & E. Seidman (Eds.), *Handbook of community psychology* (pp. 247–272). New York: Kluwer Academic/ Plenum Press.
- *Wandersman, A., & Giamartino, G. A. (1980). Community and individual difference characteristics as influences on initial participation. *American Journal of Community Psychology*, 8(2), 217–228.
- *Wang, K., & Tai, C.-F. (2011). The influence of social presence on continual participation in online communities: The relational view based on social identity theory. Paper presented at the 2011 International Joint Conference on Service Sciences. IJCSS 2011. Tapei, Taiwan. Retrieved, January, 17, 2013, from: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5960282.
- *Warin, M., Baum, F., Kalucy, E., Murray, C., & Veale, B. (2000). The power of place: Space and time in women's and community health centres in South Australia. *Social Science and Medicine*, 50, 1863–1875.
- *Washington, O. G., & Moxley, D. P. (2003). Group interventions with low-income African American women recovering from chemical dependency. *Health and Social Work*, 28(2), 146–156.
- Wilkinson, D. (2007). The multidimensional nature of social cohesion: Psychological sense of community, attraction, and neighboring. *American Journal of Community Psychology*, 40, 214–229.
- *Wilson, R. J., Abram, F. Y., & Anderson, J. (2010). Exploring a feminist-based empowerment model of community building. *Qualitative Social Work*, 9(4), 519–535.
- *Wilson, G., & Baldassare, M. (1996). Overall "sense of community" in a suburban region: The effects of localism, privacy, and urbanization. *Environment and Behavior*, 28(1), 27–43.
- Wollabæk, D., & Selle, P. (2003). Participation and social capital formation: Norway in a comparative perspective. *Scandinavian Political Studies*, 26(1), 67–91.
- *Xu, Q., Perkins, D. D., & Chow, J. C.-C. (2010). Sense of community, neighboring, and social capital as predictors of local political participation in China. *American Journal of Community Psychology*, 45, 259–271.



*Yau, Y. (2010). Homeowners' participation in management of multi-storey residential buildings: The Hong Kong's case. Property Management, 29(4), 345–356.

- *Yee, D. L., Capitman, J. A., Leutz, W. N., & Sceigaj, M. (1999). Resident-centered care in assisted living. *Journal of Aging, & Social Policy, 10*(3), 7–26.
- *Yoo, W.-S., Suh, K.-S., & Lee, M.-B. (2001). Exploring the factors enhancing member participation in virtual communities. Paper presented at Pacific Asia Conference on Information Systems. PACIS 2001. Soul, Korea. Retrieved January, 17, 2013, from http://www.pacis-net.org/index.jsp?t=proceeding&y= 2001.
- *Zanetell, B. A., & Knuth, B. (2004). Participation rhetoric or community-based management reality? Influences on willingness to participate in a Venezuelan freshwater fishery. World Development, 32(5), 793–807
- Zani, B., Cicognani, E., & Albanesi, C. (2001). Adolescents' sense of community and feeling of unsafety in the urban environment. *Journal of Community and Applied Social Psychology*, 11, 475–489.
- Zimmerman, M., & Rappaport, J. (1988). Citizen participation, perceived control and psychological empowerment. American Journal of Community Psychology, 5, 725–750.

