

# Reliability and Validity of a Multidimensional Measure of Subjective Community Well-Being

Assessment

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## Abstract

An individual's flourishing is sustained by and dependent on their community's well-being. We provide one of the first studies of a measure of communal subjective well-being, focusing on individuals' relationships with their community. Using two samples from the Greater Columbus, Ohio region, we provide evidence of the reliability and validity of the Subjective Community Well-being (SCWB) assessment. The five domains of the SCWB are Good Relationships ( $\alpha = .92$ ), Proficient Leadership ( $\alpha = .93$ ), Healthy Practices ( $\alpha = .92$ ), Satisfying Community ( $\alpha = .88$ ), and Strong Mission ( $\alpha = .81$ ). A community-based sample ( $N = 1,435$ ) and an online sample of Columbus residents ( $N = 692$ ) were scored on the SCWB and compared across domains. We found evidence that the SCWB scores differentiate between active and less active community members. We discuss the appropriate uses of the SCWB as a measure of well-being and provide recommendations for research that could profitably utilize the SCWB measure to examine community well-being.

## Keywords

well-being, community, flourishing, validity, reliability

To flourish means to grow, prosper, and thrive, numerous aspects of a person's life are good (VanderWeele, 2017; VanderWeele et al., 2019). The determination of whether a person is flourishing requires a holistic appraisal of the most important ends of human life, as well as the broader community context (Hone et al., 2014; Lee, Kubzansky, & VanderWeele, 2021; Silva & Caetano, 2013; VanderWeele, 2019; Weziak-Bialowolska et al., 2019b; Weziak-Bialowolska, et al., 2020). There will always be some disagreement about the ends that are most important, but it is relatively clear that certain domains are nearly universally valued across cultures as ends in themselves rather than primarily as means to ends (Lee, Weziak-Bialowolska, et al., 2021). At the individual level, such ends would arguably entail at least five domains: happiness and life satisfaction, physical and mental health, meaning and purpose, character and virtue, and close social relationships (VanderWeele, 2017). The inclusion of additional domains may vary across cultural groups. For example, religious individuals value communion with God (or the transcendent), whereas nonreligious individuals might not. However, imagining a flourishing life that would not include these five fundamental domains is difficult. Some level of financial and material security is required to sustain the domains over time.

Individual flourishing is constituted and sustained by communal flourishing. Research continues to identify important cultural differences (Weziak-Bialowolska et al., 2019b) as well as changes over time as social conditions change (VanderWeele et al., 2021). Therefore, a complete assessment of flourishing requires an assessment of individual experiences and group-level factors such as mutuality, belongingness, mission, justice, relational growth, effective leadership, and trust (VanderWeele, 2019). Community flourishing “might be understood as a state in which all aspects of the community's life are good,” including both “objective and subjective aspects” (VanderWeele, 2019, p. 254).

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The importance of the individual–community connection is not always emphasized in the flourishing literature, although scholars are increasingly discussing the integral relationship between the “contextual-social sphere” and the “psychological sphere” (Delle Fave et al., 2016, p. 1; Lee & Mayor, 2023; VanderWeele & Lomas, 2023). VanderWeele’s (2019) measure of Subjective Community Well-being (SCWB) represented an important step forward in integrating individual and communal flourishing. It complements objective measures collected by government organizations, such as the U.S. Census Bureau. By combining a previously validated, six-domain measure of individual flourishing (VanderWeele, 2017; Weziak-Bialowolska et al., 2019a) with a new five-domain measure of community well-being, SCWB provides a comprehensive picture of individuals’ subjective perception of their community’s well-being that can be adapted to a variety of types of “communities”: families, schools, religious communities, workplaces, neighborhoods, cities, states, and nations.

The remainder of this article is organized as follows. Next, we provide a brief overview of existing measures of community well-being and the closely related construct of social well-being. Then, we provide a more in-depth discussion of the theoretical rationale behind the SCWB and the aspects intended to be captured by the measure. We next describe the methods used to collect data and the analytic approach taken. The results of these analyses are described next. Finally, we conclude with a discussion of our recommendations for using the SCWB and how the measure could be enhanced for future work exploring the well-being of communities.

## Theoretical Development of SCWB

The theoretical foundation of the SCWB can be found in VanderWeele (2019). A flourishing community has all areas of life going well. It encompasses objective and subjective individual and aggregate or community features (Lee & Kim, 2016). The measuring of individual subjective well-being has improved, and several individual and community objective metrics are routinely recorded (Allin & Hand, 2017; National Research Council, 2013; OECD, 2013). However, community subjective well-being assessments lack sufficient development. Kim and Lee (2014) found that despite efforts to integrate objective and subjective features, 53 community measures had more objective indicators than subjective. We will focus on community subjective measurements. This is called “community subjective well-being” (or “community well-being” for short) and is distinct from communal flourishing, which includes both objective and subjective dimensions (i.e., “all aspects”).

Much of what is known about subjective community well-being assesses community satisfaction (Lee & Kim, 2016; Sirgy et al., 2010; VanderWeele, 2019). “Overall, how satisfied are you with the quality of life in the Flint area?” (Sirgy et al., 2010) is a sample question. How much do you love living in Flint? How desirable is it? Other items may measure community satisfaction with culture, life, government, or infrastructure (Lee & Kim, 2016). However, is this enough? Satisfaction is vital, but using it alone to determine community well-being appears problematic for various reasons. First, contentment may be high if someone can acquire what they want, not because the society is good or well-functioning. Employees may be content with their jobs because they are highly compensated and get to do what they enjoy daily, not because the firm is well-run with strong working relationships. Community well-being goes beyond satisfaction. Second, community satisfaction may be a “lagging indicator” in many cases, with long-term losses in community well-being generating satisfaction declines. The community’s well-being may diminish for some time without significantly influencing satisfaction due to prior memories, loyalty, a reluctance to alter perceptions, or because it takes time for communal well-being to negatively impact individual experience. Third, contentment alone does not define a good society, but rather whether people and the relationships between them are truly flourishing in it. In sum, while community satisfaction is vital, community well-being seems to go beyond that.

The measure of community subjective well-being evaluated in this study is based on six areas that include but also beyond community satisfaction (VanderWeele, 2019). These are flourishing individuals, good relationships, proficient leadership, healthy practices, a satisfying community, and a strong mission. The first domain, flourishing individuals, concerns the community’s members; the second domain is relations between these individuals; the third domain is relations with authority figures; the fourth domain is structures and practices within a community; the fifth domain is how well these relations and structures create a satisfying community; and the sixth domain concerns the extent to which these relations and structures relate to some further mission or end (VanderWeele, 2019). Before providing the items, we briefly discuss each domain’s motivation.

Every community revolves around its members. Members’ well-being is necessary for communal well-being. Though not independent of individual well-being, communal well-being extends beyond it. To suggest a community is fully thriving while its residents are not would be absurd. We shall address the conceptual and causal relationships between individual and communal well-being below, but at least a community’s well-being

**Table 1.** Subjective Community Well-Being Measure.

Item—label	Item statement
<b>Domain 1. Good Relationships</b>	
Close Relationships	Everyone within Greater Columbus has close relationships.
Respect	Everyone within Greater Columbus is respected.
Trust	Everyone within Greater Columbus trusts one another.
Mutuality	Everyone within Greater Columbus contributes to the well-being of others.
<b>Domain 2. Proficient Leadership</b>	
Beneficence	Leaders in Greater Columbus truly care about the well-being of everyone in the community.
Integrity	Leaders in Greater Columbus can be relied on to do what is right.
Competence	Leaders in Greater Columbus have the skills and understanding they need to lead the community well.
Vision	Leaders in Greater Columbus are able to inspire the community with their vision.
<b>Domain 3. Healthy Practices</b>	
Relational Growth	Greater Columbus has structures and practices that allow relationships to become closer.
Fairness	Greater Columbus has structures and practices that allow the community to deal with conflicts so that everyone is treated fairly.
Sustenance	Greater Columbus has structures and practices that allow the community to sustain itself.
Achievement	Greater Columbus has structures and practices that allow the community to accomplish its goals.
<b>Domain 4. Satisfying Community</b>	
Satisfaction	Everyone in Greater Columbus is satisfied with the way things are in the community.
Value	Everyone in Greater Columbus thinks this is a good community to be a part of.
Belonging	Each person has a sense of belonging in the community.
Welcome	Everyone feels welcome in this community.
<b>Domain 5. Strong Mission</b>	
Purpose	This community's shared purpose or mission to be a good place to live, is clear to everyone.
Contribution	This community contributes to the world to make it a better place.
Interconnectedness	Everyone is needed for the community to fulfill its goals and purposes.
Synergy	This community is able to do more with everyone together than we could individually.

is partly based on its members' well-being. A good community includes individual people doing well. Good relationships are also crucial to community well-being. Community members should be regarded and trusted, with intimate ties. A flourishing community is one where everyone helps others. Excellent community includes "good relationships." Good leadership is essential for a community to grow and last. Leaders should care about the community and its members. Leaders should have the skills and knowledge to lead society and be trustworthy enough to do the right thing. Their aim for communal well-being should inspire others. So, "proficient leadership" helps build and is partially constitutive of a good community.

A healthy community has healthy behaviors. Structures and procedures should help relationships grow; the community survives, resolves conflicts, and achieves objectives. Healthy activities contribute to good communities. Membership in the community should be rewarding. The absence of this usually indicates a problem. Each community member should feel welcome and be able to integrate over time. Each member should think the community is good. Thus, a "satisfying community" contributes to, and is partially constitutive of, a good community. Finally, a good community should serve its goals, which includes improving the wider

world. Everyone should also understand the community's mission. The community thrives if it can do more collectively than everyone can do alone, and everyone is needed to achieve its goals. A "strong mission" helps build, and is partially constitutive of, a good community.

The measure evaluated in this study evaluates thriving individuals, solid connections, skillful leadership, healthy practices, a gratifying community, and a powerful mission. Participants rate the community, not just their satisfaction, in each domain. Even in the "satisfying community" area, people will examine whether everyone is content, not just themselves. Lee and Kim (2016) call these broader community judgments "inter-subjective community well-being."

### *Subjective Community Well-Being Measure*

The items and domains that comprise the SCWB measure were conceptualized in VanderWeele (2019) and were adapted to apply for this study (i.e., the Greater Columbus community). Table 1 shows the 20 statements comprising the SCWB measure, four items representing five domains that extend beyond individual well-being. Respondents were prompted to rate the extent to which they agreed with the statements about the community in

Greater Columbus in terms of the experience of everyone in the community. Each item is measured on a 7-point scale (from 0 = *strongly disagree* to 6 = *strongly agree*), with higher scores indicating greater agreement with the statement. Scores were averaged across the four items in each of the five domains to create domain-specific indices. Utilizing four subjectively appraised items representing five conceptually distinct domains facilitates the assessment of levels of well-being across different aspects of a well-functioning or thriving community in terms of good relationships (D1), proficient leadership (D2), healthy practices (D3), satisfying community (D4), and strong mission (D5).

### Present Study

Building upon previous psychometric research (Silva & Caetano, 2013), the present paper offers the first attempt to provide validity and reliability evidence of the SCWB measure. Because the individual flourishing component of the SCWB has been previously validated (e.g., Węziak-Białowolska et al., 2019a), we restrict our focus to the five community-focused domains. We also developed a brief version of the SCWB for surveys that cannot accommodate the full set of items.

## Method

### Participants and Procedure

The study was funded by The Columbus Foundation, which also led development of the survey instrument in consultations with the Human Flourishing Program, the RAND Corporation, and the City of Santa Monica's Office of Well-being. Sampling and data collection were performed by the Center for Human Resource Research (CHRR) at the Ohio State University. Participants from Franklin County, Ohio (drawn largely from the city of Columbus, the capital of Ohio), were recruited for the present study in two phases. In the first phase, respondents from the American Population Panel (APP) were invited via email and text messages according to the demographic characteristics of Franklin County, including age, gender, race/ethnicity, income, and educational attainment. Respondents from the APP completed the survey online between October 10 and November 1, 2019, and were given a gift card of US\$10 for their time. In the second phase, The Columbus Foundation worked closely with CHRR to prioritize collection from lower-income and racially diverse communities based on learnings from other cities who had expressed past difficulty achieving high response rates to well-being surveys from community residents in these demographic categories. To ensure adequate representation from lower-income and diverse communities, The Columbus Foundation

**Table 2.** Demographic Characteristics of the Columbus Sample.

Characteristic	% in each group	% missing <sup>a</sup>
Gender (female)	56.6	1.5
Age—M (SD)	42.9 (15.6)	3.2
18–29	22.6	
30–49	40.8	
50–64	23.0	
65 or older	10.3	
Race		2.1
Black	32.4	
White	55.7	
Other	9.7	
Education		2.4
Less than high school degree	9.1	
High school diploma or equivalent	19.7	
Some college	21.3	
Associate degree	8.5	
Bachelor's degree	23.4	
Advanced degree	15.5	

Note.  $N_{Total} = 2,127$ ;  $N_{Complete\ Case} = 1,800$ .

<sup>a</sup>% Missing is based on the total sample size; numbers represent percentages unless indicated otherwise. Race "Other" includes Hawaiian, Indian, Asian, and Hispanic.

leveraged its community partnerships to enable CHRR to conduct in-person recruitment through local libraries and with several nonprofit community organizations. Respondents at these community sites had the option of completing the survey via tablet or pen and paper, and in-person recruitment occurred between November 25, 2019, and mid-February 2020. The survey was translated into Spanish and Somalian for Phase 2 and included Somalian and Hispanic outreach efforts. The final number of respondents totaled 2,127 with 690 coming from the APP and the remainder from the in-person recruitment efforts.

Some respondents did not provide complete information, so our final sample consisted of 1,950 adults who answered the questions about their community and provided demographic information. The demographic characteristics of the sample are presented in Table 2. Over half of respondents in the sample were female (58.6%) and White (58.2%), while just under one-third were Black (31.9%), and 9.9% self-identified with another race. The age ranges in the sample were as follows: 23.6% of respondents were 18 to 29 years old, 41.9% were 30 to 49, 23.5% were between 50 and 64, and 11% were age 65 or older. For educational attainment, over one quarter of respondents had less than a high school diploma (8.5%), 19.9% had a high school diploma or equivalent only, 21.7% had some college but no degree, and nearly half had obtained a postsecondary degree (8.7% had associate degrees, 25% had bachelor's degrees, and 16.2% had advanced degrees).

The sample for this study was generally reflective of the population of the county, with the notable exception of race. The Black population in the county was estimated in the 2019 census to be 23.8%, and the Black population in the survey sample was closer to 32%. Similarly, the White population in the county was estimated in the 2019 census to be 66.8% and the sample characteristics were closer to 58%. Our resulting sample contained slightly more of the Black population than the census data estimates, but, overall, our sample is largely representative of the population of Greater Columbus.

## Measures

*Existing Measures of Community Satisfaction.* Evidence for convergence validity was obtained by examining correlations between the SCWB measure and existing community satisfaction measures. One scale and three single-item measures were available for use.

The Neighborhood Cohesion Scale (NCS) includes four items assessing respondents' level of agreement with the following statements about their neighborhood: "I feel like I belong in my neighborhood," "I plan to remain a resident of my neighborhood for a number of years," "I regularly stop and talk to people in my neighborhood," and "I borrow things and exchange favors with my neighbors" (Buckner, 1988; Lochner et al., 1999; Robinson & Wilkinson, 1995). In this sample, coefficient alpha was .88 (.87, .89). We expected that total SCWB measure and domains scores to all positively correlate with scores on the NCS.

In addition, the three single-item measures were social cohesion and neighborhood trust with item, "People in my neighborhood can be trusted" (Sampson et al., 1997); social identification with item, "I see myself as a member of the Columbus community" (Doosje et al., 1995); and civic efficacy with item, "I can influence decisions affecting Columbus" (Taylor & Low, 2010). These measures assess aspects of the quality of one's community and are theoretically similar to community well-being, and therefore, we expected positive associations between the SCWB measure and the other community measures. However, as these dimensions of neighborhood and community are independent from the domains from the SCWB measure, we expected at most only moderate effect sizes.

Correlations between the SCWB measure and two indexes of individual flourishing (Flourishing Index [FI] and Secure Flourishing Index [SFI]; VanderWeele, 2017) were also examined in the sample. In this sample, coefficient alpha was .85 (.84, .86) for the FI and .83 (.82, .84) for the SFI. As individual flourishing and community well-being are conceptually related but distinct

constructs, we expected positive associations and moderate to strong effect sizes.

*Community Engagement as a Criterion.* This study includes an in-person sample gathered primarily through local libraries and an online sample of residents in the Greater Columbus area. These two samples were collected to diversify the demographic groups, secure better representation in specific zip codes not well-covered in the online sample, and ensure that Spanish and Somali speakers would be included. Comparing this in-person sample with the online sample may provide evidence of differences among individuals within the same community that have an a priori expected difference in scores on the SCWB. This is because the in-person respondents were actively engaged with a local community institution (usually a library) in a manner that included being physically present in those spaces, interacting with others, and being willing to remain in the space long enough to participate in the survey. Little is known about the extent to which the respondents in the online sample spend time in local community spaces such as libraries. Although not perfect, using the mode of data collection (in-person vs. online) as a criterion to distinguish between individuals who are higher versus lower on the dimensions of the SCWB provides a reasonable initial proxy for individuals higher versus lower on the SCWB.

## Analytic Strategy

The SCWB measure is conceptualized as a multifaceted construct comprising five related domains (VanderWeele, 2019), and the present analysis tested it as such. All statistical analyses were conducted in R (R Core Team, 2022).

*Psychometric Analyses.* We evaluated the psychometric properties of the SCWB by examining item characteristics, the internal structure of the measure, reliability estimates, standard error of measurement, measurement invariance, and the external relationship with conceptually related variables. Item characteristics were examined using the item locations (means), standard deviations, item-to-total correlations, average item correlations, and empirical item characteristic curves. The internal structure was assessed using exploratory factor analyses. Reliability was assessed using coefficient alpha and alpha if items were omitted.

Standard error of measurement was examined using a single global measure and a conditional standard error of measurement. Conditional standard error of measurement is reported for each potential scale score (mean across items), and we used a generalizability theory

(Brennan, 1998; Huebner & Skar, 2021). In addition, technical details of these estimators are available in our supplemental material.

To explore potential conceptual distinctions among items, we also examined whether, for certain individuals, scores could be comparatively high on particular indicators, and low on others. We thus report individual indicators the extreme quantiles (2.5%, 97.5%) across individual differences in the scores comparing indicators. If, for example, two items are capturing roughly the same conceptual content, one would not expect the 2.5th and 97.5th quantiles of the individual-level differences in responses to the two indicators to be particularly different from one another. Suppose they are notably different from each other. In that case, this indicates that some individuals self-report comparatively higher scores on one indicator than on another and that the conceptual content of the items might, therefore, be quite distinct. The 2.5th and 97.5th quantiles of the individual-level differences are used rather than the minimum and maximum of such differences to allow for the possibility that some individuals misreported or did not understand the content of the items.

A confirmatory factor model based on the five domains was estimated, and the fit of this model is commented on. Then, to explore the dimensionality and local-fit more fully, we employed exploratory factor analysis. Exploratory factor analyses were conducted by first assessing the scree plot of the eigenvalues of the corrected correlation matrix. We used parallel analysis to help identify how many dimensions of variation were implied within each data source. Exploratory factor analyses were then conducted extracting one- and five-factor solutions. The extracted solutions were exacted using full-information maximum likelihood with robust standard errors and rotated using geomin. We compared the solutions based on model fit statistics (model  $\chi^2$  and  $\chi^2$ -difference tests), fit indices (comparative fit index [CFI], root mean square error of approximation [RMSEA], and standardized root mean square [SRMR]), magnitude of factor loadings, and interpretability of solution. All factor analyses were conducted using the *lavaan* package (Rosseel, 2012) in R. Full model results, including residual correlations, are available in our online supplement.

The factor analysis results, item analyses, and item content were used to develop a five-item brief measure of SCWB. An emphasis was placed on item content to maintain fidelity with the overall construct intended to be assessed by the SCWB. The empirical results were used to ensure the selected items align well with each domain. Exploratory factor analysis was conducted on this subset of items to assess dimensionality.

Scores on the SCWB (mean scores for each domain) were correlated with conceptually related variables of neighborhood cohesion, social cohesion, social trust, civic efficacy, flourishing, and secure flourishing. These variables were described in the *Measures* section. Correlations with these related constructions provide valid evidence that scores on the SCWB can be interpreted as a measure of community well-being. Additional validity evidence for interpreting scores from the SCWB was assembled by comparing “known groups” of participants with high community involvement (i.e., participants sampled from libraries and community centers) and a group with lower community involvement (i.e., participants sampled electronically). First, measurement invariance of the full model and brief version was assessed (Millsap, 2012). Configural invariance between groups was assessed using the permutation test approach (Jorgensen et al., 2018). We compared the means of the SCWB domain scores across these two “known” groups using *t* tests and a regression model controlling for age, sex, race, and education.

*Missing Data.* Item-level nonresponse could be observed due to failing to respond to a given item. Analyses in text report on the pairwise complete case data for most analyses (e.g., summary statistics and empirical item characteristics). Factor analyses were conducted using full-information maximum likelihood.

## Results

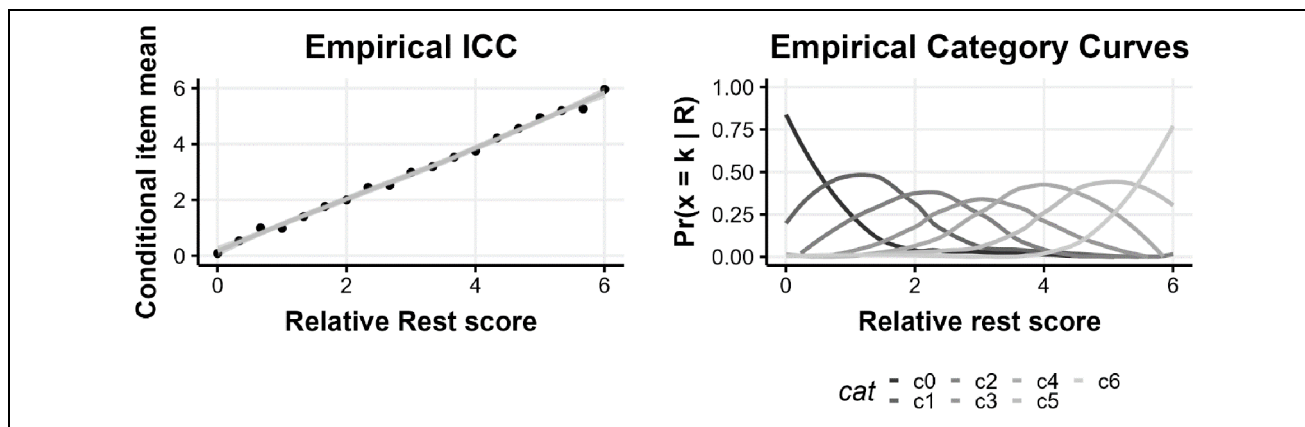
### Item Analyses

The items of the SCWB measure are summarized in Table 3. These data do not show strong evidence of floor or ceiling effects. However, one item that potentially has a ceiling effect is Item *D5.4 Synergy* under the D5 Strong Mission domain, “This community is able to do more with everyone together than we could individually.” The item mean is 4.59 ( $SD = 1.43$ ) which is close to the maximum score of 6, but we think this item to be easy to endorse highly so this result is expected. The item-to-total correlations and average item correlations suggest that the proposed domains align well. The exceptions occurred within the D4 Satisfying Community and D5 Strong Mission domains. Item *D4.2 Value* more strongly correlated with the total score than the domain score, but the average correlation of *D4.2* was higher within the domain. Within the D5 Strong Mission domain, Items *D5.1 Purpose* and *D5.2 Contribution* correlated more strongly with the total score on all items than the domain score. These results give evidence that the domains proposed may provide a reasonable grouping for these items in general.

**Table 3.** Descriptive Statistics of Subjective Community Well-Being Items, Domains, and Composite Measure.

Item—label	% miss	M	SD	ITC		Avg. cor.	
				Total	Domain	Total	Domain
Close Relationships	4.98	3.32	1.66	0.69	0.74	0.53	0.69
Respect	4.80	3.16	1.74	0.76	0.84	0.58	0.76
Trust	4.65	3.00	1.76	0.77	0.86	0.59	0.77
Mutuality	4.70	3.33	1.73	0.78	0.82	0.59	0.74
Beneficence	4.84	3.45	1.64	0.79	0.85	0.60	0.78
Integrity	4.23	3.47	1.66	0.78	0.85	0.60	0.78
Competence	4.98	3.63	1.62	0.78	0.85	0.60	0.78
Vision	4.98	3.64	1.62	0.77	0.84	0.59	0.78
Relational Growth	4.33	3.68	1.48	0.76	0.77	0.58	0.71
Fairness	5.12	3.38	1.65	0.79	0.82	0.60	0.75
Sustenance	4.94	3.57	1.62	0.79	0.85	0.60	0.77
Achievement	5.17	3.66	1.60	0.80	0.85	0.61	0.77
Satisfaction	3.53	2.87	1.80	0.76	0.76	0.58	0.66
Value	3.67	3.72	1.68	0.75	0.71	0.57	0.63
Belonging	4.61	3.45	1.60	0.77	0.76	0.58	0.67
Welcome	4.47	3.35	1.67	0.77	0.78	0.59	0.68
Purpose	3.76	3.58	1.61	0.77	0.58	0.59	0.48
Contribution	3.81	3.81	1.56	0.76	0.68	0.58	0.55
Interconnectedness	3.24	4.33	1.53	0.49	0.63	0.38	0.53
Synergy	3.06	4.59	1.43	0.45	0.63	0.36	0.52

Note.  $N_{total} = 2,127$ ;  $N_{Complete\ Case} = 1,800$ ; range for all items is 0 to 6. ITC = item-to-total correlation without item included; Avg. Cor = average correlation of item with all other items.



**Figure 1.** Empirical Item Characteristics Curves for Item D1.2 Respect.

Note. Categories range from c0 = strongly disagree to c6 = strongly agree. ICC = intraclass correlation coefficient.

However, the items included in the D5 Strong Mission domain may not be operating as expected to assess a single dimension. Instead, the items included in the D5 Strong Mission domain may also be strongly correlated with the other dimensions of the SCWB as evidenced by the stronger item-to-total correlation and item-to-domain correlation.

The empirical item characteristic curve and category functioning curve for Item *D1.2 Respect* are presented in Figure 1. The empirical item characteristic curve

provides evidence that a linear approximation of the relationship between the factor and the item score is plausible. Using the mean response on all other items as an approximation for the factor scores is not without potential limitations (McNeish & Wolf, 2020), but the approximation is a good starting point for understanding how item responses relate to the domain. The category operating characteristic curves similarly provide evidence that each response category provides distinct information about individual differences on all other

**Table 4.** Estimates of Coefficient Alpha and Alpha Without Item With Est. (95% CI of Alpha).

Item	Total	$\alpha$ w/o item	Domain	$\alpha$ w/o item
D1.1 Close Relationships	SCWB Total	.960	D1. Good Relationships	.919
D1.2 Respect	0.961 (0.959, 0.964)	.959	0.918 (0.913, 0.924)	.884
D1.3 Trust		.959		.879
D1.4 Mutuality		.959		.892
D2.1 Beneficence		.959	D2. Proficient Leadership	.914
D2.2 Integrity		.959	0.934 (0.929, 0.938)	.913
D2.3 Competence		.959		.912
D2.4 Vision		.959		.916
D3.1 Relational Growth		.959	D3. Healthy Practices	.914
D3.2 Fairness		.959	0.922 (0.916, 0.927)	.900
D3.3 Sustainance		.959		.888
D3.4 Achievement		.959		.889
D4.1 Satisfaction		.959	D4. Satisfying Community	.850
D4.2 Value		.960	0.884 (0.876, 0.892)	.865
D4.3 Belonging		.959		.850
D4.4 Welcome		.959		.840
D5.1 Purpose		.959	D5. Strong Mission	.785
D5.2 Contribution		.959	0.81 (0.797, 0.823)	.735
D5.3 Interconnectedness		.963		.762
D5.4 Synergy		.963		.765

Note.  $N = 1,800$ . Values in parentheses are the 95% CI for the estimated alpha. CI = confidence interval; SCWB = subjective community well-being.

items on the domain. This is evidenced by a distinct peak for each category. Across all items, the empirical category curves tended to be distinct when using the domain scores (minus the focal item) as the conditioning variable, but categories *disagree* and *somewhat disagree* were not distinct for Items *D1.1 Close Relationships*, *D3.1 Relational Growth*, and *D4.2 Value*. This gave us insight into how individuals in this sample tended to use the lower end of the response scale less than optimally if one's purpose was to distinguish among individuals with low or poor perceptions of community well-being. The full set of item characteristic curves and category operating characteristics curves are provided in our online supplement.

### Reliability and Internal Structure

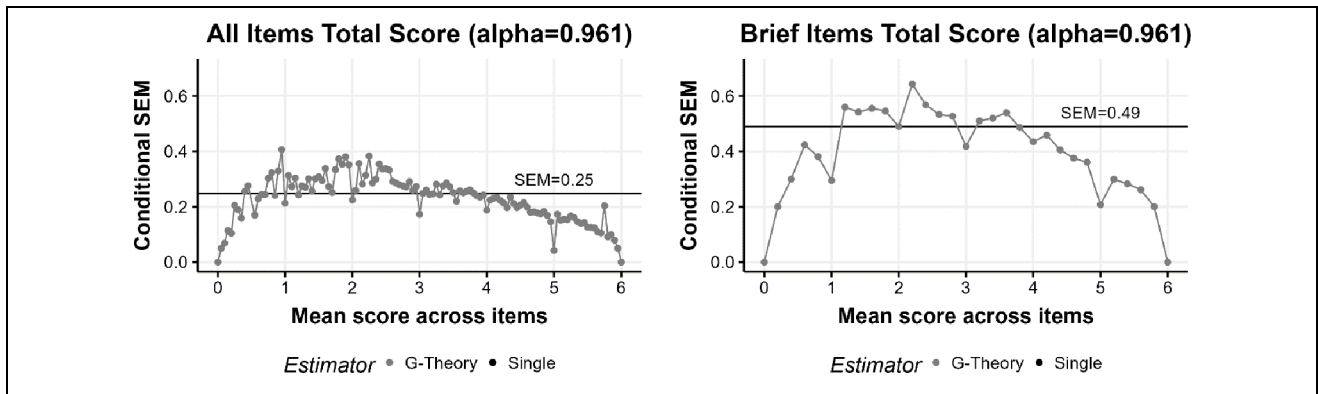
**Internal Consistency.** We estimated the internal consistency using coefficient alpha for the SCWB total scores and domain scores. The estimates of alpha and alpha if item excluded estimates are reported in Table 4. Coefficient alpha for the total score was .961 (.959, .964), and removing any single item did not drop the alpha meaningfully. The D3 Health Practices domain had the highest estimates of coefficient alpha at .934 (.929, .938), and D5 Strong Mission had the lowest estimates at .81 (.797, .823) which is still acceptable. Removing any one item from the domains had a relatively major impact on the alpha because the domains contain only four items, but in general the removal did not reduce estimates of reliability significantly. An

exception is arguable for Item *D5.2 Contribution* which dropped alpha to .73 when removed from the Strong Mission domain. The drop in alpha gives evidence that D5.2 is contributing more to the variance in the Strong Mission relative to the other items within the domain. Taken together, these results provide evidence that the domains of the SCWB are internally consistent.

**Measurement Precision.** If averaging all SCWB items together into a single total score, the single global standard error of measurement is 0.25 scale scores. The single global standard error of measurement for the domain scale scores is 0.45 (Good Relationships), 0.39 (Proficient Leadership), 0.41 (Healthy Practices), 0.50 (Satisfying Community), and 0.54 (Strong Mission). The standard error of measurement for a domain scores of Good Relationships is interpreted as a mean score on the Good Relationships domain is expected to vary by 0.45 scores on average across repeated administration of four-item sets of similar Good Relationship-related items drawn from a hypothetically similar "universe of items." For instance, if an individual scored 3.5 on Good Relationships, we would expect their score to fall between 2.62 and 4.38 with 95% confidence. The global standard error of measurement for the Brief SCWB measure is 0.49.

A single measure of precision is seldom appropriate for all persons. A conditional standard error of measurement estimates across possible scale scores are shown in Figure 2 for the mean across all items and for the brief





**Figure 2.** Conditional SEM for All Items and Brief Subjective Community Well-Being Scale Scores.

Note. SEM = standard error of measure.

measure. The conditional estimates highlight how individuals with extreme scores are more precise, leading to more confidence that individuals who endorse the extremes are likely to endorse at the extremes on similar sets of items. The conditional standard error measurement plots for each domain are available in our Online Supplement.

**Factory Analyses.** First, a confirmatory factor analysis model with five correlated dimensions was tested, and we found evidence of a lack of fit,  $\chi^2(160) = 1,594.3$ ,  $p < .001$ , RMSEA = .085, CFI = .934, SRMR = .044 (our online supplement contains complete results and residuals). We employed exploratory factor analysis to explore the dimensionality and local fit of each item to the theoretical structure. The exploratory factor analysis we conducted found evidence for how items clustered. The scree plot and parallel analysis suggested that the five factors may be sufficient to explain the interitem covariances. The one-and-five-factor solutions are reported in Table 5 for comparison. Separating the items into five domains instead of a single composite fits these data significantly better,  $\tilde{\chi}^2(70) = 4,838$ ,  $p < .001$ . The items generally grouped as expected for items in the D1 Good Relationships, D2 Proficient Leadership, D3 Healthy Practices, and D4 Satisfying Community domains; however, items in the D5 Strong Mission domain did not group as expected. Items D5.1 Purpose and D5.2 Contribution grouped with the D4 Satisfying items. In addition, Item D4.1 Satisfaction loaded moderately strongly (0.34) with items from the D1 Good Relationships domain. Residual correlations for both models are available in our online supplement. These results provide evidence that subjective community well-being can be decomposed into five dimensions roughly aligning with the theoretically motivated structure.

**Structure of SCWB Brief Measure.** The five-item brief measure was composed using items *D1.3 Trust*, *D2.3 Competence*, *D3.4 Achievement*, *D4.1 Satisfaction*, and *D5.1 Purpose* (see Table 1 for item content). We selected these items to cover the five domains intended to be assessed by the full measure. The item characteristics and factor analysis results did not suggest any major issues with how these items operated within each domain. The only potential issue we identified was in assessing the D5 Strong Mission domain using only one item because the factor analyses gave evidence of the potential separation of the items into more than one domain. However, the content is necessary to ensure adequate construct coverage.

A confirmatory factor analysis model with one factor was tested, and we found evidence of a lack of fit,  $\chi^2(170) = 134.4$ ,  $p < .001$ . RMSEA = .134, CFI = .964, SRMR = .028; our online supplement contains complete results and residuals). The results of an exploratory factor analysis focusing on these five items are shown in Table 6. The parallel analysis gave evidence of two factors, and the results of the two-factor solution are included in Table 6. Collapsing these items into a single dimension seems reasonable for the purposes of creating an SCWB Brief Measure. However, the statistical evidence suggests that the brief SCWB is not a perfectly unidimensional measure but could be seen as essentially unidimensional given that only one item, *D4.1 Satisfaction*, loads entirely on a second factor but still shows a strong item-to-total correlation (.74) while item *D1.3 Trust* loads on both factors. The potential misfit of a unidimensional measure using these five items could lead to underestimating the difference between groups and underestimating the relationship with other conceptually related variables. However, the SCWB Brief Measure utilizing these five items provides researchers with a concise approach to measuring community well-being that may prove useful in studies when the full SCWB is not viable due to length constraints.

**Table 5.** Results of the Exploratory Factor Analyses for the Subjective Community Well-Being.

Item	One-factor solution			Five-factor solution						
	$f_1$	$h^2$	$u$	$f_1$	$f_2$	$f_3$	$f_4$	$f_5$	$h^2$	$u$
D1.1 Close Relationships	<b>0.69</b>	0.47	0.53	<b>0.68</b>	0.01	0.01	0.07	0.06	0.58	0.42
D1.2 Respect	<b>0.75</b>	0.57	0.43	<b>0.83</b>	0.02	-0.03	0.08	-0.01	0.78	0.22
D1.3 Trust	<b>0.76</b>	0.58	0.42	<b>0.93</b>	0.00	0.00	-0.02	0.00	0.84	0.16
D1.4 Mutuality	<b>0.77</b>	0.59	0.41	<b>0.79</b>	0.06	0.03	-0.01	0.05	0.75	0.25
D2.1 Beneficence	<b>0.80</b>	0.63	0.37	0.04	<b>0.86</b>	0.00	0.01	-0.03	0.78	0.22
D2.2 Integrity	<b>0.79</b>	0.62	0.38	0.01	<b>0.89</b>	-0.03	0.03	-0.04	0.78	0.22
D2.3 Competence	<b>0.78</b>	0.62	0.38	-0.01	<b>0.86</b>	0.02	-0.01	0.03	0.77	0.23
D2.4 Vision	<b>0.77</b>	0.60	0.40	-0.01	<b>0.85</b>	0.06	-0.05	0.04	0.76	0.24
D3.1 Relational Growth	<b>0.77</b>	0.59	0.41	0.02	0.22	<b>0.55</b>	0.03	0.08	0.64	0.36
D3.2 Fairness	<b>0.81</b>	0.65	0.35	0.06	0.21	<b>0.59</b>	0.08	-0.06	0.71	0.29
D3.3 Sustenance	<b>0.80</b>	0.64	0.36	-0.02	0.00	<b>0.94</b>	-0.01	-0.01	0.84	0.16
D3.4 Achievement	<b>0.82</b>	0.67	0.33	-0.01	0.12	<b>0.83</b>	-0.03	0.03	0.81	0.19
D4.1 Satisfaction	<b>0.75</b>	0.57	0.43	<b>0.34</b>	-0.01	0.21	<b>0.38</b>	-0.09	0.63	0.37
D4.2 Value	<b>0.72</b>	0.52	0.48	0.17	-0.01	0.18	<b>0.43</b>	0.13	0.57	0.43
D4.3 Belonging	<b>0.75</b>	0.56	0.44	0.14	0.09	-0.03	<b>0.68</b>	0.01	0.68	0.32
D4.4 Welcome	<b>0.76</b>	0.58	0.42	0.08	0.00	0.01	<b>0.83</b>	-0.03	0.78	0.22
D5.1 Purpose	<b>0.75</b>	0.57	0.43	0.00	0.01	0.14	<b>0.71</b>	0.06	0.70	0.30
D5.2 Contribution	<b>0.74</b>	0.55	0.45	-0.01	0.08	0.20	<b>0.49</b>	0.21	0.64	0.36
D5.3 Interconnectedness	<b>0.45</b>	0.20	0.80	0.11	0.01	-0.01	0.08	<b>0.74</b>	0.65	0.35
D5.4 Synergy	<b>0.42</b>	0.18	0.82	0.00	-0.02	0.12	0.00	<b>0.86</b>	0.80	0.20
Factor correlation matrix										
$f_1$					0.68	0.68	0.69	0.19		
$f_2$				0.68		0.76	0.66	0.37		
$f_3$				0.68	0.76		0.69	0.31		
$f_4$				0.69	0.66	0.69		0.33		
$f_5$				0.19	0.37	0.31	0.33			

Note.  $N = 2,113$ ; Factor loadings ( $f_i, i = 1, \dots, 5$ ) greater than  $f_i > |0.30|$  are in bold for ease of discussion. RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square.  $h^2$  = communality;  $u$  = uniqueness; one-factor model fit:  $\chi^2(170) = 5,148.5, p < .001$ . RMSEA = .152, CFI = .771, SRMR = .075; and the five-factor model fit,  $\chi^2(100) = 457.9, p < .001$ , RMSEA = .054, CFI = .983, SRMR = .013.

**Table 6.** Results of the Evaluating SCWB Brief Measure Give Adequate Evidence for Use.

Item	ITC	Avg. cor.	$\alpha$ w/o item	One-factor			Two-factor			
				$f_1$	$h^2$	$u$	$f_1$	$f_2$	$h^2$	$u$
D1.3 Trust	0.71	.60	.85	<b>0.77</b>	0.59	0.41	<b>0.38</b>	<b>0.43</b>	0.58	0.42
D2.3 Competence	0.69	.58	.86	<b>0.75</b>	0.56	0.44	<b>0.86</b>	-0.07	0.65	0.35
D3.4 Achievement	0.74	.62	.85	<b>0.80</b>	0.64	0.36	<b>0.79</b>	0.05	0.69	0.31
D4.1 Satisfaction	0.74	.61	.85	<b>0.80</b>	0.64	0.36	0.01	<b>0.95</b>	0.90	0.10
D5.1 Purpose	0.70	.59	.86	<b>0.76</b>	0.58	0.42	<b>0.54</b>	0.24	0.55	0.45
Factor correlation							.75			

Note.  $N = 2,113$ ;  $\alpha = .88$  (.87, .89). Factor loadings ( $f_i, i = 1, 2$ ) greater than  $f_i > |0.30|$  are in bold for ease of discussion. SCWB = subjective community well-being; ITC = item-to-total correlation; Avg. Cor = average correlation of item with other items; RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square.  $h^2$  = communality;  $u$  = uniqueness; one-factor model fit  $\chi^2(5) = 128.6, p < .001$ . RMSEA = .131, CFI = .966, SRMR = .031; and the two-factor model fit  $\chi^2(1) = 6.3, p = .012$ , RMSEA = .054, CFI = .999, SRMR = .006;  $\tilde{\alpha}\chi^2(4) = 117.6, p < .001$ .

*Conceptual Distinctions Assessed by Quantiles of Extreme Differences.* The extreme quantiles (2.5% and 97.5%) for the individual-level differences among domains are reported in Table 7 to examine distinctions across domains and subdomains. There was 2.5% of the sample (i.e., 53 of the 2,127 individuals) who scored 2.00

points or more higher on Good Relationships (D1) than on Proficient Leadership (D2) and also 2.5% of the sample (i.e., 53 of the 2,127 individuals) who conversely scored 3.00 points or more higher on Proficient Leadership (D2) than Good Relationships (D1). Likewise, there was 2.5% of the sample who scored 1.25

**Table 7.** Quantiles of Extreme Differences Distribution of Domain Scores (2.5%, 97.5%).

Domain	(D1)	(D2)	(D3)	(D4)	(D5)
Good Relationships (D1)		(-3.00, 2.00)	(-3.00, 2.00)	(-2.25, 2.00)	(-3.75, 1.25)
Proficient Leadership (D2)	(-2.00, 3.00)		(-2.00, 2.00)	(-2.00, 3.00)	(-3.25, 1.75)
Healthy Practices (D3)	(-2.00, 3.00)	(-2.00, 2.00)		(-1.75, 2.75)	(-3.00, 1.5)
Satisfying Community (D4)	(-2.00, 2.25)	(-3.00, 2.00)	(-2.75, 1.75)		(-3.25, 1.00)
Strong Mission (D5)	(-1.25, 3.75)	(-1.75, 3.25)	(-1.5, 3.00)	(-1.00, 3.25)	

Note. Domain scores were calculated as the mean response to items within domain. The 2.5% tile corresponds to 53 respondents having at least X differences in domain scores.

points or more higher on Good Relationships (D1) than on Strong Mission (D5) and conversely 2.5% of the sample who scored 3.75 points or more higher on Strong Mission (D5) than on Good Relationships (D1). Other differences reported in Table 7 are interpreted analogously. A difference of 3 or more points implies that, on average, an individual responds three or more response categories differently on items in different domains. For example, an individual with a 5.0 average score on Good Relationships (D1) would be positively endorsing the items, whereas the extreme difference implies they respond an average of 2.0 or lower on Strong Mission (D5) would be responding “disagree.” These are substantial differences for a notable proportion of the sample, thereby supporting conceptual distinctions across these domains. Likewise, there was notable evidence for such distinctions at the item level (see Online Supplement) as the differences between the 2.5th and 97.5th quantiles were substantial.

### Validity Evidence

*Evidence Based on Criterion of Group Status.* Evidence for validity based on the criterion of a known group membership was evaluated by comparing scores on the SCWB domains and across a group of high community involvement respondents and low community involvement. Respondents who were recruited in person at community-based locations (local libraries, recreation facilities, etc.) are expected to report higher levels of community well-being compared with respondents who completed the survey online. In the full five-factor model, an assessment of invariance of measurement properties (factor model parameter) provided some evidence in favor of invariance of a structurally similar model across survey modes, but more restricted models provided a significantly worse statistical fit (see online supplement). The brief version was more statistically comparable across survey modes. Additional results from our measurement invariance assessment are provided in our online supplement.

The results of the group criterion evaluation are presented in Table 8. The comparisons indicate that scores on most SCWB domains (except for Strong Mission) were higher among respondents who were surveyed in local libraries compared with those surveyed online ( $p < .001$ ), as expected. Examining differences among the individual items in the Strong Mission domain revealed a significant difference ( $p = .046$ ) between groups on Interconnectedness, with higher scores among respondents who completed the survey in person versus online. Small and nonsignificant differences were observed between the two groups on the other three items: Specifically, the community-based survey group had higher scores on Purpose and Contribution, and lower scores on Synergy, compared with the online survey group. Scores on the SCWB and Brief SCWB measures were also significantly higher ( $p < .001$ ) among respondents who were surveyed in person versus online.

*Evidence Based on Relationships With Other Variables.* The existing measures correlated with the SCWB measures and domains at levels and in directions indicating related but distinct concepts (Table 9). We found a moderate positive correlation ( $r = .52$ ) between the Civic Efficacy item and the SCWB measure, as well as the individual SCWB domains (.42–.47). In addition, the SCWB measure was moderately positively correlated with the NCS (.45) and Social Identification item (.44). Smaller correlations ranging from .31 to .37 were observed between the Individual Flourishing measures and the SCWB total and SCWB domains. The SCWB total measure and domains also showed medium correlations (.31–.38) with the item for social trust.

The bivariate correlation analyses reported in Table 9 provide a baseline for how the five domains and the brief measure relate to external variables. We expand on these relationships by looking at how the five domains of SCWB predict the six conceptually related variables controlling for age, sex, race, educational attainment, and survey mode. The results for the NCS, Civic Efficacy, and FI are reported in Table 10. The regression

**Table 8.** Between-Group T Tests Across SCWB Measures for Respondents According to Recruitment Method.

Domain/measure	Online (N = 692)		In-person (N = 1,435)		t (df)	p value	FDR p value	g
	M	SD	M	SD				
SCWB Total Measure	3.38	1.08	3.63	1.26	-4.68 (1,576.12)	<.001	<.001	0.21 (0.11, 0.30)
SCWB Brief Measure	3.16	1.22	3.43	1.39	-4.42 (1,535.82)	<.001	<.001	0.20 (0.10, 0.29)
D1. Good Relationships	2.92	1.39	3.27	1.56	-5.13 (1,520.11)	<.001	<.001	0.23 (0.14, 0.32)
D2. Proficient Leadership	3.29	1.38	3.69	1.49	-6.18 (1,462.11)	<.001	<.001	0.28 (0.19, 0.37)
D3. Healthy Practices	3.44	1.23	3.67	1.47	-3.71 (1,609.96)	<.001	.001	0.16 (0.07, 0.25)
D4. Satisfying Community	3.20	1.27	3.42	1.49	-3.47 (1,571.06)	<.001	.001	0.15 (0.06, 0.24)
D5. Strong Mission	4.07	1.14	4.11	1.24	-0.83 (1,475.27)	.404	.445	0.04 (-0.05, 0.13)
D5.1 Purpose	3.51	1.49	3.62	1.66	-1.57 (1,511.17)	.117	.143	0.07 (-0.02, 0.16)
D5.2 Contribution	3.80	1.43	3.82	1.60	-0.38 (1,513.93)	.706	.706	0.02 (-0.07, 0.11)
D5.3 Interconnectedness	4.26	1.53	4.42	1.50	-2.18 (1,342.75)	.029	.046	0.10 (0.01, 0.19)
D5.4 Synergy	4.70	1.30	4.59	1.44	1.77 (1,496.38)	.077	.106	-0.08 (-0.17, 0.01)

Note. Differences were computed using online group—in-person group, so a negative difference representing in-person had a higher average. All patterns of differences between survey mode were similar even after controlling for gender, age, race, and education; Hedges's g calculated for different sample sizes; our online supplement contains full results for each additional regression model controlling for covariates. SCWB = Subjective Community Well-Being; CI = confidence interval; FDR = False Discovery Rate adjusted p-value.

**Table 9.** Correlations Between SCWB Domains and Measures and Related Conceptual Variables.

Domain/measure	NCS		Social trust		Social identification		Civic efficacy		FI		SFI	
D1. Good Relationships	0.36 (0.33, 0.40)	0.31 (0.27, 0.35)	0.35 (0.31, 0.39)	0.35 (0.31, 0.39)	0.45 (0.42, 0.48)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)
D2. Proficient Leadership	0.38 (0.34, 0.41)	0.31 (0.27, 0.35)	0.39 (0.35, 0.42)	0.39 (0.35, 0.42)	0.47 (0.44, 0.50)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)
D3. Healthy Practices	0.40 (0.36, 0.44)	0.34 (0.30, 0.37)	0.39 (0.35, 0.42)	0.39 (0.35, 0.42)	0.47 (0.44, 0.51)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)	0.33 (0.29, 0.36)
D4. Satisfying Community	0.40 (0.36, 0.43)	0.34 (0.30, 0.38)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.43 (0.39, 0.46)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)	0.31 (0.27, 0.35)
D5. Strong Mission	0.41 (0.38, 0.45)	0.37 (0.33, 0.40)	0.42 (0.39, 0.46)	0.42 (0.39, 0.46)	0.42 (0.39, 0.46)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)	0.32 (0.28, 0.35)
SCWB Total Measure	0.45 (0.42, 0.48)	0.38 (0.35, 0.42)	0.44 (0.41, 0.48)	0.44 (0.41, 0.48)	0.52 (0.49, 0.55)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)	0.36 (0.33, 0.40)
SCWB Brief Measure	0.43 (0.40, 0.47)	0.37 (0.33, 0.40)	0.38 (0.34, 0.42)	0.38 (0.34, 0.42)	0.50 (0.47, 0.53)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)	0.34 (0.30, 0.38)

Note. SCWB Brief Measure is composed using items D1.3 Trust, D2.3 Competence, D3.4 Achievement, D4.1 Satisfaction, and D5.1 Purpose. SCWB = Subjective Community Well-Being; Est. (95% CI) NCS = Neighborhood Cohesion Scale; FI = Flourish Index; SFI = Secure Flourish Index; CI = confidence interval.

**Table 10.** SCWB Domains Differentially Predict Outcomes.

Predictor	Neighborhood Cohesion Scale			Civic efficacy			Flourish Index		
	B (SE)	p value	B STD	B (SE)	p-value	B STD	B (SE)	p value	B STD
<b>SCWB Domain</b>									
D1. Good Relationships	0.17 (0.08)	.029	0.14	0.40 (0.09)	< .001	0.28	0.29 (0.07)	.006	0.17
D2. Proficient Leadership	0.07 (0.06)	.288	0.06	0.13 (0.07)	.066	0.10	0.05 (0.05)	.373	0.04
D3. Healthy Practices	0.07 (0.08)	.405	0.05	0.28 (0.10)	.004	0.18	0.09 (0.08)	.208	0.07
D4. Satisfying Community	-0.02 (0.13)	.897	-0.02	-0.45 (0.15)	.003	-0.36	-0.08 (0.12)	.527	-0.07
D5. Strong Mission	0.34 (0.12)	.003	0.29	0.53 (0.13)	< .001	0.39	0.26 (0.11)	.017	0.23
<b>Covariate Effects</b>									
Age (centered)	0.32 (0.03)	< .001	0.20	-0.05 (0.04)	.175	-0.03	0.19 (0.03)	< .001	0.13
Female (ref: Male)	-0.07 (0.06)	.278	-0.02	-0.02 (0.07)	.770	-0.01	0.21 (0.06)	.001	0.07
Race (ref: White)									
Black	-0.31 (0.08)	< .001	-0.09	0.18 (0.09)	.037	0.05	0.35 (0.09)	< .001	0.11
Other	-0.21 (0.10)	.031	-0.04	0.13 (0.13)	.299	0.02	0.27 (0.10)	.007	0.05
Education (ref: No high school)									
High school diploma	-0.18 (0.14)	.203	-0.05	-0.07 (0.15)	.635	-0.02	0.43 (0.17)	.011	0.11
Some college	0.00 (0.14)	.999	0.00	0.16 (0.15)	.303	0.04	0.22 (0.17)	.184	0.06
Associate degree	0.10 (0.16)	.551	0.02	0.41 (0.17)	.019	0.06	0.33 (0.19)	.072	0.06
Bachelor's degree	0.45 (0.14)	.002	0.12	0.36 (0.15)	.019	0.09	0.69 (0.17)	< .001	0.20
Advanced Degree	0.63 (0.15)	< .001	0.14	0.28 (0.16)	.079	0.06	0.33 (0.19)	.072	0.06
Survey Mode (ref: Online)	-0.07 (0.07)	.345	-0.02	0.70 (0.08)	< .001	0.18	0.69 (0.17)	< .001	0.20
R <sup>2</sup>	.33			.34			.21		

Note. SCWB = Subjective Community Well-Being; B STD = standardized regression coefficient.

results for the other three outcomes were similar and are available in our Online Supplement. These results highlight how the five domains differentially predicted neighborhood cohesion, where the significant predictors were Good Relationships ( $p = .020$ ) and Strong Mission ( $p = .003$ ), whereas the nonsignificant predictors were Proficient Leadership ( $p = .258$ ), Healthy Practices ( $p = .535$ ), and Satisfying Community ( $p = .891$ ).

### Discussion

Part of a holistic assessment of flourishing entails individuals' perception of their broader community. In this study, we have shown how the measure of SCWB contributes to the holistic assessment of flourishing. We showed that scores on the SCWB can be measured reliably and provide a valid inference of differences in community engagement among different groups of individuals. This study provides researchers with evidence that SCWB can be used to help make inferences about levels of well-being within specific communities (cities, schools, religious communities, workplaces, etc.) and opens new avenues of research into community well-being. For example, leaders of a business organization who wish to create a more positive organizational culture for members might assess the SCWB and other desired outcome measures before and after implementing organizational changes, ideally in the context of a randomized controlled trial. Or school district leaders

might wish to assess SCWB across schools to identify specific schools that demonstrate high levels of well-being so that follow-up study might uncover the reasons why. These lessons could be shared with administrators and staff at other schools in the district with comparatively low scores so that they might develop a transformation process to enhance well-being. At a policy level, regularly assessing the SCWB for administrative units such as cities, counties, or even nations could help policy makers better understand aspects of flourishing that are not revealed by typically collected measures, such as economic indicators or life satisfaction surveys.

The SCWB is related to, but distinct from, the broader construct of social well-being (Keyes, 1998). Whereas the SCWB invites respondents to focus on group well-being in a specific community (in the current study, the Greater Columbus area), social well-being encompasses social life as a whole, including items on "society," "most cultures," "the world you live in," and "social institutions," as well as asking the individual about their contribution to the greater good instead of assessing whether others in the community collectively make this contribution (see Keyes, 1998, pp. 138–139). A few of the survey items in these two measures assess similar issues, such as trust and close relationships. But the focus is quite different and some domains in the SCWB (e.g., Proficient Leadership; Strong Mission) are absent in the social well-being measure. Likewise, social well-being assesses the level of "social coherence" in the

world as a whole, which is absent in the SCWB. A limitation of the current study is not jointly measuring social well-being in conjunction with the SCWB to investigate distinctions among these scales and constructs. We would expect a moderately strong, positive association between the SCWB and social well-being and invite future research to confirm or disconfirm this expectation.

Caveats to our interpretation of these results are that the findings from the community versus online samples were not as distinct on all domains as expected, especially considering the lack of difference observed on the Strong Mission domain (Factor 5). While we believe our method to obtain a group with higher perceptions of community well-being using the in-person collection at libraries and community centers was useful initial step, we do not know for certain whether these individuals truly had higher perceptions of the value of community well-being because they utilized with community resources (i.e., libraries and community organizations).

The evidence of validity based on correlations with external variables revealed that all the domains of the SCWB measure correlated similarly with each outcome. We expected similar correlations in the same direction, but the similarity in terms of magnitude was unexpected. We anticipated at least some variability in the magnitude of the correlations in the flourishing indices (FI and SFI). The identification of constructs that help differentiate among the dimensions of the SCWB would significantly enhance future studies using the SCWB.

### **Recommendations for Using the SCWB**

Our study focused on providing evidence for the use of the SCWB within a single community. A within-community utilization of the SCWB can provide researchers with a way to measure the within-community change in individuals' perceptions of community well-being. Although beyond the scope of the current study, a potentially valuable use of the SCWB is to examine whether specific subgroups (demographic groups, socioeconomic status, community volunteers, etc.) within communities respond differently. For instance, do any subgroups perceive their community's well-being to be lower while the rest of the community on average perceives it to be higher? Such questions could be addressed using the SCWB. Incorporating the SCWB into longitudinal studies of specific communities would allow a direct comparison of the scores over time to assess the community's change in these perceptions.

With small modifications to the items for each community, the SCWB could be used to compare among communities' average self-perception. If researchers obtain a diverse representative sample across a variety

of communities, then the SCWB could be pivotal in examining the well-being across communities. An advantage of using the SCWB measure in a large multi-community assessment is examining the characteristics of communities (e.g., availability of social services) that are related to higher average subjective community well-being ratings.

The statistical evidence for the proposed measure suggested several limitations on the use of the SCWB and possible revisions that researchers should be aware of when adopting these items for their use. Item *D4.1 Satisfying* ("Everyone in Greater Columbus is satisfied with the way things are in the community.") cross-loaded with items on the D1 Good Relationship domain, which could suggest that part of what individuals think is satisfying about a community is the relationship aspect, and this result suggests that the item may need to be reworded to emphasize individuals' satisfaction as a whole instead of simply a relationship component. For instance, in this sample, the item could be reworded as "Everyone in Greater Columbus is satisfied as a whole with the way things are in the community," to put greater emphasis on the satisfaction aspect. In addition, the evidence for the coherence of the domain Strong Mission (D5) was not quite as compelling, and, though alpha was .81 in this sample for this domain, the four items did not group as well together in the internal structure analyses as did the other domains. Researchers aiming to assess individuals' perceptions of community mission should revise these items for their community and be cautious that scores generated to assess this domain may be suboptimal. It is also possible that evidence for the coherence of this domain may be different in community contexts other than cities. Indeed, the notion of the "mission" of a city may be less transparent than that of a community constituted by a school, a workplace, a family, a religious community, or a special interest group focused around a specific hobby, for example (VanderWeele, 2019).

### **Conclusion**

The multidimensional measure of SCWB was found to result in reliable scores, and validity evidence was gathered for the interpretation that *higher SCWB scores indicate that individuals perceive a greater sense of satisfaction and flourishing in and with the community in Greater Columbus*. Researchers studying the Greater Columbus area could use items of the SCWB to examine perceptions of satisfaction and thriving in and with their community and explore how subgroups within the Greater Columbus area perceive their community. With small modifications to the stems of these items, other

researchers can easily adapt these items for the study of community-level well-being in different communities.


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