

RESEARCH ARTICLE

Linking community participation and subjective well-being in Chinese residential communities: the mediating role of community identity and the moderating effect of loneliness

Xiangshu Deng¹, Zhenyu Wei^{1*}, Hang Lu², Ye Luo³

¹ Research Institute of Social Development, Southwestern University of Finance and Economics, No. 555, Liutai Road, Wenjiang District, Chengdu 611130, China.

² Southwest Petroleum University, Law School, No.8, Xindu Road, Xindu District, Chengdu, 610500, China.

³ Sichuan Guanghua Center for Social Services, No.169, Jinji South Road, Wuhou District, Chengdu 610045, China.

* Corresponding author: Zhenyu Wei, weizhenyu@swufe.edu.cn

ABSTRACT

This study attempts to draw on self-determination theory and the community psychology perspective to elaborate on the mechanisms underlying the association between community participation and life satisfaction in urban residential communities. The present study examines the mediating role of community identity in the relationship between community participation and life satisfaction. Moreover, the current study investigated the moderating effect of loneliness on the mediation model. A total of 1,205 urban residents, ranging in age from 18 to 65 years, completed the Community Participation Scale, the Community Identity Scale, the University of California, Los Angeles Loneliness Scale, and the Satisfaction with Life Scale for this study. The survey's results suggest that community participation can be a positive predictor of community identity and life satisfaction. Moreover, the result of the mediation analysis demonstrates that the link between community participation and life satisfaction can be mediated by community identity. Furthermore, the moderated mediation model analysis indicates that loneliness moderated the link between community participation and community identity, as well as the link between community participation and life satisfaction. The mediating effect of community identity on the relationship between community participation and life satisfaction is stronger for residents with high levels of loneliness than for those with low levels of loneliness. These findings provide a comprehensive explanation for how community participation improves subjective well-being among urban residents in the context of a residential community.

Keywords: community participation; community identity; life satisfaction; loneliness; residential community

1. Introduction

Subjective well-being is an important concept for researchers interested in measuring quality of life^[1]. It was defined as a person's affective and cognitive evaluations of their life as a whole^[2]. The structure of

ARTICLE INFO

Received: 5 February 2024 | Accepted: 18 March 2024 | Available online: 18 April 2024

CITATION

Deng XS, Wei ZY, Lu H, et al. Linking community participation and subjective well-being in Chinese residential communities: the mediating role of community identity and the moderating effect of loneliness. *Environment and Social Psychology* 2024; 9(7): 6104. doi: 10.59429/esp.v9i7.6104

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subjective well-being contains two major components: affective and cognitive [3]. According to the tripartite model of subjective well-being, the affective component contains positive and negative affect, while life satisfaction, which reflects a person's global evaluation of their quality of life as a whole, can be considered as the cognitive component [3, 4]. Life satisfaction has received considerable attention from researchers as a core component of the subjective well-being model. Diener and his colleagues developed the Satisfaction with Life Scale (SWLS) [4, 5]. The SWLS assesses a person's general sense of satisfaction with their whole life [6]. As life satisfaction levels can predict future risk behaviors, such as suicide and violence, it is critical to investigate the promotion of life satisfaction in residential communities [7-10].

Based on self-determination theory, people have three basic psychological needs: autonomy, competence, and relatedness [11, 12]. Engaging in a particular activity that meets one's basic psychological needs would also enhance one's subjective well-being [13-15]. Previous studies have also suggested that basic psychological needs can be fulfilled by intrinsically motivated behaviors, such as community-oriented behaviors, which in turn improves individual well-being [11, 14, 16]. Community participation, which refers to "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," plays a key role in promoting human well-being [17]. Community participation differs from social or political participation because it emphasizes active engagement in groups or communities that the individual is deeply involved in, such as a residential community [18-20]. It has several forms, such as volunteering in community services, attending community meetings and taking part in community organizations [21-23].

Previous literature has demonstrated that older people who engage in community participation report better physical functioning [24]. Regarding psychological benefits, evidence suggests that community participation positively influences mental health. According to a previous study [25], community participation can decrease loneliness among people with psychiatric disabilities. Community-dwelling older adults who engage in community activities have fewer depressive symptoms [26-28]. Moreover, in the past few decades, there has been consensus that community participation is beneficial for individuals' subjective well-being [18, 27, 29, 30]. In older adults, researchers have found that participation in community services is an important predictor of life satisfaction [29]. Among Chinese retirees, individuals with more frequent community participation had higher levels of life satisfaction [18, 27, 30]. Further, researchers have explored the mechanism of the association between older adults' community participation and their life satisfaction, noting that social support and basic psychological needs can serve as mediators in said relationship [18, 27].

Despite the rich literature that reported the positive effect of community participation on well-being, few studies have investigated the mechanisms underlying the link between community participation and life satisfaction from the perspective of community psychology. Nevertheless, previous studies have indicated that community psychology explores how to promote the well-being of both individuals and communities in the context of the community [31, 32]. Meanwhile, other studies have suggested that community participation is related with community psychological factors [33-35]. Therefore, considering that community participation takes place in the community context, it is worthwhile to elaborate on the psychological mechanisms underlying the association between community participation and subjective well-being from a community psychology perspective. Community identity is a crucial psychological variable in the community psychology field. It was first introduced by Hummon [36], it describes the degree to which individuals identify with the territorial community in which they live [36-38]. As previous studies suggested, community identity is a type of social identity [39-43]. According to social identity theory, having a sense of identity with one's residential community contributes to the global self-categorization and social identity processes [44]. In broad terms, community identity satisfies residents' need for relatedness [41-43, 45]. Based on self-determination theory, this study

hypothesizes that the link between community participation and life satisfaction would be mediated by community identity.

Loneliness, which is a critical public health issue, is increasingly recognized as a severe threat to health [46, 47]. It refers to an aversive state or an unpleasant feeling arising from perceived deficiencies in one's social relationships [48]. A large body of research has found that loneliness has a negative effect on well-being. Mushtaq et al. [49] reported that loneliness is related with psychiatric disorder, such as depression, alcohol abuse, and sleep issues. Besides mental health issues, loneliness can lead to physical illness, such as obesity and cancer [49]. Moreover, there is a consensus that loneliness is linked to increased mortality risk [50–52]. Loneliness was found to be associated with suicidal ideation and suicidal behavior [53]. A previous study also demonstrated that people with high levels of loneliness exhibit less community identification and less personal well-being than people with low levels of loneliness [43]. These findings highlight the importance of efforts to investigate potential well-being interventions for lonely people. Therefore, the present study attempts to examine whether loneliness moderates the mediating effect of community identity on the link between community participation and life satisfaction.

2. The hypothetical research model

To deepen our understanding of the association between community participation and individuals' subjective well-being in residential communities, we investigated the association between community participation, community identity, loneliness, and life satisfaction in the context of residential communities. By drawing on self-determination theory and the community psychology perspective, we assume that the relationship between community participation and life satisfaction would be mediated by community identity, and that loneliness would moderate the mediation model (**Figure 1**). We took several steps to study the link between community participation, community identity, loneliness, and life satisfaction. First, we investigated whether community participation could predict community identity and life satisfaction, separately. Second, the present study investigated whether community identity can predict life satisfaction. Third, we examined whether community identity mediates the relationship between community participation and life satisfaction. Fourth, we focused on the moderating role of loneliness in the mediation model. We developed seven hypotheses:

Hypothesis 1 (H1): Community participation would positively predict residents' community identity.

Hypothesis 2 (H2): Community participation would positively predict residents' life satisfaction.

Hypothesis 3 (H3): Community identity would positively predict residents' life satisfaction.

Hypothesis 4 (H4): The association between community participation and life satisfaction would be mediated by community identity.

Hypothesis 5 (H5): The link between community participation and community identity would be moderated by loneliness.

Hypothesis 6 (H6): The link between community participation and life satisfaction would be moderated by loneliness.

Hypothesis 7 (H7): The mediating effect of community identity in the link between community participation and life satisfaction would be moderated by loneliness.

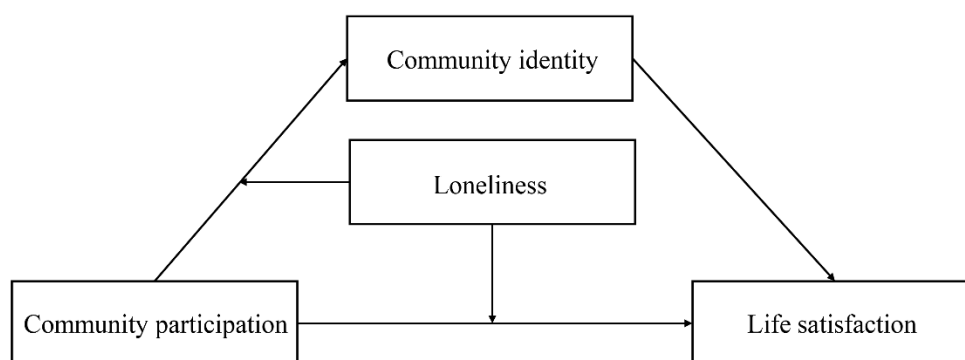


Figure 1. The hypothesized moderated mediation model.

3. Materials and methods

3.1. Participants and procedure

To test the aforementioned hypotheses, an online survey was conducted in 22 residential communities in Chengdu, which is a big city in the southwest of China. Participants were recruited in the WeChat online groups. The study sample comprised 1,205 urban residents, aged between 18 and 65 years. The length of residence of all participants exceed 1 year. In total, 62.16% of the participants were women and 37.84% were men. 34.69% of the participants were young and middle-aged people, ranging in age from 18 to 30 years. 60.17% of the participants were middle-aged people, ranging in age from 31 to 60 years. 5.14% of the participants were older adults, ranging in age from 61 to 65 years. The survey was conducted anonymously. Each participant earned 15 RMB for participation. This study was approved by the Ethics Committee of Research Institute of Social Development, Southwestern University of Finance and Economics, Chengdu, China. Informed consent was obtained from all the participants.

3.2. Measures

Participants were asked to report their sociodemographic data in the survey, such as age, education level, gender, time of residence, marital status, and monthly income.

3.2.1. Community participation

The instrument used to measure residents' level of community participation was adapted from the Citizen Participation Index^[54]. This community participation scale, which contains six items, was used in a previous study^[55]. The six items were “talk about the problems about community management to neighborhood committees”, “participate in the activities organized by neighborhood committees”, “participate in neighborhood meetings”, “take part in voluntary community services”, “be a member of community organizations (e.g., club, interest group)”, and “keep up to date with community development, such as reading news on the community message board”^[55]. The six items were rated on a Likert-type scale (1 = “rarely or never,” 2 = “only some of the time,” 3 = “occasionally,” 4 = “most or all of the time”). Residents were asked to report how often they had been participated in the six types of community activities during the past month. This scale has sufficient psychometric properties for urban residents and is highly reliable (Cronbach's alpha = 0.917)^[55].

3.2.2. Community identity

Based on social identity theory, Xin and Ling^[56] developed the Community Identity Scale (CIS). It has

two dimensions: functional identity and emotional identity ^[23, 56]. Functional identity relates to the extent to which residents are satisfied with the community's supportive resources, whereas emotional identity is associated with residents' level of affective attachment to the community ^[23, 56]. Each dimension consists of 4 items. The items for functional identity are "Living in this community meets the needs of our family," "I recognize the community's administration level," "The community environment is more satisfactory than any other place," and "I recognize the community's administration level." For emotional identity, the items are "the community makes me feel at home," "The community where I live is special emotionally to me," "I feel the community has become a part of my life," and "I care deeply about what others think of my community." Participants were asked to respond to each item using a six-point Likert scale ranging from 1 ("not true at all") to 6 ("absolutely true"). Previous studies have indicated the CIS has shown satisfactory psychometric properties in Chinese urban residents ^[23, 56, 57]. High CIS scores indicated a high sense of community identity. In the present study, the Cronbach's alpha coefficient for the CIS was 0.964.

3.2.3. Life satisfaction

The current study used the SWLS to assess life satisfaction ^[4, 51]. The SWLS measures the respondents' general satisfaction with their life. The scale contains five items. A representative item is "I am satisfied with my life." The items were responded to on a Likert-type scale ranging from 1 ("strongly disagree") to 7 ("strongly agree"). SWLS has sufficient psychometric properties and is suitable for a wide range of age groups and cultural contexts ^[6]. In the current study, the Cronbach's alpha coefficient for the SWLS was 0.933.

3.2.4. Loneliness

Loneliness was the moderating variable. The present study used the University of California, Los Angeles Loneliness Scale (3-item, Chinese version) to measure the level of loneliness ^[58, 59]. The three items were "I feel left out," "I feel isolated," and "I lack companionship." The items were responded to on a three-point Likert scale ranging from 1 ("hardly ever") to 3 ("often"). The three-item UCLA Loneliness Scale in the current study has good psychometric properties (Cronbach's alpha = 0.889).

3.3. Statistical analyses

SPSS software version 23.0 for Windows was used to analyze the data. The mediation analyses were conducted using Hayes' PROCESS macro for SPSS. Raw data were transferred into Z-scores for further analyses. Sociodemographic variables (i.e., age, gender, education level, dwelling time, marital status, and income) were served as covariates. The bootstrapping method (which constructs confidence intervals [CIs] with no distributional assumptions) was used to calculate estimators ^[60]. We took four steps to analyze the data. First, we conducted the descriptive statistics. Then, to examine the bivariate associations among community participation, community identity, loneliness, and life satisfaction, we conducted Pearson correlation analysis. Thereafter, a linear regression model was conducted to examine Hypotheses 1, 2, and 3. Furthermore, we used Hayes' PROCESS macro for SPSS (Model 4) to test Hypothesis 4 ^[61]. In the end, the hypothesized moderated mediation model was tested using Hayes' PROCESS macro for SPSS (Model 8) ^[61].

4. Results

4.1. Descriptive statistics and bivariate correlations

The survey included 1,205 residents (749 women, 456 men). Participants' demographic information is shown in **Table 1**. As **Table 2** shows, the results of the Pearson correlation analysis demonstrated positive correlations among community participation, community identity, and life satisfaction. Moreover, loneliness had negative correlations with community identity and life satisfaction.

4.2. The linear regression model

For Hypothesis 1, using the linear regression model, we tested whether community participation can predict community identity. The results indicated the following. Community participation positively predicted community identity ($F_{(1,1203)} = 465.214, p < 0.001$). Community participation explained 27.9% of the variability in community identity ($R^2 = 0.279$). Regarding the relationship between community participation and life satisfaction, we found that community participation could be a predictor of life satisfaction ($F_{(1,1203)} = 171.271, p < 0.001$). Community participation explained 12.5% of the variability in life satisfaction ($R^2 = 0.125$). Therefore, H2 was confirmed. In addition, community identity predicted life satisfaction ($F_{(1,1203)} = 364.615, p < 0.001$). Community identity explained 23.3% of the variability in life satisfaction ($R^2 = 0.233$). Therefore, H3 was confirmed.

4.3. The mediating role of community identity

The mediating effect of community identity on the relationship between community participation and life satisfaction was tested using the Model 4 of the PROCESS macro. The results indicated that community participation was positively associated with community identity ($\beta = 0.528, p < 0.001$) and that community identity was positively related to life satisfaction ($\beta = 0.405, p < 0.001$). The direct residual effect was statistically significant ($\beta = 0.147, p < 0.001$). Community identity partially mediated the association between community participation and life satisfaction (indirect effect = 0.213, 95% CI = 0.177–0.251). The mediation model accounted for 59.26% of variance in life satisfaction. H4 was supported.

Table 1. Sample individual characteristics (N=1205).

Individual characteristics	Mean (SD) (range) n (%)
Age	38.33 (12.51) (18–65)
Marital status	
With a spouse	835 (69.29%)
Single (unmarried/divorced/widowed)	370 (30.71%)
Education level	
Primary school education or lower	35 (2.9%)
Secondary school education	396 (32.87%)
High school education or higher	774 (64.23%)
Monthly income	
3000 RMB or below	570 (47.3%)
3001–5000 RMB	407 (33.8%)
5001–10000 RMB	215 (17.8%)
10001 RMB or more	13 (1.1%)
Years of residence	9.53 (9.2) (1–57)

Note. SD= standard deviation.

Table 2. Results of the descriptive statistics (Raw scores) and the Pearson correlations analysis.

Variables	Mean ± SD	1	2	3	4
1. Community participation	15.18±4.52	—	0.528**	0.353**	-0.003
2. Community identity	34.55±8.55		—	0.482**	-0.191**
3. Life satisfaction	24.2±6.65			—	-0.207**
4. Loneliness	5.11±1.78				—

Note. SD= standard deviation, **p < .01.

4.4. The moderated mediation model

Model 8 of the PROCESS macro was used to investigate the moderating role of loneliness in the mediating effect of community identity on the link between community participation and life satisfaction. After controlling for the covariates, community participation had a direct and significant predictive effect on community identity ($\beta = 0.531, p < 0.001$) and life satisfaction ($\beta = 0.175, p < 0.001$). Community identity was positively associated with life satisfaction ($\beta = 0.364, p < 0.001$). The results indicated that loneliness moderated the association between community participation and community identity ($\beta = 0.055, p < 0.05, 95\% \text{ CI} = 0.009\text{--}0.101$) (see **Figure 2**). The results of the simple slope analysis demonstrated that the positive effect of community participation on community identity was higher in the residents with high levels of loneliness (effect = 0.586, $p < 0.001, 95\% \text{ CI} = 0.518\text{--}0.654$) than in those with low levels of loneliness (effect = 0.476, $p < 0.001, 95\% \text{ CI} = 0.413\text{--}0.54$) (for details, see **Table 3** and **Figure 3**). Therefore, H5 was supported.

Moreover, the link between community participation and life satisfaction was also moderated by loneliness ($\beta = 0.1, p < 0.001, 95\% \text{ CI} = 0.053\text{--}0.147$). Therefore, H6 was supported (see **Figure 2**). The simple slope analysis demonstrated that the positive effect of community participation on life satisfaction was stronger in the residents with high levels of loneliness (effect = 0.275, $p < 0.001, 95\% \text{ CI} = 0.197\text{--}0.353$) than in those with low levels of loneliness (effect = 0.075, $p < 0.05, 95\% \text{ CI} = 0.005\text{--}0.146$) (for details, see **Table 3** and **Figure 4**). Furthermore, the results indicated that the mediating effect of community identity in the relationship between community participation and life satisfaction was higher in the residents with high levels of loneliness than in those with low levels of loneliness (for details, see **Table 4**). Therefore, H7 was confirmed.

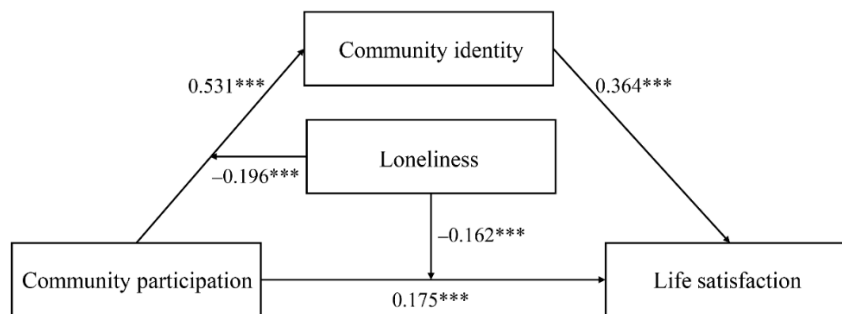


Figure 2. The moderated mediation model.

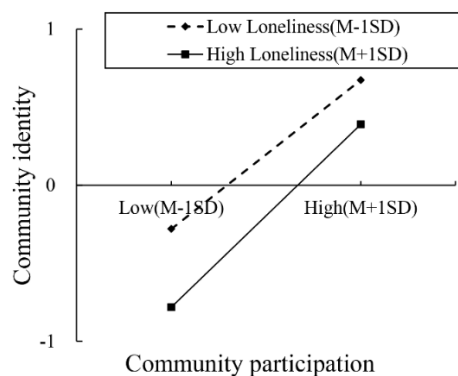


Figure 3. Loneliness moderated the association between community participation and community identity.

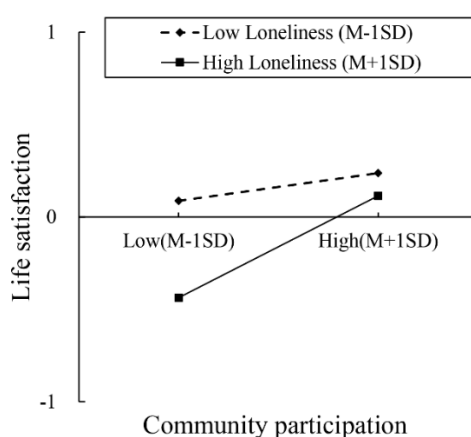


Figure 4. Loneliness moderated the relationship between community participation and life satisfaction.

Table 3. Conditional direct effects of community participation on community identity and life satisfaction.

Conditional direct effects of community participation on community identity						
Loneliness	Effect	SE	t	p	LLCI	ULCI
M-1SD	0.476	0.032	14.746	0.000	0.413	0.54
M	0.531	0.024	22.056	0.000	0.484	0.579
M+1SD	0.586	0.035	16.882	0.000	0.518	0.654
Conditional direct effects of community participation on life satisfaction						
Loneliness	Effect	SE	t	p	LLCI	ULCI
M-1SD	0.075	0.036	2.088	0.037	0.005	0.146
M	0.175	0.029	5.97	0.000	0.118	0.233
M+1SD	0.275	0.04	6.931	0.000	0.197	0.353

Note. SE = standard error.

Table 4. Conditional indirect effects of community participation on life satisfaction.

Loneliness	Effect	BootSE	BootLLCI	BootULCI
M-1SD	0.173	0.018	0.14	0.208
M	0.193	0.019	0.157	0.23
M+1SD	0.213	0.024	0.167	0.263
Index of moderated mediation	0.02	0.01	0.001	0.039

Note. SE = standard error.

5. Discussion

Life satisfaction has received attention from many researchers as a key component of human well-being. Studies focusing on the psychological determinants of life satisfaction can provide an interesting addition to the growing literature on human well-being. By drawing on self-determination theory and the community psychology perspective, the present study examined the mediating effect of community identity on the link

between community participation and life satisfaction. Moreover, the current study investigated the moderating role of loneliness in the mediation model. Using a moderated mediation model, we found that community identity partially mediated the relationship between community participation and life satisfaction. Furthermore, we highlighted the moderating role of loneliness in the mediation model. The findings from the present study contribute to extending our understanding of the association between community participation and life satisfaction among urban residents in the residential community context.

In line with Hypothesis 1, we found that community participation could be a positive predictor of community identity. People with more community participatory behavior, such as volunteering in community service, identified more with their local communities. Moreover, the result of the linear regression model analysis suggested that community identity could improve residents' life satisfaction. This finding is consistent with previous studies that reported that community-based identification was related to well-being [42, 43, 62]. Furthermore, we found a significant positive correlation between community participation and life satisfaction. Residents who often engaged in community participation were more satisfied with their lives than those who did not. This finding is in line with prior studies that suggested that community participation is associated with subjective well-being [18, 27, 63, 64]. Using longitudinal data from a national survey, Ding et al. [65] found that past community participation was related to better sociopsychological well-being in the following year. Taken together, this evidence shows that it could be feasible to increase community participation to promote residents' subjective well-being in the residential community context.

Regarding Hypothesis 4, the results of the mediation model analysis suggested the mediating effect of community identity on the association between community participation and life satisfaction. Residents who are more engaged in community activities may have a stronger identification with the community they live in; subsequently, community identity could enhance the level of satisfaction with life as a whole. As previously discussed, the mediating role of community identity in the association between community participation and life satisfaction can be explained using self-determination theory [13–15]. Community identity, enhanced by community participation, satisfies an individual's need for relatedness, which consequently enhances their subjective well-being [13–16].

A moderated mediation model analysis was conducted to examine Hypotheses 5, 6, and 7. The results suggested that loneliness moderated the relationship between community participation and community identity. The simple slope analysis suggested that the positive effect of community participation on community identity was stronger for residents with high levels of loneliness than for those with low levels of loneliness. Moreover, a significant interaction of community participation and loneliness in predicting life satisfaction emerged. Specifically, community participation could significantly improve the subjective well-being of lonely residents. Furthermore, the mediating role of community identity in the relationship between community participation and life satisfaction was observed for lonely residents. A prior study suggested that people with high levels of loneliness have a lower degree of community identification and personal well-being than those with low levels of loneliness [43]. The results of the moderated mediation model analysis suggested that community participation may be a potential community-based intervention to enhance the subjective well-being of lonely urban residents.

This study has several significant theoretical and practical implications. By drawing on self-determination theory and the community psychology perspective, the present study offers a comprehensive understanding of the mechanisms underlying residents' subjective well-being in the context of residential communities. From a practical perspective, the findings of our study may help in designing effective community interventions to improve the subjective well-being of residents with high levels of loneliness in Chinese residential communities. When developing community participation-based interventions, we must pay close attention to

whether the community activities in which residents participate can enhance their community identity. The community should consider the significance of emotional identity and functional identity. For instance, to improve emotional identity, the community could encourage residents to be members of neighborhood committees and to participate in community decision. Moreover, to increase functional identity, community managers should organize community activities based on residents' daily needs. For example, community managers could organize physical activities and health knowledge lectures to meet residents' need for health

6. Conclusion

The promotion of residents' well-being is clearly a desirable goal for residential communities^[66]. Further, community participation is increasingly being recognized as a feasible intervention for improving residents' well-being^[18,22,55]. To understand the relationship between community participation and improved life satisfaction, our study drew on self-determination theory and the community psychology perspective to examine the mediating role of community identity and the moderating role of loneliness in the link between community participation and life satisfaction. The results of the present study indicated that community identity mediated the link between community participation and life satisfaction, and loneliness moderated this mediation model. The effect of community participation on life satisfaction through community identity was stronger in the residents with high levels of loneliness than in those with low levels of loneliness. One limitation should be reported here. The present study focused on Chinese residential communities and the survey was conducted in China. Therefore, it is prudent to generalize the current findings to other cultural contexts.

Overall, the current findings extend our understanding of the improvement of subjective well-being by elucidating the mechanism of the association between community participation and life satisfaction among urban residents. Our findings suggested that community participation, which promotes the interaction between individuals and the community, can significantly increase residents' subjective well-being. Moreover, community identity could mediate the link between community participation and subjective well-being. Given the above, community participation may be an important community-based intervention to improve the subjective well-being of residents with high levels of loneliness.

Author contributions

Conceptualization, XD and ZW; methodology, XD, ZW, HL and YL; formal analysis, XD and ZW; investigation, XD, ZW, HL and YL; writing—original draft preparation, XD and ZW; writing—review and editing, XD, ZW, HL and YL; project administration, XD and ZW; funding acquisition, ZW. All authors have read and agreed to the published version of the manuscript.

Funding

This research was funded by [MOE (Ministry of Education in China) Project of Humanities and Social Sciences] grant number [21YJC840026].

Conflict of interest

The authors declare no conflict of interest.

References

1. Campbell, A. Subjective measures of well-being. *American Psychologist* 1976; 31: 117–124. <https://doi.org/10.1037/0003-066X.31.2.117>
2. Diener, E., Lucas, R. E., & Oishi, S. Subjective well-being: The science of happiness and life satisfaction. *Handbook of Positive Psychology* 2002; 2: 63–73.

3. Diener, E. Subjective well-being. *Psychological Bulletin* 1984; 95: 542–575. <https://doi.org/10.1037/0033-2909.95.3.542>
4. Pavot, W. G., & Diener, E. Review of the Satisfaction with Life Scale. *Psychological Assessment* 1993; 5: 164–172. https://doi.org/10.1007/978-90-481-2354-4_5
5. Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. The satisfaction with life scale. *Journal of Personality Assessment* 1985; 49(1): 71–75. https://doi.org/10.1207/s15327752jpa4901_13
6. Pavot, W. G., Diener, E., Colvin, C. R., & Sandvik, E. Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment* 1991; 57: 149–161. https://doi.org/10.1207/s15327752jpa5701_17
7. Fergusson, D. M., McLeod, G. F. H., Horwood, L. J., Swain, N. R., Chapple, S., & Poulton, R. Life satisfaction and mental health problems (18 to 35 years). *Psychological Medicine* 2015; 45(11): 2427–2436. <https://doi.org/10.1017/S0033291715000422>
8. MacDonald, J. M., Piquero, A. R., Valois, R. F., & Zullig, K. J. The relationship between life satisfaction, risk-taking behaviors, and youth violence. *Journal of Interpersonal Violence* 2005; 20(11): 1495–1518. <https://doi.org/10.1177/0886260505278718>
9. Pavot, W. G., & Diener, E. The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology* 2008; 3(2): 137–152. <https://doi.org/10.1080/17439760701756946>
10. Proctor, C. L., Linley, P. A., & Maltby, J. Youth life satisfaction: A review of the literature. *Journal of Happiness Studies* 2009; 10(5): 583–630. <https://doi.org/10.1007/s10902-008-9110-9>
11. Deci, E. L., & Ryan, R. M. The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry* 2000; 11(4): 227–268. <http://www.jstor.org/stable/1449618>.
12. Deci, E. L., & Ryan, R. M. Self-determination theory. In *Handbook of theories of social psychology*, ed. Sage Publications Ltd; 2012. pp. 416–436. <https://doi.org/10.4135/9781446249215.n21>
13. Sheldon, K. M., Abad, N., Ferguson, Y., Gunz, A., Houser-Marko, L., Nichols, C. P., & Lyubomirsky, S. Persistent pursuit of need satisfying goals leads to increased happiness: A 6-month experimental longitudinal study. *Motivation and Emotion* 2010; 34: 39–48. <https://doi.org/10.1007/s11031-009-9153-1>
14. Wray-Lake, L., DeHaan, C. R., Shubert, J., & Ryan, R. M. Examining links from civic engagement to daily well-being from a self-determination theory perspective. *The Journal of Positive Psychology* 2019; 14(2): 166–177. <https://doi.org/10.1080/17439760.2017.1388432>
15. Lv, X., Tang, R., Luo, J., Zhang, M., & Li, Q. I Join, So I Enjoy: How Customer Participation Increases Wellbeing. *Journal of Happiness Studies* 2023; 23: 2783–2811. <https://doi.org/10.1007/s10902-023-00703-w>
16. Jiang, J., Zeng, T., Zhang, C., & Wang, R. The mediating role of relatedness need satisfaction in the relationship between charitable behavior and well-being: Empirical evidence from China. *International Journal of Psychology* 2016; 53 (5): 349–355. <http://10.1002/ijop.12377>
17. Ohmer, M. L. Citizen participation in neighborhood organizations and its relationship to volunteers’ self and collective efficacy and sense of community. *Social Work Research* 2007; 31: 109–120. <https://doi.org/10.1093/swr/31.2.109>
18. Chen, L., & Zhang, Z. Community Participation and Subjective Wellbeing: Mediating Roles of Basic Psychological Needs Among Chinese Retirees. *Frontiers in Psychology* 2021; 12: 743897. <https://doi.org/10.3389/fpsyg.2021.743897>
19. Moreno-Jiménez, M. P., Rodríguez, M. L. R., & Martín, M. V. Construction and validation of the Community and Socio-political Participation Scale (SCAP). *The Spanish Journal of Psychology* 2013; 16. <https://doi.org/10.1017/sjp.2013.48>
20. Talò, C. Community-based determinants of community engagement: a meta-analysis research. *Social Indicator Research* 2018; 140: 571–596. <https://doi.org/10.1007/s11205-017-1778-y>
21. Lardier Jr, D. T. An examination of ethnic identity as a mediator of the effects of community participation and neighborhood sense of community on psychological empowerment among urban youth of color. *Journal of Community Psychology* 2018; 46(5): 551–566. <https://doi.org/10.1002/jcop.21958>
22. Talò, C., Mannarini, T., & Rochira, A. Sense of community and community participation: A meta-analytic review. *Social Indicator Research* 2014; 117: 1–28. <https://doi.org/10.1007/s11205-013-0347-2>
23. Xin, Z., Yang, Z., & Ling, X. Interdependent self-construal matters in the community context: Relationships of self-construal with community identity and participation. *Journal of Community Psychology* 2017; 45(8): 1050–1064. <https://doi.org/10.1002/jcop.21910>
24. Gilmour, H. Social participation and the health and well-being of Canadian seniors. *Health Reports* 2012; 23(4): 23–32.
25. Rogers, E. S., Millner, U. C., Ludlow, L., Lord, E. M., & Russinova, Z. Development of a comprehensive inventory of community participation for individuals with psychiatric disabilities. *Psychiatric Rehabilitation Journal* 2021; 44(1): 51. <https://doi.org/10.1037/prj0000450>

26. Glass, T. A., De Leon, C. F. M., Bassuk, S. S., & Berkman, L. F. Social engagement and depressive symptoms in late life: longitudinal findings. *Journal of Aging and Health* 2006; 18(4): 604–628. <https://doi.org/10.1177/08982643062910>
27. Li, C., Jiang, S., Li, N., & Zhang, Q. Influence of social participation on life satisfaction and depression among Chinese elderly: Social support as a mediator. *Journal of Community Psychology* 2018; 46(3): 345–355. <https://doi.org/10.1002/jcop.21944>
28. Park, N. S., Jang, Y., Lee, B. S., Haley, W. E., & Chiriboga, D. A. The mediating role of loneliness in the relation between social engagement and depressive symptoms among older Korean Americans: do men and women differ? *Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 2013; 68(2): 193–201. <https://doi.org/10.1093/geronb/gbs062>
29. Harlow, R. E., & Cantor, N. Still participating after all these years: A study of life task participation in later life. *Journal of Personality and Social Psychology* 1996; 71(6): 1235–1249. <https://doi.org/10.1037/0022-3514.71.6.1235>
30. Zhang, Z., and Zhang, J. Social participation and subjective well-being among the retirees in China. *Social Indicators Research* 2015; 123: 143–160. <https://doi.org/10.1007/s11205-014-0728-1>
31. Cowen, E. L. Community psychology and routes to psychological wellness. In *Handbook of community psychology*, ed. Springer, Boston, MA; 2000. pp. 79–99.
32. Schueller, S. M. Promoting wellness: Integrating community and positive psychology. *Journal of Community Psychology* 2009; 37(7): 922–937. <https://doi.org/10.1002/jcop.20334>
33. Deng, X., Wei, Z., Tu, C., & Yin, Y. Sense of community improves community participation in Chinese residential communities: The mediating role of sense of community responsibility and prosocial tendencies. *American Journal of Community Psychology* 2023; 71: 166–173. <https://doi.org/10.1002/ajcp.12605>
34. Peterson, N. A., & Reid, R. J. Paths to psychological empowerment in an urban community: Sense of community and citizen participation in substance abuse prevention activities. *Journal of Community Psychology* 2003; 31(1): 25–38. <https://doi.org/10.1002/jcop.10034>
35. Wandersman, A., & Giamartino, G. A. Community and individual difference characteristics as influences on initial participation. *American journal of community psychology* 1980; 8(2): 217–228. <https://doi.org/10.1007/BF00912661>
36. Hummon, D. M. City mouse, country mouse: The persistence of community identity. *Qualitative Sociology* 1986; 9(1): 3–25. <https://doi.org/10.1007/BF00988246>
37. Puddifoot, J. E. Dimensions of community identity. *Journal of Community & Applied Social Psychology* 1995; 5(5): 357–370. <https://doi.org/10.1002/casp.2450050507>
38. Puddifoot, J. E. Exploring “personal” and “shared” sense of community identity in Durham City, England. *Journal of Community Psychology* 2003; 31(1): 87–106. <https://doi.org/10.1002/jcop.10039>
39. Van Vugt, M. Community identification moderating the impact of financial incentives in a natural social dilemma: Water conservation. *Personality and Social Psychology Bulletin* 2001; 27(11): 1440–1449. <https://doi.org/10.1177/01461672012711005>
40. Luo, N., Zhang, M. L., Hu, M., & Wang, Y. How community interactions contribute to harmonious community relationships and customers’ identification in online brand community. *International Journal of Information Management* 2016; 36 (5): 673–685. <https://doi.org/10.1016/j.ijinfomgt.2016.04.016>
41. Yang, Z., & Xin, Z. Q. Community identity increases urban residents’ in-group emergency helping intention. *Journal of Community & Applied Social Psychology* 2016; 26(6): 467–480. <https://doi.org/10.1002/casp.2274>
42. Fong, P., Cruwys, T., Haslam, C., & Haslam, S. A. Neighborhood identification and mental health: How social identification moderates the relationship between socioeconomic disadvantage and health. *Journal of Environmental Psychology* 2019; 61: 101–114. <https://doi.org/10.1016/j.jenvp.2018.12.006>
43. McNamara, N., Stevenson, C., Costa, S., Bowe, M., Wakefield, J., Kellezi, B., ... & Mair, E. Community identification, social support, and loneliness: The benefits of social identification for personal well-being. *British Journal of Social Psychology* 2021; 60(4): 1379–1402. <https://doi.org/10.1111/bjso.12456>
44. Pretty, G. H., Chipuer, H. M., & Bramston, P. Sense of place amongst adolescents and adults in two rural Australian towns: The discriminating features of place attachment, sense of community and place dependence in relation to place identity. *Journal of Environmental Psychology* 2003; 23(3): 273–287. [https://doi.org/10.1016/S0272-4944\(02\)00079-8](https://doi.org/10.1016/S0272-4944(02)00079-8)
45. Greenaway, K. H., Cruwys, T., Haslam, S. A., & Jetten, J. Social identities promote well-being because they satisfy global psychological needs. *European Journal of Social Psychology* 2016; 46(3): 294–307. <https://doi.org/10.1002/ejsp.2169>
46. Quadt, L., Esposito, G., Critchley, H. D., & Garfinkel, S. N. Brain-body interactions underlying the association of loneliness with mental and physical health. *Neuroscience & Biobehavioral Reviews* 2020; 116: 283–300. <https://doi.org/10.1016/j.neubiorev.2020.06.015>

47. Lim, M.H., Eres, R. & Vasan, S. Understanding loneliness in the twenty-first century: an update on correlates, risk factors, and potential solutions. *Social Psychiatry and Psychiatric Epidemiology* 2020; 55: 793–810. <https://doi.org/10.1007/s00127-020-01889-7>
48. Peplau, L. A., & Perlman, D. Perspectives on loneliness. In *Loneliness: A sourcebook of current theory, research and therapy*, ed. New York: Wiley; 1982. pp. 1–18.
49. Mushtaq, R., Shoib, S., Shah, T., & Mushtaq, S. Relationship between loneliness, psychiatric disorders and physical health? A review on the psychological aspects of loneliness. *Journal of Clinical and Diagnostic Research* 2014; 8(9): WE01–WE4. <https://doi.org/10.7860/JCDR/2014/10077.4828>
50. Beller, J. Loneliness and mortality: The moderating effect of positive affect. *Applied Psychology: Health and Well-Being* 2023; 15(1): 49–65. <https://doi.org/10.1111/aphw.12354>
51. Luo, Y., Hawkey, L.C., Waite, L.J., Cacioppo, J.T. Loneliness, health, and mortality in old age: a national longitudinal study. *Social Science & Medicine* 2012; 74: 907–914. <https://doi.org/10.1016/j.socscimed.2011.11.028>
52. Holt-Lunstad, J., Smith, T.B., Baker, M., Harris, T., Stephenson, D. Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspectives of Psychological Science* 2015; 10: 227–237. <https://doi.org/10.1177/17456916145683>
53. Stickley, A., & Koyanagi, A. Loneliness, common mental disorders and suicidal behavior: Findings from a general population survey. *Journal of Affective Disorders* 2016; 197: 81–87. <https://doi.org/10.1016/j.jad.2016.02.054>
54. Perkins, D. D., Florin, P., Rich, R. C., Wandersman, A., & Chavis, D. M. Participation and the social and physical environment of residential blocks: Crime and community context. *American Journal of Community Psychology* 1990; 18: 83–115. <https://doi.org/10.1007/BF00922690>
55. Zhang, J. How community participation promotes the relocation adjustment of older women: A moderated mediation analysis. *Social Indicators Research* 2019; 143(2): 637–655. <https://doi.org/10.1007/s11205-018-2006-0>
56. Xin, Z. Q., & Ling, X. H. Urban residents' community identity: Concept, measurement and its correlates. *Psychological Research* 2015; 8: 64–72. <http://qikan.cqvip.com/Qikan/Article/Detail?id=666333154>.
57. Yang, C., Wang, Y., Hall, B. J., & Chen, H. Sense of community responsibility and altruistic behavior in Chinese community residents: The mediating role of community identity. *Current Psychology* 2020; 39(6): 1999–2009. <https://doi.org/10.1007/s12144-020-00667-7>
58. Hughes M. E., Waite L. J., Hawkey L. C., Cacioppo J. T. A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging* 2004; 26(6): 655–672. <https://doi.org/10.1177/0164027504268574> PMID: 18504506
59. Liu, T., Lu, S., Leung, D., Sze, L. C. Y., Kwok, W. W., Tang, J. Y. M., Luo, H., Lum, T. Y. S., Wong, G. H. Y. Adapting the UCLA 3-item loneliness scale for community-based depressive symptoms screening interview among older Chinese: A cross-sectional study. *BMJ Open* 2020, 10, e041921.
60. Preacher, K. J., & Hayes, A. F. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods* 2008; 40(3): 879–891. <https://doi.org/10.3758/BRM.40.3.879>
61. Hayes, A. F. *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Press; 2018.
62. Heath, S. C., Rabinovich, A., & Barreto, M. Putting identity into the community: Exploring the social dynamics of urban regeneration. *European Journal of Social Psychology* 2017; 47(7): 855–866. <https://doi.org/10.1002/ejsp.2296>
63. Almedom, A. M. Social capital and mental health: An interdisciplinary review of primary evidence. *Social Science & Medicine* 2005; 61(5): 943–964. c. 12.025
64. Helliwell, J. F. Well-being and social capital: Does suicide pose a puzzle? *Social Indicators Research* 2007; 81(3): 455–496. <https://doi.org/10.1007/s11205-006-0022-y>
65. Ding, N., Berry, H. L., & O'Brien, L. V. One-year reciprocal relationship between community participation and mental wellbeing in Australia: A panel analysis. *Social Science & Medicine* 2015; 128: 246–254. <https://doi.org/10.1016/j.socscimed.2015.01.022>
66. Boyko, C. T., Cooper, R. Well-being in neighborhoods: current research and future practice. In *The Handbook of Stress and Health*, ed. John Wiley & Sons Ltd; 2017. pp. 555–569