

The Social Capital among Elderly Population of Chandigarh: Cross Sectional Study

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Abstract:

Introduction: Social capital is defined as social cohesion among communities. This refers to processes between people which establish network, social trust and co-operation and mutual benefit. The present study was conducted to know the status of social capital among elderly population of Chandigarh city, India.


Method : The study was conducted from January to April 2017. The study was community based using convenience sampling. A total of 300 elderly subjects were selected for interview from the electoral rolls. The survey instrument was modified Onyx and Bullen scale consisting of 30 items with responses on likert scale from 1-4. **Results:** Mean age of respondents was 66.47 years. Male: Female ratio was 1.4:1. 45.7% owned their residence whereas 54.3% lived as tenants. Social capital score of majorities of elderly was good (63.7%) followed by average (19.3%). Highest mean scores were received for questions namely: would you help someone if their vehicle breaks down (3.03±0.69), do you agree to helping yourself when you help others (3.15±0.78) and have you visited your neighborhood in the past week (3.01±0.82). Poorest score were received for questions: while on shopping, are likely to run into friends (1.11±0.53) and have you done a favor for a sick neighbor in last 6 months (1.33±0.53). **Conclusion:** Social capital status among elderly of Chandigarh city was good and higher scores were seen among males. Highest mean scores were seen in factor 4 (proactivity in social context) and lowest among family and factor 5 (friend's connections).

Key words : Community, Elderly, Self Report, Onyx Bullen Scale, Social Capital, Social Participation

Introduction:

According to World Health Organization, Social capital represents the degree of social cohesion which exists in communities.^[1] It refers to the processes between people which establish networks, norms, social trust and facilitate co-ordination and co-operation for mutual benefit. An advanced level of social participation might support physical and

mental activity and feelings of security and active engagement might result from more neighborhood and family connections.^[2,3] This sense is particularly important in older people and it is now being recognized as a critical problem, along with the increase in life expectancy and the growing number of older people.^[4,5] With the changing nature of society in recent years, many older people,

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compared to other age groups, are at risk of social isolation and of having limited contact with others.^[6] A range of circumstances can place older people at an increased risk of social exclusion.^[7] They might lose important parts of their social environments during retirement or lose a partner, relatives and friends through illness, death or change in geographic location, and their health might deteriorate (disease and disability).^[6,7] The transformations that occur in the physical and cognitive abilities of older adults can cause them to come to depend more seriously on social capital at each of these levels.^[2] A greater level of trust could provide older adults with greater emotional, economic and logistical resources.^[8] Different social and healthcare programs planned for older individuals might originate from varying levels of social capital between different origins, which requires more consideration.^[9]

Social capital is a new area of research among older Indian adults. There have been some studies in this field; however, none of them have studied elderly adults as a population.^[10,11] Much research into social capital has been conducted in the U.S. and other western countries, which ignores the cultural context of its conceptualization. Caution must be applied in comparisons in which the cultural context of social capital is ignored.^[12] The modern day understanding of social capital encompasses a range of concepts including community networks, civic engagement, reciprocity and social cohesion. Against this background, the present study was planned to know about status of social capital among elderly population of Chandigarh.

Method:

Study area : Chandigarh is the Union Territory (UT) of India and capital of two states, Punjab and Haryana, with population of 10.54 lakhs (Census 2011). Majority i.e. 1,025,682 (97.25%) of its population is urban including slums and 29,004 (2.75%) is rural population with 6.4% of Chandigarh's total population as elderly (60 years and more).^[13]

Study participants: Subjects with age 60 years and above.

Study period: Study was conducted from 1st January 2017 to 30th April 2017

Study design: A community based cross-sectional study done using convenience sampling technique. This study was conducted in Sector 41 and adjoining villages Baterla and Adhere.

Sample size : A total number of 300 participants were selected for the interview from the Electoral roll (2017).^[14]

Taking a prevalence of good social capital score from a pilot study conducted (75%), 95% confidence interval and precision of 5%, sample size was calculated as 288. Thus, a total sample of 300 was considered for the present study.

Study tool: The social capital questionnaire was initially developed by developed by Onyx and Bullen (2000) and consisted of 32 questions answered using a 4-point Likert-type response scale as follows: 1. No, not at all; 2. No, not much; 3. Yes, frequently; and 4. Yes, definitely.^[15] The social capital scale included the following eight dimensions: Participation in Community; Feelings of Trust and Safety; Neighborhood Connections; Tolerance of Diversity; Value of Life; Family Connections; Pro-activity in Social Contexts; and Work Connections. The Onyx and Bullen scale of social capital was primarily developed in Australia. It is being modified according to Indian context and only 30 questions were structures covering the eight domains. A pilot study was initially conducted among 10 randomly selected participants who were residing in area other than the study area and response from these elders they were not included in the final study. The feedback from the pilot study was integrated in the final version of the questionnaire.

Data Collection: Electoral roll was used to identify families/households with elderly subjects and they were approached to participate in the study. In case of refusal, next available household was approached.

Sample selection was continued till the sample size was exhausted. Eligible participants were approached by the investigator by making house to house visit and data was collected after obtaining written informed consent for the participation in the study consent. They were distributed a self administered 30 Questions Questionnaire keeping in mind their availability, free time and convenience & feasibility. Subjects were approached at the time of their choice after taking consent. In case of non-availability after 3 attempts, next household was selected for enrolment. Time taken to fill the questionnaire was 15-20 minutes and an average of 18 minutes per participants.

Social Capital Score^[15]

The social capital score of an individual is calculated by administering the questionnaire, and when summed together for sampled population, social capital score for community is calculated. There are eight factors associated with Social Capital. The set of questions among these factors are so distributed that they form a consistency in the questions and the respondent may not feel stressed while answering.

- Factor 1 (Feeling of Trust and Safety) :Q5+Q6+Q7+Q9+Q14
- Factor 2 (Tolerance of diversity):Q25
- Factor 3 (Value for Life):Q1+Q2
- Factor 4 (Social agencies): Q3+Q17+Q19+Q23+Q24+Q29+Q30

- Factor 5 (Family and friend’s connections): Q16
- Factor 6(Neighborhood connections):Q8+Q10+Q11+Q15+Q18+Q20
- Factor 7 (Community connections):Q4+Q12+Q13+Q21+Q22
- Factor 8 (Work connections): Q26+Q27+Q28

Calculation of General social capital score:

General social capital score is calculated by summation of the scores of eight factors with 30 questions (F1+F2+F3+F4+F5+F6+F7+F8). The higher the score, the higher the level of social capital. The score of the General Social capital represents the social capital of the individual- Poor: $d \leq 30$; Average 31-60; Good 61-80; Very Good 81-100; Excellent 101-120. The tool used in present study has been validated in Indian settings. Socio economic status was assessed using the Modified Kuppaswamy scale (2016).^[16]

Statistical analysis: Data was entered in Microsoft excelspreadsheet and analyzed using OpenEpi 2007. Descriptive analysis was used to summarize data using frequency, percentages and mean (\pm standard deviation).

Ethical considerations: After taking permission from ethical committee, written consent was taken from the respondents prior to initiation of the study. Confidentiality and anonymity of the respondent was strictly maintained. Respondents were given the option of quitting from the study if desired by them with no element of compulsion.

Table 1 : Distribution of respondents according to overall Social capital Status (n=300)

Social Capital status	Overall	Male	Female
Average	58 (19.3%)	26 (15%)	32 (32%)
Good	191 (63.7%)	115 (65.7%)	76 (60.8%)
Very good	49 (16.3%)	32 (18.3%)	17 (13.6%)
Excellent	2 (0.7%)	2 (1.1%)	0 (0)
Total	300	175	125

Results:

The current study found that maximum numbers of respondents were in the age group of 60-69 years (73.3%) and minimum in age group of 80 years and above (4.4%). Mean (\pm SD) age of the respondent was 66.47 (\pm 5.8) years. Male-female ratio was 1.4:1 (175/125). Mean (SD) age was 66.1 (\pm 5.7) years for male and 66.8 (\pm 5.8) years for female respondents. Out of total respondents, 45.7% owned their residence whereas overall maximum number of

respondents was living as tenants (54.3%). Table 1 shows the distribution of social capital category.

According to type of family, one fourth (23.4%) of the respondents living in joint family had average social capital status, whereas those who lived in nuclear family 18.4% of them had average social capital status. Table 2 shows the distribution of responses received from the participants in Likert scale.

Table 2 : Revised Onyx and Bullen scale [Frequency, percentage and mean scores]

Question		No, not at all (1)	No, not much (2)	Yes, frequently (3)	Yes, definitely (4)	Mean \pm SD
Q.1	Do you feel safe walking down your street at dark?	1 (0.3)	62 (20.9)	176 (59.5)	57 (19.3)	2.98 \pm 0.64
Q.2	Do you agree that most people can be refused?	5 (1.7)	73 (24.7)	158 (53.4)	60 (20.3)	2.92 \pm 0.71
Q.3	If someone's vehicle breaks down outside your house, do you invite them in and let them use your phone?	-	67 (22.6)	154 (52.1)	75 (25.3)	3.03 \pm 0.69
Q.4	Does your area have a reputation of being safe?	49 (16.6)	112 (37.8)	99 (33.4)	36 (12.2)	2.41 \pm 0.90
Q.5	Does your locality feel like home?	9 (3)	62 (20.9)	160 (54.1)	65 (22)	2.95 \pm 0.74
Q.6	Do you enjoy living with people with different life styles?	15 (5.1)	104 (35.1)	138 (46.6)	39 (13.2)	2.68 \pm 0.76
Q.7	Do you feel valued in the society?	8 (2.7)	79 (26.7)	145 (49)	64 (21.6)	2.90 \pm 0.76
Q.8	If you were to die tomorrow, would you be satisfied with what you have achieved in your life?	23 (7.8)	99 (33.4)	134 (45.3)	40 (13.5)	2.65 \pm 0.81
Q.9	"You help yourself by helping other" Do you agree?	8 (2.7)	48 (16.2)	133 (44.9)	107 (36.7)	3.15 \pm 0.78
Q.10	Do you go outside your locality to visit your family?	41 (13.9)	109 (36.8)	106 (35.8)	40 (13.5)	2.49 \pm 0.89
Q.11	When you need information regarding government programmes or policies, do you know where to find the information?	24 (8.1)	114 (38.5)	110 (37.2)	48 (16.2)	2.61 \pm 0.85
Q.12	If you disagree with what everyone has agreed upon would you feel free to speak?	41 (13.9)	73 (24.7)	123 (41.6)	59 (19.9)	2.68 \pm 0.94

Q.13	If you have dispute with your neighbour, would you complaint to authorities?	101 (34.1)	78 (26.4)	77 (26)	40 (13.5)	2.19±1.05
Q.14	At work do you take the initiative to do what needs to be done even if no one asks you to?	17 (5.7)	76 (25.7)	138 (46.6)	65 (22)	2.85±0.82
Q.15	In the past week, have you helped your workmate even if it's not the part of your job description?	10 (3.4)	87 (29.4)	106 (35.8)	93 (31.4)	2.95±0.86
Q.16	Over the weekend did you had lunch /dinner, with friends outside your household?	62 (20.9)	96 (32.4)	88 (29.7)	50 (16.9)	2.43±1.00
Q.17	Can you get help from friends when you need it?	30 (10.1)	98 (33.1)	104 (35.1)	64 (21.6)	2.68±0.92
Q.18	If you were caring for a child, and need to go out for a while, would you ask for help from your neighbours?	12 (4.1)	75 (25.3)	143 (48.3)	66 (22.3)	2.89±0.79
Q.19	Have you visited your neighbourhood on the past week?	12 (4.1)	62 (20.9)	133 (44.9)	89 (30.1)	3.01±0.82
Q.20	How many people did you talk to yesterday?	168 (56.8)	108 (36.5)	14 (4.7)	6 (2)	1.52±0.68
Q.21	When you go shopping in local area, you likely to run into friends and acquaintances?	280 (94.6)	7 (2.4)	-	9 (3)	1.11±0.53
Q.22	In past 6 months, have you done any favor for a sick neighbour?	206 (69.6)	83 (28)	6 (2)	1 (0.3)	1.33±0.53
Q.23	Do you help out in local group as a volunteer?	20 (6.8)	87 (29.4)	145 (49)	44 (14.9)	2.72±0.79
Q.24	Have you attended a local community event in past 6 months?	69 (23.3)	96 (32.4)	103 (34.8)	28 (9.5)	2.30±0.93
Q.25	Are you an active member of local organization/group?	29 (9.8)	82 (27.7)	143 (48.3)	42 (14.2)	2.67±0.83
Q.26	Are you on management or organizing committee of any local group or organization?	205 (69.3)	16 (5.4)	57 (19.3)	18 (6.1)	1.62±0.99
Q.27	In the past 1 year, have you joined in any local community action to deal with an emergency (fire, flood, earthquake relief etc.)?	202 (68.2)	24 (8.1)	49 (16.6)	21 (7.1)	1.63±0.99
Q.28	Do you feel part of the local geographic community where you work?	202 (68.2)	17 (5.7)	50 (16.9)	27 (9.1)	1.67±1.05
Q.29	Are your work inmates also your friends?	204 (68.9)	21 (7.1)	43 (14.5)	28 (9.5)	1.65±1.04
Q.30	Do you feel a part of the team at your work?	209 (70.6)	16 (5.4)	45 (15.2)	26 (8.8)	1.62±1.03

It was observed that 106 (35.6%) respondents agreed that their living area is safe, where as 160 (53.6%) of the respondents were most likely to feel safe while walking down the street at dark. It was seen that 30 (10.3%) of the respondents had not much tolerance to diversity. In question in related to value of life, 58 (19.4%) and 62 (20.8%) of the respondents felt valued in the society as well as they were satisfied with their achievements in life respectively. Only 23 (9.3%) and 7 (2.3%) of the subjects said that they would take decision for needful even if no one asks them to do and not helping their workmate when it was not part of their jobs description. 50(16.7%) the re-spondents had lunch/dinner with friends outside their household over the weekend. 124(41.6%) respondents had attended more than onetime local community event in past 6 months (Kirtan, Birthday etc). Overall, only 10.1% of the elder respondents participated in the community as volunteers or as a parts of a local association and feelings of trust and safety, pro-activity in a social context and neighborhood connections were relatively high (23.8%, 22.7%, 20.3% respectively).

Discussion:

In the present study, males (58.3%) respondents were more than females (41.7%) and these findings are in accordance with elderly population in Chandigarh as percensus 2011. Shim^[17] had similar findings i.e. majority of the respondents in the study were males (60.3%). In the present study mean (SD) age of the respondents was 66.4(SD-5.7) years which is lower than the mean age of study subjects in China, 70.9 years.^[18] This difference could be because China has high life expectancy rate at birth (76.1 years) than India (69.0 years).^[14]

In present study, two-third (68.7 %) of the respondents lived in a nuclear family and rest of the respondents lived in joint family whereas in Iranian study, 57.8% and 34.8% lives with spouse & children and with spouse alone.^[17] This may be due to fact that joint family concept is adopted in India.^[19] As suggested by our findings that those respondents living in nuclear family had higher

mean score for social capital status. It was also found that more number of respondents in nuclear family scored higher in Factor 5 i.e., friends and family connections in the present study.

Overall in our study majority of male respondents has better social capital status (65.7%) than female (60.8%) counter parts. Excellent social capital score found in only two subjects which were males. It was also found that only 10.1% of the respondents participated in the community as volunteers or as a part of a local association, whereas, feelings of trust and safety, pro-activity in a social context and neighborhood connections were relatively higher (23.8%, 22.7%, 20.3% respectively). However, Iranian study found that respondents had very high pro activity in social context (70.9%) followed by feeling of trust (67.8%).^[17] In the present study the highest degree of response of social capital reported by the participants was for feeling of trust and safety (23.8%) followed by Proactivity in social context (22.7%). These findings differed from the findings by Ponce who concluded that family social capital is a major determinant of social participation of older adults, which was not found to be true in the present study.^[20]

Regarding bridging social capital, present study found that neighborhood connections were found to be having higher scores than tolerance of diversity. Daoud^[21] concluded that lower social cohesion (bonding) was associated with higher depression in Neighborhood Effect on Health and Well-being (NEHW) which is similar to findings in a study by Julie et al.^[22] which found that that bonding social capital was significantly associated with physical and emotional health. Gray et al. reported a reduction in participation of those of advanced age in social clubs, except for religious organizations.^[23]

Low levels of participation of elder adults in community as volunteers (10.1%) as found by Tsai et al. concluding that mobility is important for community independence.^[24] With increasing age, underlying pathologies, genetic vulnerabilities, physiological & sensory impairments and

environmental barriers, the capacity of mobility also declined. Understanding how mobility declines is paramount to finding ways to promote mobility in old age.^[24] Better social capital (using measures of neighborhood trust and community participation) is associated with a higher degree of physical mobility, independence and mental well-being among older individuals.^[25] In Sweden, the researchers found that most of the older participants, despite the ageing process, attempted to remain active and connected to the community.^[26] It was also found that social participation increased with advancing age and then declined after the age of 80.^[20]

Overall both male and female felt equal level of trust and safety in present study with similar findings in Iranian older adults.^[17] People have greater trust in those with whom they have broader and regular communication especially specially in the rural areas. Also, hope of continuous relationships in the future can facilitate the development of trust.^[27, 28] Alesina and La Ferrara reported that three main issues could contribute to promoting trust: personal traits, being a member of groups and features of the community.^[29] Barr and Russell et al., reported that 64 percent of older women did not feel safe walking down their streets after dark^[30]; however, more than two thirds (66.7 percent) of our respondents reported a feeling of safety. Onyx and Bullen also reported that women had poorer feelings of safety in their local communities.^[15]

Aihara and colleagues reported greater cognitive social capital among men in a study. They concluded that contributions to local organizations and having healthy behaviors were linked to cognitive social capital which is significant for successful ageing.^[29] Heenan et al., in a study at Northern Ireland, reported that there was evidence of strong mutual relationships between older people and their neighbors.^[31] The present study had participants from urban area as who reported high feelings of trust and safety and neighbourhood connections, rather than participation in the

community, which supported Onyx and Bullen's findings that urban area had high neighborhood connection and felt more safe and found people trust worthy. Hodgkin in his study reported that age was a significant determinant of people's activities. Older people, predominantly those who were retired, engaged in more community participation and social activities, such as volunteer groups, social clubs and church groups.^[32]

The study had some limitation which were short duration of the study and under (or over) reporting of the data by respondents. Convenient sampling technique was used to select the participants due to time constraints.

Conclusion:

The findings in our study shows that social capital status of elderly sampled population (mean score-68.7) is in the range of good score (61-80). Age group of 60-69 years (63.2%) scored the highest on the social capital scale. Males scored higher than females in overall social capital score. Out of the eight factors associated with social capital, highest Mean (SD) was for i.e. factor 4: Proactivity in social context (15.6±3.7). And lowest was for factor 5, i.e. family and friends connections. More studies should be conducted to get comprehensive results for cognitive and structural aspects of social capital.

Declaration:

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Conflict of Interest: Nil

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