

COMMUNITY ORGANIZATIONS AND SENSE OF COMMUNITY: FURTHER DEVELOPMENT IN THEORY AND MEASUREMENT

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The Community Organization Sense of Community Scale (COSOC) is a frequently used or cited measure of the construct in community psychology and other disciplines, despite a lack of confirmation of its underlying 4-factor framework. Two studies were conducted to test the hypothesized structure of the COSOC, the potential effects of method bias on

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psychometric properties, and whether a revised measure (COSOC-R) yielded improved model-to-data fit. Study 1 included year 2002 data from two samples: (a) randomly selected community residents (n = 724) of five cities in the United States, and (b) randomly selected organizational members (n = 508) of community-organizing initiatives in the same five US cities. Study 2 included year 2006 data from organizational members (n = 151) of community-based prevention partnerships located in the midwestern United States. Results from both samples in Study 1 confirmed that method bias from the mixed use of positively and negatively worded items had a detrimental effect on the factor structure of the original COSOC. Results of Study 2 strongly supported the hypothesized 4-factor structure of the COSOC-R (i.e., relationship to organization, organization as mediator, influence of the organization, and bond to community). Study 2 results also showed that the overall COSOC-R and its subscales were reliable and related in expected ways with psychological empowerment, community participation, and organizational involvement. Implications of the study and strategies to further develop the COSOC are discussed. © 2008 Wiley Periodicals, Inc.

McMillan and Chavis (1986) described sense of community (SOC) as feelings that members have of belonging, of significance to one another and to groups, and as shared faith that members' needs will be met through their relationships. Embedded in this description of SOC is an issue that is central to community psychology—that is, the connections between individuals and the larger social groups of which they are a part. Heretofore, research on SOC has focused primarily on connections among individuals within neighborhoods or workplaces (Boyd & Angelique, 2002), although the connections articulated by McMillan and Chavis (1986) are, in part, germane to the context of community organizations. Writing on the occasional inclusion of the organizational frame in community psychology (e.g., Boyd & Angelique, 2007; Shinn & Perkins, 2000), Keys (2007) observed, “Organizational perspectives can provide important intellectual counterweights to the myriad individual perspectives we find in abundance in both the discipline of psychology and western societies” (p. 277). From an ecological perspective, SOC might be considered a feature of organizational culture, an indicator of interdependent relationships among persons within organizations and relationships among organizations or institutions within communities (Bryan, Klein, & Elias, 2007). The purpose of our article is to provide evidence of validity of an instrument designed to measure SOC tailored for community organizations and incorporating multiple referents. Community organizations are crucial for SOC researchers to study because they represent important settings through which individual and community transformation can occur (Evans, Hanlin, & Prilleltensky, 2007).

Although vital to the experience of community life, SOC within the context of community organizations has received relatively little attention from researchers. Boyd and Angelique (2002) noted that the principal setting for study of SOC in organizations was the workplace rather than community organizations. One early exception they noted was that of Hughey, Speer, and Peterson's (1999) study, which introduced a conceptual framework and measure, the Community Organization Sense of Community Scale (COSOC). The COSOC has since been frequently cited or applied by researchers in community psychology and other disciplines (e.g., Anderson, 2005;

Black & Hughes, 2001; Blanchard & Markus 2004; Farrell, Aubry, & Coulombe, 2004; Halamova, 2001a, 2001b, 2002; Herman, Onaga, Pernice-Duca, Oh, & Ferguson, 2005; Keough, 2003; Lizak, 2003; Maya Jariego, 2004; Nowacki, 2005; Ohmer, 2004; Omoto & Snyder, 2002; Perkins, Hughey & Speer, 2002; Peterson & Reid, 2003; Peterson & Speer, 2000; Peterson, Speer, & Hughey, 2006; Puddifoot, 2003; Wright, 2004; Yasuda, Hughey, Peterson, Saito & Kubo, 2007). For example, Keough (2003) applied the COSOC in a study of music bands in the United States, while Yasuda et al. (2007) used the COSOC to study citizen participation in community organizations in Japan.

Given its breadth of application, a brief review of the COSOC's development is useful. Hughey et al. (1999) proposed a framework and measure for SOC in community organizations that included four components: (1) relationship to the organization, (2) organization as mediator, (3) influence of the organization, and (4) bond to the community. The four components were intended to address the specificity of how SOC might distinctly manifest in community organizations, embedded as they often are within complex interorganizational and institutional transactions (Sarason, 1974). Hughey et al. (1999) observed that, "Within community organizations individuals form attachments to one another; but they also take action, via their organizations, that may change other settings and institutions in their communities (p. 99)." Therefore Component 1, relationship to the organization, was intended to tap the customary interpersonal bonding features of SOC, principally focused on mutual understanding of individual interests. Component 2 represented members' perceptions of the extent to which their community organization served as a boundary spanning or mediating mechanism to other groups and the broader community. Components 1 and 2 reflected the twin organizational regularities of internal organizational processes and relations with external groups. Extending the logic of organizational interdependence, Component 3 represented perceptions of an organization's engagement with and influence on the broader community or city, whereas Component 4 incorporated individuals' attachment to city or town, also a customary element of SOC. Taken together, the four components encompassed multiple SOC referents that were included in one 16-item measure. That measure, however, is in need of improvement for methodological and empirical reasons and to shorten the instrument to make it more useful for researchers and community practitioners.

Two studies were presented by Hughey et al. (1999) that tested the validity of the COSOC. Using principal components factor analysis, the four hypothesized factors emerged in their first study, but their second study failed to reproduce this 4-factor structure, showing instead a 3-factor structure for the COSOC. These three factors included one representing the bond to community, another for organization as mediator, and a third factor which combined negatively worded items from the other two putative dimensions (i.e., relationship to organization and influence of the organization). Principal components analyses were customary at the time in SOC studies, but researchers have increasingly adopted the more rigorous analytic technique of confirmatory factor analysis (CFA; e.g., Long & Perkins, 2003; Obst & White, 2004; Proescholdbell, Roosa & Nemeroff, 2006; Tartaglia, 2006). Despite later verification of the COSOC's 3-factor structure using CFA, Hughey, Peterson, Lowe, and Oprescu (in press) pointed to the need for future studies to investigate whether method bias from the mixed use of positively and negatively items might account for the failure to distinguish the dimensions of relationship to organization and influence of the organization. Recent research suggests that this practice of mixing both positively worded and negatively worded items may have a detrimental effect on

psychometric properties associated with other measures of SOC (Peterson et al., 2006), and that future research should investigate and, if needed, rectify this measurement problem. The mixed use of positively and negatively worded items is a technique that is frequently used by researchers to safeguard against acquiescent behaviors of respondents and response set bias. The limitations of this practice, however, can involve problems with a measure's factor structure and internal consistency (Barnette, 2000; Schmitz & Baer, 2001). Consequently, the mixed use of positively worded and negatively worded items should be avoided.

In the current study, we used CFA to test the hypothesized structure of the COSOC, the potential effects of method bias on psychometric properties, and whether a revised and shorter version of the COSOC, which included only positively worded items, resulted in improved model-to-data fit. Given the preeminence of SOC in community psychology, the importance of valid measures for community research and action, and the findings of Hughey et al.'s (1999; in press) studies, it is necessary to test the possible effect of method bias on the COSOC. One effective strategy to examine the effects of method bias on the factor structure of a scale was described by Bollen and Paxton (1998). Their approach, applied in our present study, involves including method-specific factors within the model being tested. Method bias can thus be assessed by comparing the model with the method factors against the model without the method factors. Here, new COSOC items will also be evaluated using CFA. We further tested the construct validity of the COSOC, with new items, through examination of partial correlations with related variables (i.e., psychological empowerment, reports of participation in community activities beyond the organization, and organizational involvement). Based on previous work, we expected the new COSOC to be positively associated with psychological empowerment (Itzhaky & York, 2000; Long & Perkins, 2003), participation in community action activities (Speer & Peterson, 2000), and organizational involvement (Speer, 2000). Considering the interest in SOC in community-based research and practice, as well as the widespread use of the COSOC, it is essential to test and redress method bias that may have a detrimental effect on the psychometric properties associated with this instrument.

STUDY 1: METHOD

Participants

Study 1 included two samples of participants. Participants in the first sample ($n = 724$) were randomly selected community residents who were interviewed in year 2002 as part of an evaluation study of a community-organizing initiative implemented in five U.S. cities. These cities included two eastern cities, two midwestern cities, and one urbanized area of the mountain region. Across the five communities, 761 randomly selected residents participated in the survey. Of these individuals, 747 reported membership in at least one community organization, and 724 of these individuals completed all COSOC items using as a referent the organization in which they most often participated. Consistent with recommendations in the SOC measurement literature (Long & Perkins, 2003), we used only cases with complete COSOC data. This sample ($n = 724$) was 64% female, 22% Black or African American, six% Latino or Hispanic, 65% White, non-Hispanic, and the remaining were of some other racial or ethnic background. Thirty-one percent was age 18–34, 23% was 35–44, 20% was 45–54, 12% was 55–64, and 14% was age 65 or older. Eleven percent reported annual

household income of less than \$15,000, 12% reported income between \$15,000 and less than \$25,000, 29% reported income of \$25,000 to less than \$45,000, 26% reported income \$45,000 to less than \$70,000, and 22% reported income of \$75,000 or more. Educationally, 3% had less than a high school education, 19% had completed high school, 28% had some college, 29% had a college degree, and 21% had a graduate degree.

Participants in the second sample ($n = 508$) were randomly selected community residents who were members of community-organizing initiatives in each of the five cities. These individuals were also interviewed in year 2002 as part of an evaluation study. Across the five community organizations, 562 members participated in the survey. Of these individuals, 508 completed all COSOC items and were included in this analysis. This remaining sample ($n = 508$) was 66% female, 33% Black or African American, 5% Latino or Hispanic, and 56% White, non-Hispanic. Eleven percent was age 18–34, 15% was 35–44, 25% was 45–54, 23% was 55–64, and 26% was age 65 or older. Eight percent reported annual household income of less than \$15,000, 9% reported income between \$15,000 and less than \$25,000, 32% reported income of \$25,000 to less than \$45,000, 28% reported income \$45,000 to less than \$70,000, and 23% reported income of \$75,000 or more. Educationally, 5% had less than a high school education, 16% had completed high school, 25% had some college, 28% had a college degree, and 26% had a graduate degree.

Measure

Community Organization Sense of Community. The measure of SOC in Study 1 was the 16-item COSOC (Hughey et al., 1999). Items are shown in Appendix A. Respondents in Sample 1 and Sample 2 answered all COSOC items using a 5-point, Likert-type format ranging from “strongly agree” to “strongly disagree.” All negatively worded items were recoded prior to analysis. Based on the Hughey et al. (1999) conceptual model, items were hypothesized as representing four subscales: (a) relationship to the organization, (b) organization as mediator, (c) influence of the organization, and (d) bond to the community. Coefficient alphas among the subscales for Sample 1 were .76 for relationship to the organization ($M = 3.90$, $SD = .73$), .64 for organization as mediator ($M = 3.78$, $SD = 1.01$), .53 for influence of the organization ($M = 3.73$, $SD = .86$), and .77 for bond to the community ($M = 4.11$, $SD = .94$). Coefficient alphas among the subscales for Sample 2 were .78 for relationship to the organization ($M = 3.97$, $SD = .71$), .77 for organization as mediator ($M = 3.67$, $SD = 1.11$), .42 for influence of the organization ($M = 3.77$, $SD = .75$), and, .74 for bond to the community ($M = 4.35$, $SD = .82$).

Procedures

The sampling frame for the first sample was developed using a telephone directory in electronic format. A simple random sample was then selected. The sampling frame for the second sample was developed using a list of participants in each organization over the last year. A random sample of participants from each organization was then contacted. The surveys were administered through telephone interviews lasting approximately 25 minutes. Both studies received appropriate Institutional Review Board approval and all procedures were consistent with ethical guidelines.

Table 1. Overall Fit Statistics for Community Organization Sense of Community Scale (COSOC) Confirmatory Factor Analyses, Study 1

Measures of fit	Models			
	Model 1: 4-Factor COSOC		Model 2: 4-Factor COSOC with method factors	
	Sample 1 (n = 724)	Sample 2 (n = 508)	Sample 1 (n = 724)	Sample 2 (n = 508)
χ^2	343.977	340.077	150.966	116.967
df	98	98	81	81
p-value	<.001	<.001	<.001	<.01
Discrepancy/df	3.510	3.470	1.864	1.444
GFI	.937	.908	.974	.972
AGFI	.912	.873	.957	.953
TLI	.896	.870	.964	.977
CFI	.915	.894	.976	.984
ECVI	.581	.821	.361	.448
(90% CI)	(.508, .664)	(.717, .939)	(.318, .414)	(.399, .512)
RMSEA	.059	.070	.035	.030
(90% CI)	(.052, .066)	(.062, .078)	(.026, .043)	(.016, .041)

Note. 4-Factor COSOC based on the Hughey et al. (1999) framework (i.e., relationship to the organization; organization as mediator; influence of the organization; bond to the community).

Table 2. Standardized Regression Weights for Community Organization Sense of Community Scale (COSOC) Confirmatory Factor Analyses, Model 2, Study 1

Item	Model 2: 4-Factor COSOC with Method Factors, Sample 1 (n = 724)						Model 2: 4-Factor COSOC with method factors, Sample 2 (n = 508)					
	RO	OM	IO	BC	Pos.	Neg.	RO	OM	IO	BC	Pos.	Neg.
COSOC1	.618				.244		.357				.626	
COSOC2	.387				.704		.303				.680	
COSOC3	.451					.493	.520					.248
COSOC4	.542					.417	.696					.255
COSOC5	.281				.189		.178				.527	
COSOC6	.545					.473	.692					.243
COSOC7	.371					.506	.377					.628
COSOC8		.665			.320			.718			.429	
COSOC9		.799			.000			.619			.407	
COSOC10		.371			.253			.455			.455	
COSOC11			.309			.226			.147			.101
COSOC12			.691			.396			.717			.344
COSOC13			.479		.231				.550		.225	
COSOC14				.690		.116				.830		.019
COSOC15				.874	.050					.680	.184	
COSOC16				.634	.115					.590	.231	

Note. RO = Relationship to the organization; OM = organization as mediator; IO = influence of the organization; BC = bond to the community; Pos. = positively worded method factor; Neg. = negatively worded method factor. Items correspond to the COSOC as shown in Appendix A.

Analytic approach. In Study 1, CFAs were performed, using two data sets, to test two models: Model 1, the 4-factor COSOC (Hughey et al., 1999) and Model 2, the 4-factor COSOC with the two method factors (i.e., positively worded items and negatively

worded items). A CFA was conducted using maximum likelihood estimation procedures of AMOS 4.01 (Arbuckle & Wothke, 1999) and the indices that were interpreted are considered to be acceptable measures of fit (Hoyle, 1995).

RESULTS

Study 1 results are shown in Tables 1 and 2. Table 1 presents fit indices for the two models that were tested in this study. As can be seen in Table 1, the 4-factor solution for the COSOC (Model 1) provided the poorest fit to the data from both samples. The discrepancy χ^2 was significant for both models; however, this goodness-of-fit statistic is often considered too stringent and an unrealistic standard. Conversely, the other fit indices indicate that Model 2 provided a good fit to the data from both samples. The discrepancy-to-*df* ratio was below 2 in both samples only for Model 2, while the Goodness-of-Fit Index (GFI), Adjusted Goodness-of-Fit (AGFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) were all above .90 only for Model 2 in both samples. The Expected Cross-Validation Index (ECVI) values and the root mean square of error approximation (RMSEA) values showed the same pattern. Higher ECVI and RMSEA values indicated poorer fit for Model 1, whereas lower values indicate better fit for Model 2.

Table 1 also presents the 90% confidence intervals (CIs) for the ECVI and the RMSEA. The 90% CIs are important because they indicate differences in fit between Models 1 and 2, which are not hierarchically nested. The 90% CIs allow comparison between Model 1 (i.e., the 4-factor COSOC) and Model 2 (the COSOC with the two methods factors) by examining the extent of overlap between the models. As can be seen in Table 1, the CIs did not overlap between Models 1 and 2, indicating that the two models fit the data differently. Model 2, which had the smallest ECVI and RMSEA values, may be interpreted as fitting the data better than Model 1 for both samples.

Table 2 shows the standardized loadings for Model 2, which provided a good fit to the data from both samples. The standardized loadings represent the strength of each COSOC item in relation to the hypothesized COSOC factors (i.e., relationship to organization, organization as mediator, influence of the organization, and bond to community) and method factors (i.e., positively and negatively worded items) that were tested in Study 1. The loadings for Model 2 shown in Table 2 indicate that, among Sample 1 respondents, five of the seven items in the first subscale (i.e., COSOC2, COSOC3, COSOC4, COSOC6, and COSOC7) produced strong loadings ($>.30$) for both the hypothesized factor (relationship to the organization) and the corresponding method factor. In addition, one of the three items (COSOC8) in the second subscale (organization as mediator) and one of the three items (COSOC12) in the third subscale (influence of the organization) loaded on both the hypothesized COSOC factor and the corresponding method factor among Sample 1 participants, indicating method bias.

The standardized loadings for Sample 2 participants, which are also shown in Table 2, showed the same pattern. Specifically, three out of the seven items in the first subscale (COSOC1, COSOC2, and COSOC7) had strong loadings on both the hypothesized and corresponding method factor, while one item (COSOC5) in the first subscale loaded only on the method factor. Additionally, all three of the items in the second subscale (COSOC8, COSOC9, and COSOC10) and one item (COSOC12) in the third subscale loaded on both the hypothesized factor the corresponding method factor. Overall, CFA results for both samples provided clear evidence that method bias from the mixed use of positively and negatively worded items had an effect on the factor structure of the COSOC.

STUDY 2: METHOD

Sample

In Study 2, participants were community residents ($n = 151$) who were active volunteer members of community partnerships located in a midwestern U.S. state. These individuals were interviewed in year 2006 as part of an evaluation study of the partnerships. The partnerships were funded in year 2006 by a state public health department to address issues related to obesity or tobacco use in their communities. This sample of individuals was 77% female, 99% White, non-Hispanic, and 1% Hispanic or Latino. The racial/ethnic percentages for the sample were consistent with census data from the counties in which the samples were drawn. Fourteen percent was age 18–34, 29% was 35–44, 31% was 45–54, 19% was 55–64, and 7% was age 65 or older. Three percent reported annual household income of less than \$30,000, 24% reported income between \$30,000 and less than \$50,000, 18% reported income of \$50,000 to less than \$60,000, and 55% reported income of \$60,000 or more. Educationally, 2% had completed high school, 12% had some college, 54% had a college degree, and 32% had a graduate degree.

Measures

Revised Community Organization Sense of Community Scale (COSOC-R). The measure tested in Study 2 was an 8-item scale, henceforth referred to as the Revised Community Organization Sense of Community Scale (COSOC-R), which included only positively worded items. Based on recommendations in the SOC literature (Long & Perkins, 2003), we also took this opportunity to create a shorter version of the COSOC that could more easily be administered in applied community contexts. These COSOC-R items were developed primarily by the third author of this study by converting the negatively worded items into positively worded statements, which were then reviewed by the co-authors. The items were hypothesized as representing four components as conceptualized in the Hughey et al. (1999) framework: (a) relationship to the organization, (b) organization as mediator, (c) influence of the organization, and (d) bond to the community. Respondents answered items of the COSOC-R using a 6-point, Likert-type format ranging from “*strongly agree*” to “*strongly disagree*.” The eight items included in the COSOC-R are presented in Appendix B.

Psychological empowerment. The measure of psychological empowerment used in this study was the revised version of the Sociopolitical Control Scale (SPCS-R; Peterson, Lowe, Hughey, Reid, Zimmerman & Speer, 2006; Zimmerman & Zahniser, 1991). The 17-item SPCS-R was designed to measure self-perceptions concerning individuals’ abilities to organize people and influence policy decisions in a local community. Support for both the content and construct validity of the SPCS-R was found in the Peterson et al. (2006) study. Respondents in this study answered SPCS-R items using a 6-point, Likert-type format ranging from “*strongly agree*” to “*strongly disagree*.” The 17 items were combined in this study to provide a single measure of psychological empowerment.

Community participation and organizational involvement. The measure of community participation used in this study was an 8-item scale that assessed civic involvement and participatory behaviors in community-action activities. Items asked respondents to indicate their frequency of participation in a variety of community groups and events (e.g., signed a petition, written a letter to influence local policies, attended a public

meeting to pressure for a policy change) over a 3-month period. The measure of organizational involvement was one item that asked respondents to indicate their level of involvement in their partnership. Respondents answered the items of both measures using a 5-point scale ranging from “not at all” to “five times or more.”

Procedures

The sampling frame for this sample was the membership roster of each partnership. A census of each partnership was then attempted. The surveys were administered through standard mail and Web survey techniques. Respondents completed the survey in about 15 minutes. The study received appropriate Institutional Review Board approval and all procedures were consistent with ethical guidelines.

Analytic approach. A CFA was performed to test the 4-factor structure (i.e., relationship to the organization, organization as mediator, influence of the organization, bond to the community) of the COSOC-R. A CFA was conducted using maximum likelihood estimation procedures of AMOS 4.01 (Arbuckle & Wothke, 1999) and the indices that were interpreted are considered to be acceptable measures of fit (Hoyle, 1995). Coefficient alphas, descriptive statistics, and partial correlations were then computed for the overall COSOC-R, its dimensions, as well as for psychological empowerment, organizational involvement, and participation in community activities. Demographic variables, including age, gender, education, and income, served as covariates in the partial correlation analysis.

RESULTS

Study 2 results are shown in Tables 3, 4, and 5. Table 3 presents fit indices and Table 4 shows the standardized loadings for the COSOC-R tested in this study. Table 5 shows coefficient alphas, descriptive statistics, and partial correlations between the overall

Table 3. Overall Fit Statistics for Revised Community Organization Sense of Community Scale (COSOC-R) Confirmatory Factor Analysis, Study 2

<i>Measures of fit</i>	<i>4-Factor COSOC-R (n = 151)</i>
χ^2	16.385
<i>df</i>	14
<i>p</i> -value	.290
Discrepancy/ <i>df</i>	1.170
GFI	.972
AGFI	.932
TLI	.994
CFI	.997
ECVI	.400
(90% CI)	(.380, .499)
RMSEA	.034
(90% CI)	(.010, .057)

Note. 4-Factor COSOC-R based on the Hughey et al. (1999) framework (i.e., relationship to the organization; organization as mediator; influence of the organization; bond to the community).

Table 4. Standardized Regression Weights for Revised Community Organization Sense of Community Scale (COSOC-R) Confirmatory Factor Analysis, Study 2

Item	4-Factor COSOC-R, (n = 151)				
	RO		OM	IO	BC
COSOC-R1	.912				
COSOC-R2	.872				
COSOC-R3			.824		
COSOC-R4			.885		
COSOC-R5				.894	
COSOC-R6				.931	
COSOC-R7					.918
COSOC-R8					.932

Note. RO = Relationship to the organization; OM = organization as mediator; IO = influence of the organization; BC = bond to the community. Items correspond to the COSOC-R as shown in Appendix B.

Table 5. Coefficient Alphas, Descriptive Statistics, and Partial Correlations Between Revised Community Organization Sense of Community (COSOC-R) Dimensions and Conceptually Relevant Variables, Study 2

	α	M	SD	1	2	3	4	5	6	7	8
Overall COSOC-R	.87	3.80	.76	-	.85**	.84**	.89**	.48**	.18*	.16	.30**
Relationship to the organization	.88	3.72	1.02	-	.61**	.78**	.18*	.17*	.22**	.25**	
Organization as mediator	.84	3.54	1.03		-	.70**	.22*	.04	.03	.29**	
Influence of the organization	.91	3.90	1.04			-	.19*	.06	.13	.24**	
Bond to the community	.92	4.06	.84				-	.33**	.10	.14	
Psychological empowerment	.88	3.51	.74					-	.52**	.06	
Community participation	.79	1.20	.60						-	.11	
Organizational involvement	NA	2.11	1.31							-	

Note. Covariates in the partial correlation analysis: age, gender, education, and income. NA = Not Applicable. * $p < .05$; ** $p < .01$.

COSOC-R, its subscales, and a set of variables that might be related to SOC. As can be seen in Table 3, the 4-factor solution for the COSOC-R provided good model-to-data fit. For the model presented in Table 3, the discrepancy χ^2 was not statistically significant and the discrepancy-to-*df* ratio was below 2. In addition, the GFI, AGFI, TLI, and CFI were all above .90. The ECVI and RMSEA values showed a similar pattern with low values indicating that the model provided a good fit to the data from the sample in Study 2. More specifically, the RMSEA value was .034, indicating good model-to-data fit.

As can be seen in Table 4, all of the loadings for the COSOC-R items were strong, with loadings greater than .80. Strong reliabilities were also found for the COSOC-R and its subscales, as presented in Table 5, with coefficient alphas ranging from .84 to .92. Partial correlation results shown in Table 5 indicated statistically significant relationships between the COSOC-R subscales. The strongest associations were among the first three COSOC-R subscales (relationship to organization, organization as mediator, and influence of the organization) with partial correlations ranging from .61 to .89. These COSOC-R subscales were also significantly, though less strongly, associated with the fourth COSOC-R subscale (bond to community) with partial correlations ranging from .18 to .22. In addition, the COSOC-R and its subscales were significantly associated with the set of

conceptually relevant variables. The strongest partial correlations were between bond to community and psychological empowerment ($r = .33, p < .01$) and between organization as mediator and organizational involvement ($r = .29, p < .05$).

DISCUSSION

In this article, we reported on two studies that tested the hypothesized factor structure of the COSOC, a widely cited or applied measure of SOC in community organizations. Results from both samples in Study 1 suggested that method bias had an effect on the factor structure of the original COSOC. Study 2 results, however, showed that the revised version of the COSOC (COSOC-R), which included only positively worded statements, confirmed the originally hypothesized 4-factor model of relationship to the organization, organization as mediator, influence of the organization, and bond to the community. Findings of Study 2 also indicated that the revised subscales of the COSOC-R representing the four dimensions were highly reliable and related in expected ways with measures of psychological empowerment, community participation, and organizational involvement. Findings of these studies, which demonstrated the detrimental effect of method bias on the COSOC's factor structure, the advantage of converting negatively worded items, and the improved validity of the COSOC-R, are valuable to the SOC construct, its measurement, and the evaluation of initiatives that aim to promote SOC in community organizations.

This measure of SOC—with its focus on SOC in an organizational context—represents an infrequently taken, yet important, direction in the evolution of the SOC construct (Hill, 1996; Hughey & Speer, 2002; van Uchelen, 2000). The predominant focus of current SOC research at the individual level—an individual's experience of interpersonal bonding—is worthwhile, but this emphasis in the literature has come at the expense of not recognizing interdependent relations among organizations and institutions, the fundamental building blocks of communities (Long, 1958), nor conditioning relational ties with the organizational function of linking individuals to other organizations as possible promoters of change. Although the COSOC-R does not directly measure SOC at the organizational or community levels per se, it provides, in one 8-item measure, a reliable and valid appraisal of individuals' experience of relationships within organizations, their experience of their organization as a mediating or bridging mechanism, their perception of the organization's sway in their community, and their bond to the broader environment of community as place. The ability to accurately measure SOC in a community organization context also has implications for organizational learning.

It has been argued that to address the confluence of social, economic, health, and other community problems, community organizations must learn, transform, and facilitate empowerment at multiple levels of change, i.e., individual, organizational, and community (Perkins et al., 2007; Schneider, Peterson, Vaughn, Mooss & Doebbeling, 2006). One study of an earlier version of the COSOC showed SOC to be an important empowering organizational characteristic (Hughey et al., in press). The work of Perkins et al. (2007) convincingly showed how internal transformation in community organizations is part of the extraorganizational milieu that affects resources available to individuals and organizations. Consequently, community-change efforts might benefit from future research that quantitatively tests relationships between organizational SOC, organizational empowerment, and organizational learning.

Although this instrument may have value to research that explores individuals' experiences within the organizations and institutions in which they are embedded

(Sarason, 1986), it may be more important in addressing individuals' perceptions of how their organizations might influence the broader community environment. Perhaps the most vital theoretical implication of this study's findings was the retention and confirmation of the four dimensions of the COSOC's, now COSOC-R's, underlying conceptual framework. In earlier research, Hughey et al. (1999) found the instrument produced either three dimensions or four dimensions, depending on the sample. With the elimination of method bias, the 4-factor model was confirmed. In the 4-factor structure, a crucial factor retained was that of "influence of the organization." This dimension echoes Sarason's (1993) emphasis on the importance of "impacting the scheme of things" (p. 188) as essential in understanding SOC. This notion is central, in our opinion, to elaborating the SOC construct beyond interpersonal relations. Future work is needed, however, to examine whether the four dimensions identified in the Hughey et al. (1999) framework may be considered as representing one underlying SOC construct. Given the strong associations found in our Study 2 between the dimensions with an organizational referent (i.e., relationship to organization, organization as mediator, and influence of the organization) and their relatively weak associations with the dimension involving a community referent (i.e., bond to the community), additional studies are needed to verify a possible second-order structure of the COSOC-R.

As researchers in community psychology and related disciplines seek to understand and promote SOC and, ultimately, change in communities, an understanding of people's experience of community life—both internal to settings and beyond to wider community environments—is critical. As recently addressed by scholars from political science, sociology, and other fields of urban studies, the challenge to community organizations in the face of globalization is to address the shortcomings of "localism" in efforts that promote participation and community involvement (Burns, 2007; Orr, 2007; Wagner, 2006). For instance, Wagner's (2006) analyses of how individuals and organizations are struggling to rebuild their New Orleans communities show that interpersonal bonding has been an important yet insufficient factor in the relationships that organizational participants need to rebuild their lives. Their sense of their communities has been characterized largely by the interrelationships between their own community organizations and those institutions responsible for the now chronic debacle (e.g., U.S. Army Corps of Engineers). The implication of this phenomenon for community psychology is that efforts should be made to move further toward an understanding of how SOC is manifested and functions in the face of forces, at metropolitan, regional, and global scales, which impact local communities. The exploration of how SOC operates beyond immediate settings represents a pivotal aspect of theory that is in need of greater empirical study using conceptually appropriate and validated measures.

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APPENDIX A

Original Community Organization Sense of Community Scale (COSOC)

<i>Concept</i>	<i>Item</i>	<i>Item wording</i>
RO	COSOC1	If I were in trouble, I could count on people in (organization name) to help.
RO	COSOC2	I trust the leaders of (organization name) to do what is best for me.
RO	COSOC3	Most members of (organization name) forget the meaning of sisterhood/brotherhood when they get out of the meetings. (Negatively Worded)
RO	COSOC4	People have no say about what goes on in (organization name). (Negatively Worded)
RO	COSOC5	My goals for (organization name) are pretty much the same as everybody else's.

<i>Concept</i>	<i>Item</i>	<i>Item wording</i>
RO	COSOC6	No one in (organization name) responds to what I think is important. (Negatively Worded)
RO	COSOC7	Everyone in (organization name) is pushing in different directions. (Negatively Worded)
OM	COSOC8	(Organization name) helps me to be a part of other groups in this city.
OM	COSOC9	Because of (organization name), I am connected to other groups in this city.
OM	COSOC10	Being in (organization name) allows me to be around important people.
IO	COSOC11	(Organization name) gets overlooked in this city. (Negatively Worded)
IO	COSOC12	(Organization name) gets very little done in this community. (Negatively Worded)
IO	COSOC13	(Organization name) has had a part in solving at least one problem in this city.
BC	COSOC14	I would really live in a different town; (city name) is just not the place for me. (Negatively Worded)
BC	COSOC15	(City name) is a good place for me to live.
BC	COSOC16	Living in (city name) gives me a sense of community.

Note. COSOC originally published in Hughey et al. (1999). Concepts based on the four dimensions identified in the Hughey et al. (1999) framework: RO = relationship to the organization; OM = organization as mediator; IO = influence of the organization; BC = bond to the community.

APPENDIX B

Revised Community Organization Sense of Community Scale (COSOC-R)

<i>Concept</i>	<i>Item</i>	<i>Item wording</i>
RO	COSOC-R1	People have a real say about what goes on in (organization name).
RO	COSOC-R2	People in (organization name) respond to what I think is important.
OM	COSOC-R3	Being in (organization name) allows me to be around important people
OM	COSOC-R4	(Organization name) helps me to be a part of other groups in this city.
IO	COSOC-R5	(Organization name) is respected in this city.
IO	COSOC-R6	(Organization name) gets a lot done in this community.
BC	COSOC-R7	I like living in this town; (city name) is the place for me.
BC	COSOC-R8	(City name) is a good place for me to live.

Note. Concepts based on the four dimensions identified in the Hughey et al. (1999) framework: RO = relationship to the organization; OM = organization as mediator; IO = influence of the organization; BC = bond to the community.