

Neighborhood Social Capital and its Related Factors in the Coronavirus Pandemic: A Sample of Iranian Older Adults

ARTICLE INFO

Article Type

Descriptive Study

Authors

Zanjari N.¹ PhD,
Aliakbarzadeh Arani Z.*² PhD,
Delbari A.¹ PhD,
Foroughan M.¹ PhD,
Ghaedamini Harouni Gh.³ PhD

How to cite this article

Zanjari N, Aliakbarzadeh Arani Z, Delbari A, Foroughan M, Ghaedamini Harouni Gh. Neighborhood Social Capital and its Related Factors in the Coronavirus Pandemic: A Sample of Iranian Older Adults. *Iranian Journal of War & Public Health*. 2021;13(2):171-177.

¹Iranian Research Center on Aging, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

²Spiritual Health Research Center, Qom University of Medical Sciences, Qom, Iran

³Social Welfare Management Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

*Correspondence

Address: Iranian Research Center on Aging, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran. Postal Code: 3713649373.

Phone: +98 (21) 22180154

Fax: +98 (21) 22180154
zaliakbarzade@muq.ac.ir

Article History

Received: August 23, 2021

Accepted: September 04, 2021

ePublished: November 02, 2021

ABSTRACT

Aims Despite the importance of neighborhood social capital in well-being and health outcomes, very few studies have focused on predictors of neighborhood social capital, especially among older adults. This study aimed to identify the factors related to neighborhood social capital in the coronavirus pandemic among older adults.

Instrument & Methods This cross-sectional survey was conducted during the autumn of 2020 in Aran & Bidgol, Iran. The sample consisted of 414 community-dwelling individuals aged 60 years and older, chosen by the clustered sampling. "Adapted Social Capital Assessment" and "Place Attachment Instrument-Older Adults" scales were used. Data analysis was undertaken using SPSS 24 by bivariate analyses and multiple linear regressions.

Findings The mean age of the participants was 70.43±8.84 years, and 77.3% of them were married. The mean social capital score was 4.98±1.99, and the mean percentage score was 15.48±6.64. Being younger, attached to the neighborhood, the possibility of recreational activities in the neighborhood, knowing the number of neighbors, and home satisfaction significantly contributed to higher neighborhood social capital. Residence characteristics, including home satisfaction and the possibility of recreational activities in the neighborhood, had the strongest effect on the neighborhood social capital.

Conclusion The neighborhood social capital is very low in the pandemic, leading to the social exclusion of older adults. Findings suggest that alternative policies should be implemented to improve proper recreational activities and connections with neighbors, especially for the oldest-old, to compensate for older adults' neighborhood social capital during the outbreak.

Keywords Older Adults; Social Capital; Residence Characteristics; Neighborhood; Coronavirus

CITATION LINKS

[1] Evaluating the physical, psychological ... [2] Factors that influence the relationship ... [3] Social network sites as a means to support ... [4] Neighborhood Sense of Community ... [5] Social capital as a resource for mental ... [6] Measurement of social capital in relation ... [7] Social capital and mental health among ... [8] Neighbourhood social capital and ... [9] Understanding older adults' social capital ... [10] The social capital of older ... [11] A tale of two Harlems: Gentrification, social ... [12] Social capital and preferences for aging ... [13] The convoy model and later-life ... [14] Getting together: Social contact frequency ... [15] Help from and help to neighbors among ... [16] The family and community life of older ... [17] A six-year follow-up study of social ... [18] Impact of COVID-19 on neighborhood ... [19] COVID-19 growth rate decreases with ... [20] How social capital helps communities ... [21] Association of neighborhood social ... [22] Investigation of the effective factors in social ... [23] The relationship of the elderly toward their ... [24] Investigating the amount of social ... [25] Adolescent place attachment, social ... [26] Does social capital influence preferences ... [27] Neighborhood-based social capital and ... [28] Social capital is associated with improved ... [29] Social capital and health among ... [30] Exacerbating inequalities: Social ... [31] Measuring social capital within ... [32] Psychometric and cognitive ... [33] Relationship between social capital ... [34] Designing and testing a place attachment ... [35] Investigating the relationship between ... [36] An study of sense of place effect on social ... [37] Poor people, poor places, and poor health ... [38] The role of social capital in place ... [39] Loneliness in urban neighbourhoods ... [40] The importance of neighborhood ... [41] Social participation among older adults ... [42] Do the benefits of exercise in indoor ... [43] Dwelling conditions and life satisfaction ...

Introduction

Although increasing life expectancy is a great achievement globally, retirement conditions, functional disorders, and disability of old age reduce the social networks [1]. In contrast, the social dimension of life has a significant impact on health and the quality of life among older adults [2]. Most recently, many social gerontologists and health researchers have conducted studies to understand the social networks of older people through the lens of social capital [3, 4].

The concept of social capital, which emerged in the 1920s but has received a great deal of attention in the last two decades, is a concept divided into cognitive and structural social capital. The first form is relatively subjective and is seen in social trust and interactions [5]. The second form is relatively objective and is measured by the relationship of individuals with formal organizations [6]. In the Coronavirus pandemic, cognitive, social capital is associated with a high level of trust and interaction, especially between neighbors. In contrast, structural social capital is associated with membership in organizations, frequent community participation, and voluntary activities related to pandemics [7]. In the meantime, the neighborhood social capital represents individuals' resources through membership in a group or community. These resources include reciprocal norms, civic participation, trust in others, and membership benefits [8]. Studies show that the neighborhood can be an important place for older adults to earn social capital [9]. However, social capital is not necessarily available only in neighborhoods, but for older people who are less active, social support can be gained through social interactions [10]. Neighborhood social capital gives seniors greater access to neighborhood care services and facilities, as well as formal and informal support, which is the aim of the "aging in place theory" [11]. Because most of the time, the neighborhood residents tend to support the older people, and this social engagement in a neighborhood may lead to feelings of belonging and comfort in older adults [12].

According to the model Convoy of Kahn and Antonucci, many people around the person constantly communicate and use each other's support [13]. Family members and close friends are more important than neighbors [14]. However, if they are not easily accessible, neighbors may provide the necessary support [15]. But Bernard *et al.* explained that neighbors and friends have been more important than family relationships on older people's social networks in recent decades. This may be because older adults manage their relationships [16], and social relationships become more selective in older adults [17]. Zetterberg *et al.* believe that neighborhood relations may become more important in times of social crises such as pandemics because access and use of public social

support services are reduced [18]. In this condition, neighborhood social capital and trust to neighbors can be used to control the prevalence of COVID-19, for example, if long-commute in older adults to meet their needs, is replaced with protected social interaction by neighbors, may be effective in controlling the spread of the disease [19]. On the other, participating in COVID-19-related volunteer activities, if the risk of disease does not increase, can improve the sense of belonging of older people in the community, trust in other residents, the meaning of life, and use all supportive resources in the community by supporting young-old adults to old-old adults [7]. Also, social capital is associated with adherence to government recommendations during the COVID-19 crisis and potentially influences reducing virus spread and improvement of health outcomes [20]. Therefore, considering the important role of neighborhood social capital in the older adults' quality of life [21] leads to understanding the factors that increase or decrease neighborhood social capital in the older population [9]. However, few studies have explored the role of predictors of social capital- especially in neighborhoods- among older adults [22]. Most studies on neighborhood social capital are divided into two general categories: Studies that examine the mutual relationship between social capital and place and studies that show the role of social capital in improving the health and well-being of old age.

About the first category, Kerbler *et al.* included people who have more attachment to their home and environment, have more social participation in the local community, and their isolationism decreases [23]. There is an inverse relationship between the level of social trust, social cohesion, and social participation of the older adults with their attitude towards living in the nursing homes [24]. Lager *et al.* also found that place attachment significantly predicts social capital variables [25]. Social capital opportunities are not the same at the neighborhood level and vary in places and with different expectations of interactions between people [9]. Jian *et al.* argued that better family social capital, higher social trust, and greater membership in organizations, even after controlling individual characteristics, are influential in the selection of aging in place [26], and structural social capital have a higher effect than cognitive, social capital on aging in place [12].

Many studies have examined the impact of social capital on a wide range of health outcomes. For example, Jiang *et al.* included that neighborhood social capital may improve cognitive function in older adults [27]. The study of Christian *et al.* showed that improving the subjective well-being of older people with chronic disease depends on improving their social capital [28], and social capital is essential for better health among South Africa's older generations [29]. Also, another study perceived that

neighborhood structural social capital (membership in the association) and cognitive (social cohesion) is important for the well-being of older people [21]. Despite growing attention on the relationship between social capital and health outcomes, information about predictors of neighborhood social capital among the aged population is limited, and many studies on social capital have selected their samples from the general population [29].

A holistic approach to older people that includes examining individual and neighborhood characteristics may clarify how to increase the social capital in the aging population. There is also conflicting information about the increase or decrease of social capital and networks of the older adults during the coronavirus pandemic [18, 30] and needs to be studied in the Iranian older adults community. Therefore, this study aimed to examine neighborhood social capital and related factors in the coronavirus pandemic among older adults.

Instrument and Methods

This cross-sectional survey was conducted during the autumn of 2020 in Aran & Bidgol, Iran. The sample consisted of 414 community-dwelling individuals aged 60 years and older, chosen by the clustered sampling. Ten neighborhoods were randomly selected from 51 neighborhoods of Aran & Bidgol city. Face-to-face interviews were administered to gather data from older adults living in those selected neighborhoods. Older people who had the inclusion criteria (resident in Aran & Bidgol at least in the last five years, and no cognitive impairment based on abbreviated mental test (AMT)) after explaining the objectives of the project for research samples and obtaining informed consent from them were selected as a sample to participate in the study. Incomplete completion of the social capital and place attachment scale was a condition for excluding the sample from the study.

As a dependent variable, perceived neighborhood social capital was measured by Harpham *et al.*'s Adapted Social Capital Assessment Tool (A-SCAT) [31]. This tool is used to measure individual social capital in developing countries, but it also applies to measure the social capital of neighborhoods. The short form of 11 questions examines social capital in two structural dimensions (active group membership, social support received from networks, and joining with other neighborhood members to solve a problem) and cognitive (trust, social adjustment, sense of belonging, and fairness). In this study, a nine-question form was used, which its content and construct validity have been confirmed by Desilva *et al.* in Vietnam and Peru. The questions of this questionnaire have a yes-no answer. Questions 1 to 5 are related to structural social capital, and questions 6 to 9 are related to cognitive, social capital. Questions 1 and 2 each have eight items with answers: no (0 points) and yes (1 point),

and each question gets a score of 0-8. Question 3 has nine items with the answer: no (0 points) and yes (1 point) and gets a 0-9. Questions 3 to 8 each with the answer: no (0 points) and yes (1 point), but question 9 is coded reversely and gets the answer no (1 point) and yes (0 points); So that higher scores in this tool indicate greater levels of perceived neighborhood social capital [32]. The reliability of this tool in a study in Iran has been reported as favorable [33]. In the present study, the internal consistency of the instrument was investigated. Cronbach's alpha for total social capital was 62.7%, structural dimension 63.1%, and cognitive dimension 64.8%. To measure place attachment was used 42-item Place Attachment Instrument-Older Adults (PAI-OA) scale for the older adults that have been developed by AliAkbarzadeh *et al.* in Iran [34]. The place in this instrument means the home and neighborhood. The items are designed on a 5-point Likert scale. The scores of each item range from 1 (strongly disagree) to 5 (strongly agree). All 16 items at the home level and 26 items at the neighborhood level are calculated separately. The range of the place attachment score at the home level is between 16 to 80, and the range of the place attachment score at the neighborhood level is between 26 to 130. In this instrument, a higher score indicates a better home or neighborhood attachment status. In the reliability study based on the internal consistency method, Cronbach's alpha coefficient was obtained 90% at home and neighborhood level. Also, the ICC of this tool at the level of both home and neighborhood was calculated at 80% [34]. Demographic variables included: sex (0=female, 1=male), age at interview, marital status (0=single, 1=married), living arrangement (0=alone, 1=only with wife, 2=with wife and children, 3=only with children, 4=with family and others), education (0=illiterate, 1=primary, 2=secondary, 3=diploma, 4=higher education), employment status (1=employed, 2=housewife, 3=retired, 4=disable), economic status (1=very low, 2=low, 3=middle, 4=high, 5=very high), house ownership (0=tenant, 1=landlord). environment characteristics included: neighborhood development status (1=bad, 2=no change, 3=good), the number of neighbors (0=nobody, 1=<4, 2=4-15, 3=>15), number of relatives in neighborhood (0=nobody, 1=1-2, 3=3-4, 4=>4), greetings of the people (0=not at all, 1=only a little, 2=to some extent, 3=rather much 4=very much), possibility of recreational activities in the neighborhood (0=not at all, 1=only a little, 2=to some extent, 3=rather much 4=very much), home satisfaction (0=no, 1=yes) and neighborhood satisfaction (0=no; 1=yes).

The study was approved by the Research Ethics Committee of the University of Social Welfare and Rehabilitation Sciences, and researchers ensured all ethical considerations, including the written informed consent to participation and personal data confidentiality. The social capital and place

attachment scale was completed. Factors related to social capital were examined both at the individual (age, sex, marital status, living arrangements, educational level, employment status, economic status, and ownership status) and environmental characteristics (Neighborhood development status, Know the number of neighbors, number of relatives, greetings of the people, the possibility of recreational activities in the neighborhood, home and neighborhood satisfaction, home, and neighborhood attachment) levels. Better understanding from predictors of neighborhood social capital will assist the development of targeted policies and compensated programs for health in older adults, especially in the times of social crisis such as pandemics and outbreaks.

Data analysis was undertaken using SPSS 24. Descriptive statistics, such as percentage, frequency, and mean, were conducted to illustrate the characteristics of the study sample. The inferential statistics, such as bivariate analyses and multiple linear regressions, were done to determine the relations between Perceived neighborhood social capital and independent variables.

Findings

The mean age of 414 participants was 70.43±8.84 years, and 77.3% of them were married. The mean score of social capital was 4.98±1.99, and the mean percentage score was 15.48±6.64. Also, the mean score of social capital in the structural dimension was 2.35±2.06, and the mean percentage score was 8.70±7.63 and in cognitive dimension was 2.87±0.61, and the mean percentage score was 35.89±7.63. There were significant relationships between the social capital and age, economic status, neighborhood development status knowing the number of neighbors, greetings of the people, the possibility of recreational activities in the neighborhood, and home satisfaction (Table 1).

The social capital had significant correlations with home attachment ($r=0.107$; $p=0.002$) and neighborhood attachment ($r=0.15$; $p=0.029$).

Before the regression analyses, collinearity diagnostics were considered for lack of multicollinearity. There was no evidence for multicollinearity, and we did not detect any correlation between independent variables higher than 0.80. The VIF index was lower than ten for all variables, and the tolerance index was higher than 0.1. The Durbin-Watson test showed the independence of measurement errors (1.929). The neighborhood attachment, age, number of neighbors, the possibility of recreational activities in the neighborhood, and home satisfaction significantly contributed to higher neighborhood social capital ($F=5.149$; $R=0.14$). Almost 14.4% of the variance in the score of the neighborhood social capital can be explained by these variables. Among

these predictors, environmental characteristics included home satisfaction, and the possibility of recreational activities in the neighborhood had the strongest effect on the neighborhood social capital (Table 2).

Table 1 The means of social capital scores according to demographic variables

Variable	N (%)	Mean±SD	p-value
Sex			0.081
Men	213 (51.4)	5.29±2.30	
Women	201 (48.6)	4.91±2.05	
Age			0.026
60-75	303 (73.2)	5.13±2.08	
76-85	93 (22.5)	4.49±1.68	
>85	18 (4.3)	5.00±1.57	
Marital status			0.397
Single	94 (22.7)	4.82±1.88	
Married	320 (77.3)	5.03±2.02	
Life arrangement			0.275
Alone	69 (16.7)	4.94±1.96	
With wife	183 (44.2)	5.18±1.98	
With wife and children	129(31.2)	4.87±2.09	
With children	25 (6.0)	4.44±1.80	
With others	8 (1.9)	4.25±.70	
Education			0.191
Illiterate	238 (42.0)	4.84±1.74	
Primary	91 (37.5)	5.38±2.46	
Secondary	15 (3.6)	4.73±2.01	
Diploma	34 (8.2)	5.23±1.98	
Higher education	36 (8.7)	4.75±2.16	
Employment status			0.106
Employed	86 (20.8)	4.95±2.04	
Housewife	161 (38.9)	4.92±1.94	
Retired	113 (27.3)	5.30±2.10	
Disable	54 (13)	4.51±1.76	
Economic status			0.008
Very low	44 (10.6)	4.29±1.75	
low	98 (23.7)	4.74±1.85	
Middle	184 (44.4)	5.22±2.15	
High	70 (16.9)	4.87±1.80	
Very high	18 (4.3)	5.94±1.69	
House ownership			0.318
Tenant	12 (5)	4.16±1.11	
Landlord	153 (95)	4.66±1.69	
Neighborhood development status			0.042
Bad	8 (1.9)	5.75±3.49	
No change	111 (26.8)	4.60±1.99	
Good	295 (71.3)	5.10±1.92	
Number of neighbors			0.003
Nobody	4 (1.0)	3.250±1.70	
<4	18 (4.3)	3.94±2.89	
4-15	85 (20.5)	4.58±1.75	
>15	307 (74.2)	5.17±1.96	
Number of relatives in the neighborhood			0.285
Nobody	50 (12.1)	4.76±2.09	
1-2	98 (23.7)	4.91±2.04	
3-4	81 (19.6)	4.74±2.05	
>4	185 (44.7)	5.18±1.90	
Greetings of the people			0.005
Not at all	4 (1.0)	5.50±1.91	
Only a little	18 (4.3)	4.88±2.05	
To some extent	91 (22.0)	4.45±2.06	
Much	122 (29.5)	4.80±2.00	
Very much	179 (43.2)	5.37±1.88	
Possibility of recreational activities in the neighborhood			0.004
Not at all	208 (50.2)	4.80±1.85	
Low	116 (28.0)	4.83±1.90	
To some extent	71 (17.1)	5.57±2.34	
Much	17 (4.2)	5.29±2.08	
Very much	2 (5)	8.50±.70	
Home satisfaction			0.001
No	25 (6.0)	3.40±1.65	
Yes	389 (94.0)	5.08±1.97	
Neighborhood satisfaction			0.294
No	8 (1.9)	4.25±2.81	
Yes	406 (98.1)	5.00±1.97	

Table 2) The influence of independent variable on the social capital of older adults

Predictors	b	β	t
Sex (Male)	0.417	0.104	1.222
Age	-0.028	-0.124	-0.2366*
Economic status	0.161	0.079	1.547
Employed (constant: Housewife)	-0.445	-0.091	-1.181
Retired (constant: Housewife)	-0.199	-0.044	-0.500
Disable (constant: Housewife)	-0.396	-0.067	-0.998
Neighborhood attachment	0.025	0.145	2.286*
Home attachment	-0.008	-0.032	-0.516
Neighborhood development status	-0.096	-0.024	-0.495
Know the number of neighbors	0.451	0.136	2.530*
Greetings of the people	0.102	0.049	0.918
Possibility of recreational activities in the neighborhood	0.303	0.138	2.838*
Home satisfaction	1.528	0.183	3.790*

* $p < 0.05$; $F = 5.149$ ($p < 0.001$); $R = 0.379$; $R^2 = 0.144$

Discussion

This study aimed to investigate the social capital and related factors among a sample of 414 community-dwelling older adults in Iran, 2021, during the COVID-19-pandemic.

The mean score of the neighborhood social capital in this study (4.98; range 0-8) was lower than that reported by Veisi Miankali *et al.* (80.50; range 36-144) [35], which might be explained by the difference between the tools and the time interval of the study. Data were collected in the Weiss Miankei study in 2018 and the present study in 2020 at the coronavirus outbreak. Zetterberg also showed a higher level of neighborhood social capital in the general population than before the corona pandemic [18].

The cognitive, social capital of the older adults was better than structural social capital. It seems that during the COVID-19 pandemic, the aged population received more support from neighbors than family and government institutions, trusted and interacted with each other but participated in fewer voluntary and collective activities. As Zetterberg *et al.* concluded, since in the crisis coronavirus, practical support is required may change patterns of social capital [18].

As the finding of this study showed, those who had "younger age, neighborhood attachment, home satisfaction, and knew more neighbors and possibility of more recreational activity in the neighborhood" reported higher perceived neighborhood social capital.

The results showed that there is an inverse relationship between social capital and age. The study by Veisi Miankali *et al.* also showed that the younger, the older people, the higher the social capital in them, so that the social capital of the 60-70 age group was higher than the other age groups in the older adults [35].

As mentioned, neighborhood attachment was a predictor for neighborhood social capital. Rahnema & Razavi showed that strengthening the sense of place attachment increases social capital by

increasing participation [36]. Also, according to Chris & Carmen, attachment to place provides more social participation in older adults [6]. Cattle point the characteristics related to neighborhood context, social history, services, facilities, housing, opportunities for occasional meetings, participation in associations, as well as the reputation of the region plays an important role in creating social capital in the people of that neighborhood, and the less attachment to the place, the lower the social capital [37]. It can be said that place attachment affects the amount and type of relationships between people in society, and this relationship in social groups allocated to a particular place, such as neighborhoods, increases their social capital and trust [38].

Furthermore, Knowing the number of neighbors was related to the higher neighborhood social capital. Gary found that "contacting and meeting people in the neighborhood is more effective in supporting than being active, participating or having a child" [10]. Also, De Jong Gierveld concluded that older people with a wider social network (including interaction in the community and relationships with family, friends, and neighbors) experience less loneliness than older people with a private and limited network. Social capital in the form of local contact is an important factor in the well-being of the elderly because it can be a source of support and eliminate loneliness [39]. For older adults alone, the closeness of neighborhood relationships may be crucial to accessing social support during an epidemic crisis, and safe interaction with the local community becomes increasingly important.

The results showed that social capital is related to the possibility of recreational activities in the neighborhood. Neighborhood services and facilities are important for the social capital of older people because they provide opportunities for them to interact with each other [40]; However, Buffel *et al.* pointed that the existence of these "local opportunity structures" alone is not sufficient to create social participation among older adults and the "age-appropriate facilities" may be more important in this regard [41]. Longer durations of quarantine are associated with feeling more depression and stress. The neighborhoods with proper recreational facilities, such as the parks that keep larger social distance for outdoor exercises in the COVID-19 pandemic, improve social capital and mental health [42].

Social capital was associated with better home satisfaction. Some studies indicated that home satisfaction is a mediator between dwelling conditions and life satisfaction [43]. It can be said that a home with suitable space and size, which can be a gathering place for family members, observing the social distance in the crisis of the coronavirus, increases family relations and support, which leads

to the development of social capital.

In our study, environmental characteristics included home satisfaction, and the possibility of recreational activities in the neighborhood had the strongest effect on the neighborhood social capital. Therefore, city planners and policymakers should consider increasing recreational facilities, safety, and age-appropriate spaces and manage the issue of social distance to use these facilities and social contact of older people in the neighborhood. While strengthening the presence of the older adults in the community as much as possible in these critical conditions and increasing their neighborhood social capital, these approaches also reduce the prevalence of disease and mortality among them.

This study was an initial attempt to examine perceived neighborhood social capital among older Iranian adults during the coronavirus pandemic. Future studies can examine the role of new communication methods and alternative ways to increase older people's neighborhood social capital in both structural and cognitive dimensions. The samples of this study were the community-dwelling older adults residing in the urban area. Given the differences in live conditions and the factors affecting social capital in rural older adults, especially during the coronavirus pandemic, it is suggested that the perceived neighborhood social capital among older people living in rural areas should also be examined. Due to the lower structural neighborhood social capital of the older adults during the coronavirus, promoting the participation of aged people in voluntary social and citizen-based activities related to COVID-19, such as temperature control in public places, support for vulnerable groups, COVID-19 prevention, and control training programs are effective approaches to promote structural social capital in neighborhoods. Also, learning and using new technologies (e.g., smartphones, the Internet, tablets, and online video chatting, for connecting with family members, friends, and even gerontological social workers) during an epidemic may be a good way only for the older adults who are digitally aware, while in people who have the low ability in information technology, intergenerational solidarity and greater communication with neighbors and creative solutions such as a telephone network for shopping can be helpful.

Conclusion

Environmental characteristics (neighborhood attachment, knowing the number of neighbors, the possibility of recreational activities in the neighborhood, and home satisfaction) are more influential factors in improving social capital among older adults than individual characteristics (age).

Acknowledgments: The researchers would like to express their gratitude to all the seniors who participated in this study.

Ethical Permissions: The study was approved by the Research Ethics Committee of the University of Social Welfare and Rehabilitation Sciences (Ethical code: IR.USWR.REC.1399.125).

Conflicts of Interests: The authors have no conflicts of interest to declare.

Authors' Contribution: Zanjari N.(First Author), Main Researcher (25%); Aliakbarzadeh Arani Z. (Second Author), Assistant Researcher/Statistical Analyst (25%); Delbari A. (Third Author), Introduction Writer (15%); Foroughan M. (Fourth Author), Discussion Writer (15%); Ghaedamini Harouni Gh. (Fifth Author), Methodologist (20%).

Funding/Support: This study was supported by grant No. 2688 in the University of Social Welfare & Rehabilitation Sciences.

References

- 1- Salar A, Boryri T, Khojasteh F, Salar E, Jafari H, Karimi M. Evaluating the physical, psychological and social problems and their relation to demographic factors among the elderly in Zahedan city during 2010-2012. FEYZ. 2013;17(3):305-11. [Persian]
- 2- Sarla E, Lambrinou E, Galanis P, Kalokairinou A, Sourtzi P. Factors that influence the relationship between social support and health-related quality of life of older people living in the community. Gerontol Geriatr Med. 2020; 6:1-10.
- 3- Simons M, Reijnders J, Peeters S, Janssens M, Lataster J, Jacobs N. Social network sites as a means to support personal social capital and well-being in older age: An association study. Computers Hum Behav Rep. 2021;3:100067.
- 4- Perkins DD, Long DA. Neighborhood Sense of Community and Social Capital: A Multi-Level Analysis. In: Fisher AT, Sonn CC, Bishop BJ, editors. Psychological sense of community. Boston: Springer; 2002. pp: 291-318.
- 5- Nyqvist F, Forsman AK, Giuntoli G, Cattani M. Social capital as a resource for mental well-being in older people: A systematic review. Aging Ment Health. 2012;17(4):394-410.
- 6- Agampodi TCh, Agampodi SB, Glozier N, Siribaddana S. Measurement of social capital in relation to health in low and middle income countries (LMIC): A systematic review. Soc Sci Med. 2015;128:95-104.
- 7- Sun Q, Lu N. Social capital and mental health among older adults living in urban China in the context of COVID-19 pandemic. Int J Environ Res Public Health. 2020;17(21):7947.
- 8- Stafford M, De Silva M, Stansfeld S, Marmot M. Neighbourhood social capital and common mental disorder: Testing the link in a general population sample. Health Place. 2008;14(3):394-405.
- 9- Lager D, Van Hoven B, Huigen PPP. Understanding older adults' social capital in place: Obstacles to and opportunities for social contacts in the neighbourhood. Geoforum. 2015;59:87-97.
- 10- Gray A. The social capital of older people. Age Soc. 2009;29(1):5-31.
- 11- Versey HS. A tale of two Harlems: Gentrification, social

- capital, and implications for aging in place. *Soc Sci Med.* 2018;214:1-11.
- 12- Lu N, Xu Sh, Zhou Q. Social capital and preferences for aging in place among older adults living in rural northeast China. *Int J Environ Res Public Health.* 2020;17(14):5085.
- 13- Fuller HR, Ajrouch KJ, Antonucci TC. The convoy model and later-life family relationships. *J Fam Theory Rev.* 2020;12(2):126-46.
- 14- Sander J, Schupp J, Richter D. Getting together: Social contact frequency across the life span. *Dev Psychol.* 2017;53(8):1571-88.
- 15- Seifert A, König R. Help from and help to neighbors among older adults in Europe. *Front Sociol.* 2019;4:46.
- 16- Bernard M, Ogg J, Judith and Phillips, Phillipson Ch. The family and community life of older people. London: Routledge; 2001.
- 17- Conway F, Magai C, Jones S, Fiori K, Gillespie M. A six-year follow-up study of social network changes among African-American, caribbean, and U.S.-born caucasian urban older adults. *Int J Aging Hum Dev.* 2013;76(1):1-27.
- 18- Zetterberg L, Santosa A, Ng N, Karlsson M, Eriksson M. Impact of COVID-19 on neighborhood social support and social interactions in Umea municipality, Sweden. *Front Sustain Cities.* 2021;3:685737.
- 19- Varshney LR, Socher R. COVID-19 growth rate decreases with social capital. New Haven: medRxiv; 2020.
- 20- Makridisid ChA, Wu C. How social capital helps communities weather the COVID-19 pandemic. *PLoS ONE.* 2021;16(1):e0245135.
- 21- Lane AP, Wong ChH, Močnik Š, Song S, Yuen B. Association of neighborhood social capital with quality of life among older people in Singapore. *J Aging Health.* 2020;32(7-8):841-50.
- 22- Kassani A, Menati R, Menati W, Shoja M, Mirbalouch A. Investigation of the effective factors in social capital and its relationship with quality of life in elders of Ilam, Iran. *Sadra Med Sci J.* 2014;2(3):235-44.
- 23- Kerbler B, Sendi R, Filipovic Hrast M. The relationship of the elderly toward their home and living environment. *Urbani Izziv.* 2017;28(2):96-109.
- 24- Hosseini SA, Ghorban A, Noghani ME. Investigating the amount of social capital in the elderly in order to determine their attitude towards nursing homes: A case study of Noor city. *Soc Cultural Strategy.* 2013;2(8):125-40.
- 25- Dallago L, Perkins DD, Santinello M, Boyce W, Molcho M, Morgan A. Adolescent place attachment, social capital, and perceived safety: a comparison of 13 countries. *Am J Community Psychol.* 2009;44(1-2):148-60.
- 26- Jiang N, Lou VWQ, Lu N. Does social capital influence preferences for aging in place? Evidence from urban China. *Aging Ment Health.* 2018;22(3):405-11.
- 27- Jiang N, Wu B, Lu N, Dong T. Neighborhood-based social capital and cognitive function among older adults in five low- and middle-income countries: Evidence from the World Health Organization Study on global AGEing and adult health. *Int J Geriatr Psychiatry.* 2020;35(4):365-75.
- 28- Christian AK SO, Okyere MA, Adjaye-Gbewonyo K. Social capital is associated with improved subjective well-being of older adults with chronic non communicable disease in six low- and middle-income countries. *Globalization Health.* 2020;16(2):1-11.
- 29- Ramlagan S, Peltzer K, Phaswana-Mafuya N. Social capital and health among older adults in South Africa. *BMC Geriatr.* 2013;13(100):1-11.
- 30- Gauthier GR, Smith JA, García C, Garcia MA, Thomas P. Exacerbating inequalities: Social networks, racial/ethnic disparities, and the COVID-19 pandemic in the United States. *J Gerontol Ser B.* 2020;76(3):88-92.
- 31- Harpham T, Grant E, Thomas E. Measuring social capital within health surveys: Key issues. *Health Policy Plan.* 2002;17(1):106-11.
- 32- De Silva MJ, Harphamb T, Tuan T, Bartolinid R, Pennyd M, Huttly SR. Psychometric and cognitive validation of a social capital measurement tool in Peru and Vietnam. *Soc Sci Med.* 2006;62(4):941-53.
- 33- Khaje Dadi A, Sharifian Sani M, Shiani M, Karimlou M. Relationship between social capital and health among mothers. *Soc Welf.* 2009;8(30-31):83-102.
- 34- Aliakbarzadeh Arani Z, Zanjari N, Delbari A, Foroughan M, Ghaedamini Harouni G. Designing and testing a place attachment model for older adults. Tehran: University of Social Welfare and Rehabilitation Sciences; 2021.
- 35- Veisi Miankali MJ, Dehghan Z, Haghani H. Investigating the relationship between social capital and demographic characteristics of the elderly referred to Tehran neighborhoods. *J Ardabil Univ Med Sci.* 2020;20(1):116-26.
- 36- Rahnema MR, Razavi MM. An study of sense of place effect on social capital and participation in Mashhad's neighborhoods. *Memari-Va-Shahrsazi (Honar-Ha-Ye-Ziba).* 2012;17(2):29-36.
- 37- Cattell V. Poor people, poor places, and poor health: the mediating role of social networks and social capital. *Soc Sci Med.* 2001;52(10):1501-16.
- 38- Naghdi A, Vahdat S, Sajadzadeh H. The role of social capital in place attachment in traditional neighborhoods (Case study: City neighborhoods Hamedan). *Urb Stud.* 2016;6(18):23-50.
- 39- Scharf T, de Jong Gierveld J. Loneliness in urban neighbourhoods: An anglo-dutch comparison. *Eur J Ageing.* 2008;5(103):103-115.
- 40- Cramm JM, Van Dijk HM, Nieboer AP. The importance of neighborhood social cohesion and social capital for the well being of older adults in the community. *Gerontol.* 2013;53(1):142-52.
- 41- Buffel T, De Donder L, Phillipson C, Dury S, De Witte N, Verté D. Social participation among older adults living in medium-sized cities in Belgium: the role of neighbourhood perceptions. *Health Promot Int.* 2014;29(4):655-68.
- 42- Dominski FB, R. Do the benefits of exercise in indoor and outdoor environments during the COVID-19 pandemic outweigh the risks of infection?. *Sport Sci Health.* 2020;16(3):583-8.
- 43- Fernández-Portero C, Alarcón D, Barrios Padura Á. Dwelling conditions and life satisfaction of older people through residential satisfaction. *J Environ Psychol.* 2017;49:1-7.