



Modelling and Measuring Local Community Engagement (LCE)

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Abstract

Social engagement is changing considerably in its forms and objectives, and it is not always easy to understand this change. Engagement in the local community can be the link between social participation and personal commitment. The purpose of this research was to define and validate the local community engagement (LCE) construct that is the degree of involvement and participation in the local community. The LCE model has eight dimensions: local volunteering, participation in traditions, participation in sports events, local political participation, local activism, protest/NIMBY, community care, and informative participation. The sample comprised 530 individuals residing in a variety of towns/cities of different sizes in Italy. Confirmatory factor analyses and reliability and validity analyses confirmed the proposed model. Further analysis showed a strong relationship between LCE and place identity, sense of community, entitativity and political control.

Keywords Community engagement · Local community engagement (LCE) scale · Participation · Scale validation

1 Introduction

The purpose of this research was to define and validate the local community engagement (LCE) construct, for evaluating the degree of involvement and participation in the local community.

The discussion on the subject of participation has primarily deepened the political forms and, more recently but less exhaustively, the more strictly social forms of participation (Sturmer & Simon, 2004). In fact, in-depth surveys show that involvement and interest in politics have declined by a large margin. This decline particularly applies to traditional forms of participation (Liu & Besser, 2003). In reality, the data show a substantial change in progress, from political and institutionalized forms (related to a substantial trust in the receptive and resilience of institutions) to social and local forms. Social participation, understood as a form of activism that is not in the political sphere in the strict sense but in

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the “community” sphere, still does not have a clear and exhaustive definition. Currently, people seem to be more interested in the changes that occur in everyday life, channelling their being an active part of the community into “para-political” experiences, such as, for example, volunteering and other forms of pro-social activism, militancy in ecological and human rights associations. Some authors consider social participation even personal behaviours such as respecting the environment, obeying laws, doing waste recycling (Bolzendahl & Coffé, 2013; Ekman & Amnå, 2012; Farrow et al., 2017). Social participation means engaging above all at the local level in ways other than political ones, without necessarily opposing this space for action. Participation thus takes the form of socio-political participation, from associations to voluntary work, at the local, national and transnational levels (Cicognani et al., 2008; Kunjuraman, 2022; Ma et al., 2023; Ohmer, 2007).

Furthermore, the establishment of forms of local participation and associations is a strengthening element of democracy (Perkins et al., 2002). A typical feature of this type of activity is certainly the more active involvement of members; that is, the establishment of horizontal relations between all members of voluntary associations, is an element that can promote a greater assumption of responsibility by the members. More traditional political involvement, such as party membership, often leads to greater passivity because of an organization that is more oriented towards the strict distinction of roles (Christens & Lin, 2014; Klandermans, 1984).

2 Theoretical Framework for Community Engagement

Often, we talk about community engagement (or community, social or civic participation) to distinguish it from conventional political participation. Social (civic or citizen) participation has been defined as «a process in which individuals take part in decision making in the institutions, programs, and environments that affect them» (Heller et al., 1989, p. 339). Ehrlich (1997) defined community engagement as «working to make a difference in communities through individual or collective actions designed to improve the quality of life» (p. vi). It is «the active, voluntary involvement of individuals and groups in changing problematic conditions in communities and influencing the policies and programs that affect the quality of their lives and the lives of other residents» (Ohmer, 2007, p. 180).

The concept of social participation outlines three key components in its social representation, which facilitates individuals to engage in self-determined modes of social involvement: the integration of the concepts of social capital and social inclusion, the affirmation of the inherent right of individuals to engage in self-determined ways in all areas of society, and the recognition of society’s obligation to establish conditions conducive to such engagement.

Studies conducted within the ecological perspective and research on collective self have suggested that the citizen participation is a vehicle through which residents can increase their capacities individually and collectively, as well as their connections to their neighbourhood. An example of this approach is Ohmer’s seminal study that examined the relationship between residents’ involvement in neighbourhood organizations and self-efficacy, collective efficacy and sense of community (Ohmer, 2007). Engaged citizens feel responsible to the communities in which they are integrated, as well as to the well-being of society as a whole (Ohmer et al., 2018). Bronfenbrenner (2004) described the ecological framework of human behaviour as the progressive and mutual adaptation throughout the life course between an active, growing human being and his or her environment. In this

perspective, the local community can be seen as a transactional environment that directly and indirectly influences individual behaviour and development, and vice versa.

Another theoretical framework useful in framing community engagement is social capital according to a collectivist approach, beginning with Putnam (1995, 2001). This will create an exchange of experience, knowledge and information that will make it possible to achieve goals that otherwise could not be pursued limitedly at the individual level. The concepts of trust and social networks, which appear so fundamentally in Putnam's vision, become for many authors indispensable features in the analysis of social capital in a society. In analysing levels of citizen involvement, Putnam considered a great many aspects: from newspaper reading to political participation, from social networks to interpersonal trust, and even associational involvement. Its goal has been to demonstrate that such civic engagement builds a functioning democracy and a healthy market economy (Putnam et al., 1994). As Ekman and Amnå state, this is a «typical example of conceptual stretching [...]». If civic engagement is used by scholars to mean completely different things, it is basically a useless concept, it confuses more than it illuminates» (Ekman & Amnå, 2012, p. 284). Thus, it is crucial to carefully distinguish, define, and operationalize different forms of involvement.

According to Macinko and Starfield (2001), we must distinguish at least four levels of analysis. At the macro level, the historical, social, political, and economic context is regarded as preceding the types of social relations or societal structures that may generate social capital and contribute to determining its distribution within societies. At the neighbourhood or “meso” level, measures encompass the characteristics of neighbourhoods or communities that might influence the production and utilization of social capital within those areas. The third level consists of individual-level behaviours, such as voting, group membership, and cooperation with others, which have been aggregated to neighbourhood, state, or national levels. The fourth level comprises individual-level attitudes primarily as psychological constructs, such as trust in neighbours, trust in government, and expectations of reciprocity. The proposed measure is in the third level.

One very important approach is related to a sense of community (Chavis & Wandersman, 1990; McMillan & Chavis, 1986; Sarason, 1974). Participation in social and community activities fosters a deep sense of belonging among individuals. When people interact with others who share common interests or goals, they feel connected to a community or larger group (Barati et al., 2012; Buckley & Burnette, 2023). This sense of belonging is vital to one's mental and emotional well-being, as it provides a support network and a feeling of being valued and accepted. It helps combat loneliness and isolation, contributing to a more fulfilling and happy life (Cicognani et al., 2008; Payini et al., 2024; Talò et al., 2014). According to activity theory, participation in social activities (such as volunteering, visiting friends, coaching boys) lead to increased personal and collective well-being, which can include high levels of sense of community (Adams et al., 2011; Ohmer et al., 2018, 2022; Tang et al., 2017). This approach allows reconnection to social capital (Guillen et al., 2011) and has considered other benefits to community well-being such as increasing community resilience (Koliou et al., 2020; Magis, 2010; Rapaport et al., 2018; Sherrieb et al., 2010), social support (Levasseur et al., 2017; Li et al., 2018; Pin & Spini, 2016), and social cohesion (Cradock et al., 2009; Fonner et al., 2014; Kalolo et al., 2019).

Volunteer research is often the field where social capital, sense of community, and community involvement come together. The seminal work of Omoto and Snyder (2010) proposes that people with a strong sense of community act on the belief that «the community itself is an entity and resource worth sustaining, nurturing, and growing» (p. 237). Even just identifying with the community is a driver for volunteerism and social involvement

(McFarland et al., 2012; Stukas et al., 2016; Stürmer et al., 2016). Many studies have shown the bidirectional relationships between the individual and collective blessings of volunteering, such as, for example, greater involvement in neighborhood decision-making, increased self-efficacy, leadership, empowerment and sense of community (Chavis & Wandersman, 1990; Colombo et al., 2001; Davidson & Cotte, 1989; Ohmer, 2007; Speer et al., 2013; Terry et al., 2019), and other aspects that support community development (Harrison et al., 2019; Kim, 2022; Lofton et al., 2022; Ohmer et al., 2018, 2022).

It is not always easy to distinguish community involvement from social involvement. The very definition of social participation is uncertain and differentiated (Guillen et al., 2011; Piškur et al., 2014). A society is a complex network of individuals, social groups, communities, institutions, that share a culture and a sufficiently large geographic area. A community, on the other hand, is a group of individuals who share geographic proximity, common values, traditions and history, and held together by a sense of belonging. This distinction makes sense if we talk about territorial communities but loses distinctive capacity if we talk about relational communities. Consider, for example, the scientific community, which transcends geographies and nationalities (Davis & Ramírez-Andreotta, 2021; Khodyakov et al., 2013). Even when staying on the territorial level, studies hardly distinguish social participation and involvement from community forms. Think of a complex of behaviours “pre-political” (though strongly related to classical forms of political participation), local community-based, not directly related to the interests of family or friends (Adler & Goggin, 2005), aimed at solving local problems, improving the conditions of communal living, and (most importantly) keeping the culture of the proximal community alive.

3 About Some Community Engagement Measures

To provide greater clarity among the possible constructs involved, many researchers have proposed a taxonomy of involvement, where different forms of participation are placed on the same level. For example, Ekman and Amnå (2012) proposed a typology of three main categories of participation in an individual or collective form: political participation, civil participation (or latent participation), and nonparticipation (or disengagement). Civil participation includes social involvement (e.g., showing interest in politics and society, identifying oneself with an ideology, or adopting an engaged lifestyle) and civic engagement (e.g., recycling, reading newspapers, or volunteering in community organizations).

There are numerous models of community engagement, and equally numerous are the proposed measures. For example, Doolittle and Faul (2013) have developed and validated the Civic Engagement Scale (CES) that measure *civic attitudes* (defined as «the personal beliefs and feelings that individuals have about their own involvement in their community and their perceived ability to make a difference in that community» [p. 2]) and *civic behaviors* («the actions that people take to actively attempt to engage and make a difference in their community» [p. 2]). Procentese and colleagues (2019) have studied the relationship between civic engagement and a new measure of sense of responsible togetherness (SoRT), connected to different dimensions of living together within local communities.

Another significant proposal, located in the area of social capital, is Guillen and colleagues' measurement of social participation (Guillen et al., 2011). The research discusses the distinction between informal and formal social participation, emphasizing their different relationships with other variables. Informal participation refers to interactions with

friends, relatives, and colleagues in an informal setting, while formal participation involves interactions within established organizations. Formal participation is more related to political action and education, whereas informal participation is more closely associated with age and happiness. Due to the different relationships of informal and formal participation with other variables (such as age, education, political action, and happiness), the Authors suggest using separate indices for each rather than a combined index for social participation.

Sometimes community engagement has been investigated in specific areas. For example, Miller et al. (2018) have proposed the Benefits of Academic Community Engagement (BACE) scale that assesses student perceptions of two specific benefits across multiple disciplines: personal development and social responsibility. Baldus et al. (2015) have developed a typology of online brand community engagement (i.e., the compelling intrinsic motivations to continue interacting with an online brand community). Storm and Rothmann (2003) have validated the Utrecht Work Engagement Scale (UWES) for the South African Police Service (SAPS) and analysed its construct equivalence and bias in different race groups. The UWES was developed to measure three related factors of work engagement: vigour, dedication, and absorption. Subsequently, the measure was used to examine the concept of engagement in samples of volunteers from different non-profit organizations (Vallières et al., 2017; Vecina et al., 2012). Boursaw et al. (2021) have studied the psychometric properties of several measures of involvement focused on community engaged research (CErR) and community based participatory research (CBPR).

To our knowledge, there is no measure that has some useful characteristics for social engagement research. First, a measure that represents a range of behaviours. All the scales we know measure an attitude or a “sense of”, that is, a representation of self in reference to others and the community. Second, a measure that covers a broad spectrum of behaviours related to the local community. Even behaviours not often thought of as typical forms of engagement, such as participating in sporting or traditional events, informing oneself about the community, or caring for the “health” of the community (complying with rules or recycling waste).

4 The Proposed Model

The proposed theoretical model of local community engagement (LCE) has eight dimensions:

Local volunteering. This dimension measures the degree of involvement in voluntary activities linked to one’s local community. Some examples are environmental associations or associations defending places of interest for the community (WWF oases or enhancement of castles, farms, churches, palaces, villas, etc.), animal protection (care of abandoned or injured animals), civic and social associations, etc.

Participation in community traditions. This dimension measures the degree of involvement in the cultural traditions that characterize the history and social life of one’s own community on the religious side (patronal feasts) and on the secular side (feasts on local products, festivals, etc.).

Participation in sporting events. This dimension measures the degree of involvement in typhus and sporting events. It also refers to the degree of identification with sports teams or associations, for example, when wearing the colours of local teams (e.g., volleyball, basketball, cycling, or rugby).

Local political participation. This dimension measures the degree of formal political participation both directly in administrative policy (elections, municipal council, political parties, etc.) and indirectly (contacting politicians, newspapers, etc.). The reach of political participation remains the local community, such as the city/town, municipal area, or neighbourhood.

Local activism. This dimension measures the degree of participation in informal meetings or via the Internet to discuss neighbourhood/city issues or to work with community members to resolve issues of collective concern.

Protest/NIMBY. This dimension measures the degree of participation in protests or demonstrations against the construction of infrastructure considered harmful to the community (e.g., against high-speed trains, LNG terminals, or pipelines).

Community care. This dimension measures the degree of participation in cleaning initiatives, respect commonplaces or special waste disposal. Such behaviour may include, for example, not throwing rubbish away on the street, respecting separate collection, or taking part in beach or park cleaning initiatives.

Informative participation. This dimension measures the degree of participation in finding out about local issues through newspapers or the Internet, discussing community issues with friends and family, or sharing and publicizing events and information about the community through social networks.

5 Research Methodology

5.1 Scale Design

The LCE scale was designed through a three-step process: (i) analysis of the literature and identification of the theoretical framework, (ii) conduct and analysis of a focus group on the topic of community engagement, (iii) definition of the items and development of the scale, and (iv) a pretest in order to assess the degree of understanding of the questions and answers.

First, an analysis of both the theoretical and empirical psychosocial literature on community engagement (alias civic, social and political participation) was undertaken. This extensive research made it possible to select the components that are most frequently considered part of community engagement (e.g., Chan et al., 2006; Ehrlich, 1997; Hyman, 2002; Ohmer, 2007; Watts & Flanagan, 2007).

Second, a focus group was conducted. Nine participants (5 women and 4 men, mean age 31.3 years, 3 actives in political or voluntary associations) were involved in a discussion on community engagement, with the help of a moderator. The questions that directed the discussion were: (i) what do you think are the most important forms of participation in your community? (ii) do you think participation has changed from the past? At the end of the discussion, which lasted about an hour, participants formulated a shared list of forms of participation. Specifically: the “classic” forms of participation such as political participation, mobilization and protest against policies considered unjust, community care such as caring for the environment, and informing themselves about their community.

Third, 24 items have been formulated in order to measure the eight dimensions of the LCE construct: local volunteering, participation in traditions, participation in sports events, local political participation, local activism, protest/NIMBY, community care, and

informative participation. These dimensions were chosen based on the literature review, focus group results and the experience of the researchers.

An alternative route to the Likert scale has been chosen to measure LCE. Although very popular, in fact, this type of measurement presents many critical issues. These issues include the fact that (1) the scale is far removed from the natural language used daily and that (2) it does not allow a perfect comparison of responses. This coarseness can also cause limited variability in scores, making it more difficult for researchers to detect subtle differences in the underlying trait or size (Leung, 2011; Nadler et al., 2015; Russell & Bobko, 1992).

The format of “sentence completion” has been introduced as an alternative technique that addresses the criticality of the type format (Hodge & Gillespie, 2007). The sentence completion technique does not use elements that are formulated negatively (reversed items), nor does it use intermediate answers that are inconsistent with the meaning of the question. The filling in of the questionnaire is more natural, although slightly more cognitively demanding, than the Likert scale. Finally, this technique allows the items to be formulated more freely, no longer having to adapt the questions to the answers but the answers to the questions. Some examples are as follows. “About the cultural traditions of my community ...”. The answers are “1=I do not care”, “2=I rarely care”, “3=I contribute quite often”, and “4=I actively contribute to keeping them alive”. “With respect to cheering and the colors of the sports teams in my community ...”. The answers are “1=I do not support or like to wear the colors of my community’s sports teams”, “2=I cheer when there are matches but I do not wear the colors of the sports teams in my community”, “3=I cheer and love to wear the colors of the sports teams in my community”, “4=I love to represent my support for the sports teams of my community even outside the sports events through clothes, gadgets, gifts, etc.”.

Fourth, before the questionnaire was submitted, in view of having to administer it online, the questionnaire was subjected to a pretest. Five undergraduates and five non-students initially filled in the questionnaire. The students were then interviewed on each individual question in order to measure their degree of understanding of the questions, the answers and the impact of any changes. As a result, some minor changes were made to the answers to questions 5 and 7. Appendix 1 shows the final scale.

5.2 Independent Variables

To assess the impact of some of the main variables most often associated with community development and well-being, the following measures were used:

The *place identity* scale of Hernandez et al. (Hernández et al., 2007). This scale is composed of four Likert-type items (from 1=“strongly disagree” to 5=“strongly agree”). $\alpha=0.89$.

The brief *sense of community* scale (BSCS-8) of Peterson and colleagues (Peterson et al., 2008). This scale is composed of eight Likert-type items (from 1=“strongly disagree” to 5=“strongly agree”). $\alpha=0.88$.

The scale of *entitativity* proposed by Crump et al. (2010). This scale is composed of eight Likert-type items (from 1=“strongly disagree” to 5=“strongly agree”). $\alpha=0.79$.

The *political control* subscale of the social control scale of Zimmerman and Rappaport (1988) and reviewed by Peterson et al. (2006). This scale consists of nine Likert-type items (from 1=“strongly disagree” to 5=“strongly agree”). $\alpha=0.83$.

Finally, the questionnaire included some socio-demographic questions: (a) age, (b) educational qualification, (c) profession, (d) years of permanent/residence in the reference community, and (e) participation in local or community associations.

5.3 Participants and Procedures

All the participants voluntarily agreed to participate in the study. A small group of students, trainees and thesis students were involved in the sampling phases. Each student administered approximately 50–60 questionnaires following precise quotas based on gender, age group, education and size of the town/city.

The participants consisted of 530 individuals (54.9% female) aged between 16 and 83 years (mean = 32.10, $SD = 13.77$): 328 individuals online (61.9%) and 202 offline (38.1%). Regarding education, 52.1% (274 ss) had a high school diploma, 18.3% (96 ss) had a bachelor's degree, and 13.7% (72 ss) had a master's degree. Participants were asked to provide information on their age, gender, level of education, profession, place of residence and political orientation. Finally, the participants were asked if they were part of an association linked to their territory or community. 160 subjects (30.2%) were active in their community.

5.4 Data Analysis

First, a confirmatory factor analysis (with maximum likelihood estimation with robust standard errors and a Satorra–Bentler scaled test statistic [MLM]) was performed to evaluate the hypothesized measurement model, i.e., a second-order variable (overall LCE) saturated by eight first-order latent variables (local volunteering, participation in traditions, participation in sports events, local political participation, local activism, protest/NIMBY, community care, and informative participation).

The following fit indices with their respective thresholds were used: (a) the chi-square (χ^2) test: nonsignificant χ^2 values indicate an acceptable fit of the model, but it is almost always statistically significant; (b) the comparative fit index (CFI) (Bentler, 1990): values ≥ 0.90 indicate an acceptable fit, and values ≥ 0.95 indicate an excellent fit; (c) the Tucker–Lewis index (TLI): the thresholds are the same as those of the CFI (Marsh et al., 2004); (d) the root mean square error of approximation (RMSEA): values ≤ 0.05 and ≤ 0.01 indicate good and excellent fit, respectively (MacCallum et al., 1996), and RMSEA can be evaluated in terms of probability, with a p value less than 0.05 (Hu & Bentler, 1999); and (e) the standardized root mean square residual (SRMR) [56]: values ≤ 0.08 demonstrate a good fit (Hu & Bentler, 1999).

The reliability and convergent and discriminant validity of the LCE scale were tested by the following indices: (a) Cronbach's α ; (b) the composite reliability (CR), which must be ≥ 0.70 for satisfactory reliability (Hair et al., 2009); (c) the average variance extracted (AVE) must be ≥ 0.50 and below the CR for convergent validity; and (d) the maximum shared squared variance (MSV) and (e) the average shared squared variance (ASV) must both be lower than the AVE for convergent validity (Fornell & Larcker, 1981). In addition, the risk of multicollinearity among the LCE scale factors was controlled by the variance inflation factor (VIF).

6 Results

6.1 Confirmatory Factor Analyses

Appendix 2 shows the frequencies and percentages for each scale item. Table 1 shows the fit indices for the total sample, the online sample and the offline sample and for the active (or inactive) subjects in the local associations. The indices indicated a satisfactory fit for all samples considered. Table 2 presents the model parameters. The alternative models do not show acceptable fit (Table 1).

6.2 Reliability and Validity Analyses

Each factor sufficiently differed from the others (Table 3). Furthermore, α indices showed good reliability of the measurements. No relevant multicollinearity was found among the eight first-order factors analysed (Pedhazur, 1997).

6.3 Correlation Analyses and Linear Models

Table 4 indicates means, standard deviations and correlations between the LCE dimensions, the total LCE score and the independent variables. The LCE dimensions are correlated with each other, with r between 0.89 and 0.23. Regarding independent variables, place identity correlates with all LCE dimensions except protest/NIMBY. Additionally, sense of community correlates with all LCE dimensions except protest/NIMBY. Instead, entitativity correlates with only total LCE and protest/NIMBY. Finally, political control correlates with total LCE, local volunteering, local political participation, local activism, community care and informative participation.

To assess the influence of independent variables on LCE, a set of linear models were performed. Six independent variables were considered: age, years of residence, place identity, sense of community, entitativity and political control. Table 5 shows the parameters of the linear models.

Age shows a positive relationship with total LCE and participation in traditions and shows a negative relationship with local volunteering, participation in sports events, local activism, protest/NIMBY and informative participation. Years of residence shows a positive relationship with total LCE, participation in traditions, participation in sports

Table 1 Fit indexes of confirmatory factor analyses

Sample	χ^2 [DF], <i>p</i> value	CFI	TLI	RMSEA [CI], <i>p</i> value	SRMR
Total sample	465.22 [244], .000	.96	.97	.06 [.05, .08], .030	.05
Online sample	457.22 [244], .000	.97	.97	.06 [.05; .09], .019	.07
Offline sample	450.54 [244], .000	.93	.92	.07 [.07; .08], .008	.07
Active subjects	460.44 [244], .000	.95	.96	.06 [.05; .07], .056	.06
Inactive subjects	379.23 [244], .000	.97	.98	.04 [.04; .05], .105	.04
Alternative models					
One first-order factor	1348.42 [252], .000	.62	.57	.10 [.10; .12], .000	.09
Correlated factors	583.84 [244], .000	.86	.87	.09 [.07; .10], .001	.07

Table 2 LCE scale parameters

Item	η_1	ε_1	First-order factor	η_2	ε_2
Item 1	.75	.60	Local volunteering	.78	.39
Item 2	.86	.25			
Item 3	.75	.58	Participation in traditions	.77	.39
Item 4	.82	.43			
Item 5	.73	.52			
Item 6	.72	.54	Participation in sports events	.78	.42
Item 7	.88	.39			
Item 8	.69	.59			
Item 9	.79	.60			
Item 10	.70	.69	Local political participation	.88	.21
Item 11	.82	.49			
Item 12	.70	.60			
Item 13	.81	.47			
Item 41	.90	.35	Local activism	.97	.06
Item 15	.88	.38			
Item 16	.83	.37			
Item 17	.82	.41	Protest/NIMBY	.65	.58
Item 18	.79	.45			
Item 19	.69	.51			
Item 20	.82	.40	Community care	.84	.23
Item 21	.69	.52			
Item 22	.84	.36	Informative participation	.79	.42
Item 23	.89	.32			
Item 24	.84	.41			

η_1 and ε_1 = saturations and errors of the items on the first-order factors. η_2 and ε_2 = saturations and errors of the first-order factors on the second-order factor (LCE). All parameters have p values < .05

Table 3 Reliability; convergent, discriminant and validity tests; collinearity statistics

	α	CR	AVE	MSV	ASV	VIF
Local volunteering	.88	.82	.53	.34	.30	1.23
Participation in traditions	.80	.80	.52	.37	.26	1.34
Participation in sports events	.79	.80	.52	.39	.32	1.45
Local political participation	.87	.82	.51	.41	.34	1.67
Local activism	.89	.83	.51	.39	.40	1.54
Protest/NIMBY	.82	.78	.53	.42	.40	1.63
Community care	.78	.75	.50	.39	.37	1.67
Informative participation	.77	.79	.51	.43	.38	1.62
LCE tot	.82	.80	.53	.44	.39	–

events, local activism and protest/NIMBY. Place identity has a positive relationship with total LCE, local volunteering, participation in traditions, local political participation, local activism and community care. Sense of community has a positive relationship with total LCE, local volunteering, local political participation and community

Table 4 Correlations, means and standard deviations

	1	2	3	4	5	6	7	8	9	10	11	12	13
LCE tot	–												
Local volunteering	.89***	–											
Participation in traditions	.78***	.65**	–										
Part.on in sports events	.67***	.45*	.72***	–									
Local political part.on	.74***	.78***	.63***	.65***	–								
Local activism	.73***	.71***	.76***	.58***	.67***	–							
Protest/NIMBY	.79***	.45*	.45**	.35*	.56***	.48***	–						
Community care	.81***	.81***	.78***	.34*	.69***	.34**	.35**	–					
Informative participation	.79**	.75***	.67***	.23*	.68**	.45**	.38**	.39**	–				
Place identity	.78***	.67***	.57**	.68***	.45***	.57***	.21	.67***	.47***	–			
Sense of community	.71***	.59***	.67**	.43**	.45***	.49***	.20	.69***	.55***	.56***	–		
Entitativity	.56***	.34	.28	.10	.13	.37**	.18	.22	.19	.41***	.31**	–	
Political control	.45**	.57**	.15	.11	.36**	.41***	.20	.26*	.34**	.23*	.35**	.14	–
Mean	47.20	3.78	6.65	6.39	6.00	4.62	5.79	5.99	47.20	14.68	25.66	24.25	29.23
S.D	10.86	1.69	2.02	2.73	2.44	1.84	2.74	1.21	10.86	4.27	6.62	5.94	7.73

*** $p < .001$; ** $p < .01$; * $p < .05$

Table 5 Linear models

	LCE	Local volunteer- ing	Participation in traditions	Part.on in sports events	Local political part.on	Local activism	Protes/NIMBY	Community care	Informative participation
Age	.08 (.21)***	-.10 (.11)	.19 (.29)***	-.22 (.25)**	.01 (.19)	-.15 (.26)**	-.20 (.35)**	.08 (.51)	-.19 (.27)*
Years of resi- dence	.11 (.22)***	-.02 (.22)	.18 (.34)***	-.20 (.30)**	.02 (.18)	-.16 (.26)***	-.19 (.30)**	.11 (.43)	.00 (.26)
Place identity	.20 (.22)***	.21 (.27)***	.22 (.38)**	.34 (.27)***	.28 (.26)***	-.20 (.30)**	.10 (.28)	.37 (.24)***	.10 (.20)
Sense of comm	.31 (.32)***	.28 (.31)***	-.12 (.17)	.05 (.24)	.26 (.24)***	-.03 (.20)	-.06 (.19)	.29 (.30)***	.10 (.26)
Entitativity	.02 (.27)	-.02 (.29)	-.02 (.04)	-.07 (.10)	-.07 (.27)	-.04 (.33)	-.22 (.28)***	.10 (.29)*	.11 (.29)
Political control	.11 (.18)**	.06 (.30)*	-.07 (.22)	-.09 (.24)	.36 (.29)***	.11 (.23)**	.20 (.39)**	.10 (.37)	.17 (.21)*

Table shows *b* and standard errors. *** $p < .001$, ** $p < .01$; * $p < .05$

care. Entitativity shows a positive relationship with community care and a negative relationship with protest/NIMBY. Finally, political control shows a positive relationship with total LCE, local volunteering, local political participation, local activism, protest/NIMBY and informative participation.

7 Discussion

The aim of the research was to propose and validate a complex model of local community engagement. This model was complex because it provides for the covariation of new components that are not traditionally considered forms of social involvement, such as sports fans and respect for the environment. In addition, other behaviors, such as volunteering or protest, are often considered dependent or independent variables of participation, while in the LCE model, they are internal dimensions of involvement. In other words, local involvement has been considered a superordinate disposition that guides the different forms of participation. This disposition may or may not be triggered by the situational conditions of the community. For example, an inclusive policy of local administrators or the urgency to solve a specific problem can increase LCE levels.

The analyses validated the factorial structure of the scale, confirming that the eight dimensions analysed can be clustered into a single overall dimension. The particular response method—the completion of a sentence—has allowed better adaptation of the measurement to the natural language of the respondents than traditional Likert scales. This technique has also overcome the problem of comparability of responses between different subjects. For example, if one asks a person if he/she has participated in a manifestation and he/she responds to a Likert with “never”, it is not possible to deduce if there were opportunities to participate but he/she did not want to participate or if there were no opportunities to participate. In this case, it would be a conceptual and statistical error to merge the two answers. The method used overcomes this problem by differentiating between the two responses.

There are several limits to this research. First, the sample is concentrated in a particular area of southern Italy. This aspect is not only a methodological limit but also a theoretical one because participatory models present strong cultural and situational differences. Cultural differences incorporate different worldviews and differences in social interaction styles related to the histories and anthropologies of specific communities. This poses considerable problems that can cause conceptual and methodological missteps. However, further research is underway to confirm the model on new cultural contexts and different historical moments.

Another limit is deciding what engagement is and (above all) what it is not. In fact, each definition is significant, especially when it delimits a phenomenon. An overly inclusive definition loses its power to discriminate. A possible limit is that of having selected dimensions that correlate strongly but that imply different behavioural dynamics and, therefore, cannot be grouped in a single category. Other analyses with complex models are necessary.

In line with these considerations and starting from the principle that participation in the collective interests of the local community feeds the democratic functioning of the macroculture of reference as much as, if not more than, traditional forms of participation, scientific research must be equipped with new conceptual and methodological tools to new forms of engagement.

Appendix 1: The LCE Scale

Below are some statements about you and your city/town. Consider the term “community” referring to your city/town, or neighborhood, or the area closest to you. Indicate, with a check mark, the answer that comes closest to who you are.

1. Of local voluntary associations (e.g. non-profit organizations, NGOs, social voluntary organizations, cultural associations, etc.) ...

- | | |
|--|--|
| 1. I am not a member | 3. I am a member and I participate quite often |
| 2. I am a member but I participate little or never | 4. I am a member and I always participate |

2. In events/activities/events related to community issues (e.g. street or beach cleaning, animal protection, donations, fundraising, etc.). I participate ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

3. In religious festivals and not (e.g.: patronal festivals, feasts on local products, festivals, etc.) typical of my community I participate

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

4. About the cultural traditions of my community ...

- | | |
|------------------|--|
| 1. I do not care | 3. I contribute quite often |
| 2. I rarely care | 4. I actively contribute to keeping them alive |

5. I organize or participate in the organization of local events (e.g. music and/or cultural festivals, awareness meetings on local culture, etc.). ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

6. In the matches of the local football team I participate ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

7. In the sporting events of local teams (e.g. volleyball, basketball, cycling, rugby, etc.) I participate ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

8. Of sports associations in my community ...

- | | |
|--|--|
| 1. I am not a member | 3. I am a member and I participate quite often |
| 2. I am a member but I participate little or never | 4. I am a member and I always participate |

9. With respect to cheering and the colors of the sports teams in my community ...

- | | |
|--|--|
| <p>1. I do not support or like to wear the colors of my community's sports teams</p> <p>2. I cheer when there are matches but I do not wear the colors of the sports teams in my community</p> | <p>3. I cheer and love to wear the colors of the sports teams in my community</p> <p>4. I love to represent my support for the sports teams of my community even outside the sports events through clothes, gadgets, gifts, etc.</p> |
|--|--|

10. I contact local administrators, politicians and/or journalists for issues that affect the entire local community ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

11. I participate in the activities of local political parties, groups or associations ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

12. In the municipal councils or assemblies I participate ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

13. In the organized meetings of the local administration I participate ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

14. I write in local newspapers or blogs ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

15. I participate in informal meetings or via the Internet to discuss neighborhood/city issues ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

16. I collaborate with other people living here to solve the problems of this neighborhood/city ...

- | | | | |
|----------|--------------|----------|-----------|
| 1. Never | 2. Sometimes | 3. Often | 4. Always |
|----------|--------------|----------|-----------|

17. In protest demonstrations calling for a change in favor of the community (e.g. street demonstrations, protests, picketing, etc.) ...

- | | |
|---|--|
| <p>1. I do not participate because in my community there aren't these manifestations</p> <p>2. Although there are these events, I prefer not to participate</p> | <p>3. I sometimes participate</p> <p>4. I often participate</p> <p>5. I always participate</p> |
|---|--|

18. In protests against the construction of infrastructures considered harmful to the community (e.g. no high-speed train, no LNG terminal, no pipeline, etc.) ...

1. I do not participate because there aren't these mobilizations	3. I sometimes participate
2. Although there are these events, I prefer not to participate	4. I often participate
	5. I always participate

19. In demonstrations protesting against the decisions of local administrators (e.g. in defense of historic buildings, trees or parks, etc.) ...

1. I do not participate because there aren't these conditions	3. I sometimes participate
2. Although there are these manifestations, I prefer not to participate	4. I often participate
	5. I always participate

20. About the cleanliness of my community (e.g.: throwing paper away on the street, collecting my dog's excrement, taking care of the separate collection of household waste, etc.) ...

1. I do not care	3. I care enough
2. I rarely care	4. I am very careful

21. With regard to the disposal of special waste (e.g. household appliances, PCs and peripherals, batteries, medicines, used oil, etc.) ...

1. I admit that I am not particularly careful on this point	3. I always go to the nearest recycling depot
2. Sometimes I go to the nearest recycling depot	

22. I can find out about local problems in newspapers or on the internet ...

1. Never	2. Sometimes	3. Often	4. Always
----------	--------------	----------	-----------

23. I discuss with friends and relatives issues related to my community ...

1. Never	2. Sometimes	3. Often	4. Always
----------	--------------	----------	-----------

24. I share and advertise events and information about my community through social networks (e.g. Facebook, Twitter, Instagram, etc.) ...

1. Never	2. Sometimes	3. Often	4. Always
----------	--------------	----------	-----------

Appendix 2: Score (Frequencies and Percentages) of LCE Scale

	Freq.	%
1. Of local voluntary associations (e.g. non-profit organizations, NGOs, social voluntary organizations, cultural associations, etc.) ...		
1. I am not a member	307	57.9
2. I am a member but I participate little or never	52	9.8
3. I am a member and I participate quite often	90	17.0

	Freq.	%
4. I am a member and I always participate	81	15.3
2. In events/activities/events related to community issues (e.g. street or beach cleaning, animal protection, donations, fundraising, etc.). I participate ...		
1. Never	181	34.2
2. Sometimes	257	48.5
3. Often	65	12.3
4. Always	27	5.1
3. In religious festivals and not (e.g.: patronal festivals, feasts on local products, festivals, etc.) typical of my community I participate		
1. Never	75	14.2
2. Sometimes	197	37.3
3. Often	197	37.3
4. Always	59	11.2
4. About the cultural traditions of my community ...		
1. I do not care	41	7.8
2. I rarely care	247	46.8
3. I contribute quite often	190	36.0
4. I actively contribute to keeping them alive	50	9.5
5. I organize or participate in the organization of local events (e.g. music and/or cultural festivals, awareness meetings on local culture, etc.). ...		
1. Never	278	52.5
2. Sometimes	154	29.1
3. Often	66	12.5
4. Always	32	6.0
6. In the matches of the local football team I participate ...		
1. Never	373	70.4
2. Sometimes	92	17.4
3. Often	46	8.7
4. Always	19	3.6
7. In the sporting events of local teams (e.g. volleyball, basketball, cycling, rugby, etc.) I participate ...		
1. Never	296	56.0
2. Sometimes	150	28.4
3. Often	48	9.1
4. Always	35	6.6
8. Of sports associations in my community ...		
1. I am not a member	404	76.2
2. I am a member but I participate little or never	29	5.5
3. I am a member and I participate quite often	56	10.6
4. I am a member and I always participate	41	7.7
9. With respect to cheering and the colors of the sports teams in my community ...		
1. I do not support or like to wear the colors of my community's sports teams	248	47.0
2. I cheer when there are matches but I do not wear the colors of the sports teams in my community	185	35.0
3. I cheer and love to wear the colors of the sports teams in my community	62	11.7
4. I love to represent my support for the sports teams of my community even outside the sports events through clothes, gadgets, gifts, etc	33	6.2

	Freq.	%
10. I contact local administrators, politicians and/or journalists for issues that affect the entire local community ...		
1. Never	283	53.4
2. Sometimes	183	34.5
3. Often	45	8.5
4. Always	19	3.6
11. I participate in the activities of local political parties, groups or associations ...		
1. Never	343	64.7
2. Sometimes	129	24.3
3. Often	41	7.7
4. Always	17	3.2
12. In the municipal councils or assemblies I participate ...		
1. Never	367	69.2
2. Sometimes	127	24.0
3. Often	21	4.0
4. Always	15	2.8
13. In the organized meetings of the local administration I participate ...		
1. Never	316	59.8
2. Sometimes	169	32.0
3. Often	38	7.2
4. Always	5	0.9
14. I write in local newspapers or blogs ...		
1. Never	417	78.7
2. Sometimes	85	16.0
3. Often	19	3.6
4. Always	9	1.7
15. I participate in informal meetings or via the Internet to discuss neighborhood/city issues ...		
1. Never	297	56.0
2. Sometimes	162	30.6
3. Often	54	10.2
4. Always	17	3.2
16. I collaborate with other people living here to solve the problems of this neighborhood/city ...		
1. Never	246	46.7
2. Sometimes	200	38.0
3. Often	57	10.8
4. Always	24	4.6
17. In protest demonstrations calling for a change in favor of the community (e.g. street demonstrations, protests, picketing, etc.) ...		
1. I do not participate because in my community there aren't these manifestations	227	43.0
2. Although there are these events, I prefer not to participate	120	22.7
3. I sometimes participate	144	27.3
4. I often participate	23	4.4
5. I always participate	14	2.7

	Freq.	%
18. In protests against the construction of infrastructures considered harmful to the community (e.g. no high-speed train, no LNG terminal, no pipeline, etc.) ...		
1. I do not participate because there aren't these mobilizations	258	48.9
2. Although there are these events, I prefer not to participate	138	26.1
3. I sometimes participate	90	17.0
4. I often participate	24	4.5
5. I always participate	18	3.4
19. In demonstrations protesting against the decisions of local administrators (e.g. in defense of historic buildings, trees or parks, etc.) ...		
1. I do not participate because there aren't these conditions	250	47.5
2. Although there are these manifestations, I prefer not to participate	124	23.6
3. I sometimes participate	108	20.5
4. I often participate	35	6.7
5. I always participate	9	1.7
20. About the cleanliness of my community (e.g.: throwing paper away on the street, collecting my dog's excrement, taking care of the separate collection of household waste, etc.) ...		
1. I do not care	12	2.3
2. I rarely care	45	8.5
3. I care enough	167	31.6
4. I am very careful	305	57.7
21. With regard to the disposal of special waste (e.g. household appliances, PCs and peripherals, batteries, medicines, used oil, etc.) ...		
1. I admit that I am not particularly careful on this point	72	13.6
2. Sometimes I go to the nearest recycling depot	101	19.1
3. I always go to the nearest recycling depot	356	67.2
22. I can find out about local problems in newspapers or on the internet ...		
1. Never	8	1.5
2. Sometimes	116	21.9
3. Often	239	45.2
4. Always	166	31.4
23. I discuss with friends and relatives issues related to my community ...		
1. Never	10	1.9
2. Sometimes	182	34.7
3. Often	221	42.2
4. Always	111	21.2
24. I share and advertise events and information about my community through social networks (e.g. Facebook, Twitter, Instagram, etc.) ...		
1. Never	10	1.9
2. Sometimes	182	34.7
3. Often	221	42.2
4. Always	111	21.2

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