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Illustrative effects of social capital on health and quality of life among older adult in India: Results from WHO-SAGE India

Himanshu Himanshu*, Perianayagam Arokiasamy, Bedanga Talukdar

International Institute for Population Science, Department of Development Studies, Govandi Station Road, Deonar, 400088, Mumbai, Maharashtra, India

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ABSTRACT

Background: Lacuna in contemporary Indian academic research highlights the need to investigate the component of social capital and health outcome among elderly individuals in Indian context. Study endeavors to investigate prevalence of health indicators: self-rated good health(SRH), functional limitation, depression and quality of life(QoL) and the illustrative effects of social capital on elderly health outcome and QoL.

Methods: Nationally representative cross-sectional data from WHO Study on global AGEing and adults health (SAGE) India 2007 is used. Individuals aged 50 + are included where logistic regression is used to estimate the effect of social capital along with other co-founders on SRH, functional limitation, and depression. Linear regression model is used to analyse evaluates the impact of social capital with other co-founders on QoL among elderly.

Results: The multivariate analysis shows that SRH is associated with age, female, those having education, higher social-action with strong trust, safety and higher psychological resources. Depression among elderly is significantly related to age, gender, education level, higher wealth, strong sociability. QoL is inversaly related to age, gender, being muslim. A positive association of QoL is observed with higher education, having wealth, and strong social capital component like currently married, civic engagement, social-action, trust solidarity,and strong psychological resources.

Conclusion: The paper presents evidence that social capital significantly associated with SRH, lower depression, better functional health and higher quality of life. Hench forth policy makers should construct social policy where elderly feel safe and trusty surrounding, that can involved them into main stream as a productive resource of society.

1. Introduction

Indian census year 2011 for the first time highlighted the unprecedented increase in elderly population (aged 60 years and above). The size and share of elderly have increased from 5.6% of the total in 1961 to 9% in 2011 which is 103.2 Million in absolute numbers. With improving life expectancy, India a developing nation has attained 69.3 years for females and 65.8 years for males at birth (Registrar General, 2011). Consequential of the fact, increase in disability, burden of disease, old age dependency have emerging as challenges to be faced by both in rural and urban population. Elderly to cope with bad health, isolation, and loneliness seek assistance of their social capital. Putnam a pioneering academician on gerontology in (1993) defined social capital as networks, norms, and trust that facilitate co-operation and co-ordination for mutual benefits within social organizations or communities (Putnam, 1993). Further, social capital develops when used and given value by the interaction between individuals (Putnam, 2001). It is also found that among the social cofounders of physical and mental health in geriatric population, individuals acquiring profound social networks with the significant levels of social support broadly represents a protective shelter for sustaining good health and quality of life in later age (Berkman et al., 2014; Newsom & Schulz, 1996; Seeman, Bruce, & McAvay, 1996).

Scholastic discourse delves into substantiated association between Social Networks and health outcomes among elderly individuals, significant positive association between social support and subjective measure of health outcomes among older population have been established (Krause, 2004; Okamoto & Tanaka, 2004; Zunzunegui et al.,

Abbreviations: SC, schedule caste; ST, schedule tribe; ADL, activities of daily living; OR, odds ratio; SAGE, study on global ageing and health; SRH, self-rated health; SRGH, self-rated good heatlh; WHO, World Health Organization; WHOQoL, World Health Organizations' quality of life

* Corresponding author.
E-mail address: himanshudcsk@iips.net (H. Himanshu).

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2004). Social Networks are the collection of interpersonal ties that people maintain and which provide them with a range of assistance, supports, resources, and services. Social Networks of elderly proves to be the locus of social capital, and it portrays how those are connected to each other spatiotemporally (Litwin, 2012).

Alternatively, the lack of social relationship, as reflected by social isolation and low social support, has been consistently related to health-damaging effects such as loneliness, increased risk of morbidity and mortality, functional limitation (Berkman, 1995; House, Landis, & Umberson, 1988).

Loneliness, a subjective quality marked by one's lack of social ties is derived from observed inappropriate relationships, was related to health status, using questionnaire of SF-36 health survey for respondents aged between 55-70-year-old, loneliness was found adversely associated with mental and physical health (Stephens, Alpass, Towers, & Stevenson, 2011). In addition to this social separation instigate loneliness which is also significantly associated with poorer self-assessed mental and physical health (Berkman, Glass, Brissette, & Seeman, 2000; Cornwell & Waite, 2009).

Social capital as process acts in bonding, bridging and linking individuals in community (Eriksson, Dahlgren, Janlert, Weinehall, & Emmelin, 2010). Individuals having more power in society in terms of available resource '*status syndrome'* can get more command over the social network in community (Bourdieu, 1986; Norstrand & Xu, 2011; Portes, 1998; Syndrome, 2004; Vanneman, Noon, Sen, Desai, & Shariff, 2006; Ziersch, Baum, Darmawan, Kavanagh, & Bentley, 2009). Numbers of years lived in the society and information about society has a powerful effect on social capital, people help other member of the community are expected reciprocity norm to behave extend supportive role (Portes, 1998). Social support also affect health and well being by reducing stress giving elderly space to express views and participate in community decision making (Hirve, 2014; Syndrome, 2004).

Research encompassing **s**ocial epidemiology seeks explanations for elderly state of physical and mental health, where studies conclude socio-economic stratification, social networks and support received by elderly are contributing factors for positive health (Kawachi & Berkman, 2000; Sirven, 2006). Social network shows a strong relationship with social position within communities. Studies confirms that network contacts of elderly are more extensive among high caste, wealthy, and well-educated households (Norstrand & Xu, 2011; Wanless, Mitchell, & Wister, 2010; Ziersch et al., 2009). Studies suggest that those individuals who were not engage in any formal association were probably to be physically inactive compared to those individual having high level of social engagement. Concurrently having regular social engagement is actually, significantly associated with the probability of reporting better health status (Folland, 2007; Islam, 2007; Jusot, Grignon, & Dourgnon, 2008).

Trust plays a pivotal role in better self-rated health, people find themselves healthier in the trustable surroundings where the reciprocity, associational activity and another type of group membership has not that much impact on health of the people (Shibuya, Hashimoto, & Yano, 2002; Shiovitz-Ezra & Litwin, 2015; Tolasa, 2017). Individual income has been one of the consistent and salient predictor for self-rated health, by far it is considered as better measurement then income inequality. Probing individual income has stronger association with self-rated health than income inequality at the prefecture level, empowering elderly for access to health care and medication (Honjo, 2004; Rözer, Kraaykamp, & Huijts, 2016; Shiovitz-Ezra & Litwin, 2015; Tolasa, 2017; Weich, Lewis, & Jenkins, 2002).

Contemporary academic investigations into impact of social capital on health among elderly have drawn much attention in scholastic discourse. Few studies in the present path-view have conducted investigation in India. Review of literature found that higher network diversity was associated with a decreased likelihood of physical inactivity among elderly people. India is a country with various religion, and cultures. Henceforth importance arises to fill in the lacunae, on how people from different religion, strata and caste organize themselves to form social capital. Indian society, socio-cultural norms, forms of family and, economic status are changing rapidly. Further with increasing urbanization and modernization, there is steep increase in nuclear families resulting the health and well-being of its elderly individuals. Therefore it becomes necessary to assess the prevalence of various health status and quality of life and analyze the moderating role of social capital on the given health outcomes such as self-rated good health (SRH), depression, functional health and quality of life which are important indicators of overall well-being among the older adults in India.

2. Methods

2.1. Study population

Present study investigates data from WHO (SAGE) on global Ageing and adult health survey Wave 1, 2013 India. SAGE is a longitudinal study with a nationally representative sample of adults conducted in six low and middle income countries (LMICs): China, Ghana, India, Mexico, Russia and South Africa accounting for 42% of the worlds 50 + population in 2011 (United Nation's Population prospects). At the outset of data collection, based on the world bank income categories, SAGE encompassed mix of low, lower-middle and upper middle income countries (World Bank 2009). SAGE survey is having vast strength with a large number of items on health, physical functions, risk-factors, chronic conditions, socioeconomic status and work history, social cohesion, healthcare utilization, subjective wellbeing and quality of life. The survey in India was implemented in six states of Assam, Karnataka, Maharashtra, Rajasthan, Uttar Pradesh, and West Bengal. A total sample of 11,230 individual were covered in the survey of which 6559 individual aged 50 years and above is selected in this present study. Survey conducted in six states was covered following the primary sampling units (PSUs), and the households that were covered in World Health Survey-India (2003), which was considered as the baseline sample for SAGE Wave-1 (Kowal et al., 2012).

3. Ethical consent

The SAGE survey was approved by the Institutional Review Board of the International Institute for Population Sciences, Mumbai. Informed consent was obtained from each participant.

4. Measures

4.1. The outcome variables for the present study are as follows

4.1.1. Self-rated good health

The present study uses overall self-rated good health (SRH) of elderly. The specific single question was asked that "In general, how would you rate your health today?". The responses were captured on the five-point Likert scale: very good, good, moderate, bad, and very bad. Measures of self-reported health are widely used in health surveys to assess the general health of the target population and shown to be strongly significant predictors of mortality and functional health. For analysis purpose, a dichotomous health variable is created where bad and very bad were combine as self-rated poor health = 0 and remain categories combine into self-rated good health = 1. Self-Rated good Heath is the outcome variable used in the analysis to determine the health condition of sample elderly.

4.1.2. Functional limitation

Functional limitation is measured by using an extended set of Active daily living. Question is based on self-reported difficulty in engaging in activities during the last 30 days, using a five-point response scale from none to extreme difficulty a scale has been generated. For the purpose

of analysis, we have created a variable in dichotomous in nature, which holds value 1 if the respondent had functional limitation in one or more of above given index (functional limitation index) and 0 otherwise. Functional limitation was defined as the low level of functional health in terms of their day to day activity.

4.1.3. Depression

In the WHO- SAGE survey symptom based depression in past 12 months was assessed through Composite International Diagnostic Interview prepared by World Mental Health Survey (Kessler & Üstün, 2004). For this a set of question is used, further these questions were added to generate a score. A dichotomous variable was created by using this score, where 0 represent the person with no depression symptom, and those with depression symptoms recoded as 1.

4.1.4. Quality of life

WHO quality of life (WHOQoL) eight-item instrument is used to quantify the quality of life which include, two questions in each of four broad domains that are physical, psychological, social, and environment. Quality of life in the survey was assessed by rating the satisfaction level with different domains of life such as health, money, personal relationship, functional health, with oneself as well as once overall life satisfaction. A composite score is created by summing up all the response, and final score are rescaled in the result from 0 to 100 where a higher score illustrates better quality of life.

4.2. Exposure variable

Social Capital *was assessed with six components* (Ramlagan, Peltzer, & Phaswana-Mafuya, 2013):

4.2.1. Being married or cohabiting

Being married or cohabiting (vs. Never married, divorced, separated, widowed)

4.2.2. Social action

Social action was computed with 4 items, e.g., How often in the last 12 months have you attaended any public meeting, any group, club,-society, union or worked with your neighborhood to fix or improve something?" Responses were dichotomized into 1 for at least once or twice per month or more and 0 for less than once a month.

4.2.3. Sociability

Sociability was computed with 4 items, e.g., "How often in the last 12 months have you had friend over to uour home or socialized with coworker or been in the home of someone who lives in a different neighborhood than you do or had them in your home?" Responses were dichotomized into 1 = at least once or twice per month or more and 0 = less than once a month.

4.2.4. Trust and solidarity

Trust and solidarity were computed with 3 items, e.g., "how do you view other people and institution and in general, would you think that most people near you,can be trusted or you have the feeling that you cannot be too careful in dealing with individuals?" All responses were dichotomized into 1 = yes or to a great or very great extent and 0 = no or neither great nor small extent to a very small extent.

4.2.5. Safety

Safety was computed with 3 items, e.g., "In general, how safe do you feel from crime and violence when you are alone at home or walking down by your street alone after dark?" All responses were dichotomized into 1 = yes or completely or very safe and 0 = no or moderately to not safe at all.

4.2.6. Civic engagement

Civic engagement was assessed with 3 items that is regarding level of intrest in local or national politics and how government respond to individuals intrested issues. All responses were dichotomized into two categories where 1 represent yes or unlimited or a lot to say and 0 represents no or some to no say at all.

4.3. Psychological resources

Two items from perceived stress scale is used to genrate psychological resources e.g., "In the last month (30 days), how often have you felt that you were unable to control the important things in your life?" Items were reverse scored, in order to get a sense of control.

4.4. Covariates

A set of demographic factors were included as control variable in this study. The demographic variables included are: age groups (50–59 = 0; 60–69 = 1; 70–79 = 2; 80+ = 3), place of residence (urban = 0; rural = 1), sex (male = 0; female = 1),marital status (single/divorced/separated/widow = 0; currently married/cohabiting = 1), religion (Hindu = 0; muslim = 1; others = 2), caste (scheduled caste = 0; scheduled tribe = 1; Others = 2), Education (No education = 0; Primary = 1; secondary = 2; high school = 3; higher study = 4), Economic or wealth status were generated through a multiple-step process, where the asset ownership (durable goods, housing characteristic such as type of floors, walls and cooking st) was converted to an asset ladder then Bayesian post-estimation method was used to generated raw continuous income estimates, and from the raw continuous estimate is transformed into quintile (poorest = 0; poorer = 1; middle = 2; richer = 3; richest = 4) were constructed.

5. Statistical analysis

To investigate the prevalence of Self-Rated Good Health, depressive symptoms, and functional limitation by the socio-demographic variables, including age group, sex, religion, cast, place of residence, permanent income quintile and social capital Bi-variate analysis is used. Post-stratified weights were used to adjust for the population distribution (age and sex). To assess the effect of Independent variable along with the Social capital variable on self-rated good health, Depression symptom and functional limitation we have used Binary logistic regression and for accessing the factor influence quality of life, we use linear regression technique.

6. Results

6.1. Descriptive results

The total sample included in the analysis was composed of 6559 elderly individual who were aged 50 and above during the survey; approximately half of the respondents were females (Table 1), around 45% of the sample population are in the age group 50 to 59 year, half of the sample are uneducated, and one fourth sample has attained primary level of schooling. Apart from this 17% sample are belonged to poorest wealth quintile and around one-fourth sample of elderly were in the richest wealth quintile. Around 75% of respondents belonged to rural area and 25% belonged to the urban area. By religion, Hindu elderly have the higher sample 85% followed by Muslims (12%). Regarding social capital, around three fourths of the respondents (74.11%) reported currently married, 26% are currently single, divorced, separated or widow. Around 70% reported low social action, 46% reported medium sociability, 45% reported low trust and solidarity, 58% reported high safety, 65% reported medium civic engagement, and 37% reported medium psychological resources.

The proportion of respondents who reported good SRH and quality

Table 1
Sample characteristics and health-related prevalence (weighted) by background characteristics and social capital among of older adults in India.

Variable Name	Total Sample	Self-Rated good Health %	Functional Limitation %	Depression Symptoms %	Mean quality of life
All	**6559**	**30.52**	**52.17**	**19.28**	**61.45**
Age					
50-59	2939 (44.81)	37.31	43.28	17.28	64.09
60-69	2234 (34.06)	28.29	55.87	19.82	60.67
70-79	1058 (16.13)	19.53	62.64	22.3	57.45
80 +	328 (5.00)	11.53	85.45	26.39	52.9
Gender					
Male	3303 (50.36)	35.83	41.59	17.6	63.58
Female	3256 (49.64)	24.99	63.18	21.03	59.26
Education					
No Education	3342 (50.95)	23.17	61.11	22.51	57.98
Primary	1685 (25.69	30.8	49.14	17.48	61.34
Secondary	645 (9.83)	39.31	39.97	15.29	65.9
High School	565 (8.61)	43.99	39.54	15.57	69.54
Higher Study	322 (4.91)	61.79	23.99	10.27	73.98
Wealth quintile					
Poorest	1062 (16.29)	22.43	61.13	23.19	53.64
Poor	1219 (18.69)	25.33	52.19	23.3	58.43
Middle	1206 (18.49)	30.62	54.93	20.7	60.38
Higher	1407 (21.58)	32.68	49.21	18.09	63.33
Highest	1627 (24.95)	39.18	45.55	13.07	69.26
Place of residence					
Urban	1676 (25.55)	37.78	46.38	18.4	64.1
Rural	4883 (74.45)	27.57	54.53	19.64	60.46
Caste					
ST	400 (6.13)	23.19	53.38	9.9	55.78
SC	1085 (16.63)	27.6	51.82	20.23	57.04
Other	5041 (77.24)	31.82	51.95	19.84	62.92
Religion					
Hindu	5531 (84.33)	31.47	50.88	18.82	61.87
Muslim	791 (12.06)	26.16	60	21.86	58.77
others	237 (3.61)	22.51	55.88	21.4	61.42
Social Capital Variables					
Marital status					
Not currently married	1698 (25.89)	22.7	67.57	22.22	56.12
Currently Married	4861 (74.11)	32.86	47.56	18.4	63.07
Social action					
Low	4634 (70.65)	25.85	55.47	19.28	59.35
Medium	1246 (19.00)	39.51	45.63	21.85	64.71
High	679 (10.35)	44.17	42.87	15.13	69
Sociability					
Low	2897 (44.17)	26.99	55.67	19.46	59.06
Medium	3066 (46.74)	31.38	51.4	19.27	62.78
High	596 (9.09)	45.12	37.37	18.34	68.04
Trust and Solidarity					
Low	2958 (45.10)	25.11	58.67	18.82	57.29
Medium	1512 (23.05)	29.51	51.2	21.07	63.96
High	2089 (31.85)	37.21	45.49	18.69	64.94
Safety					
Low	1892 (28.85)	20.57	53.86	20.29	57.02
Medium	856 (13.05)	32.09	54.27	22.94	61.57
High	3811 (58.10)	35.3	50.27	17.93	63.74
Civic engagement					
Low	256 (3.90)	25.07	53.47	16.97	58.47
Medium	4291 (65.42)	27.23	54.19	18.78	59.88
High	2012 (30.68)	37.4	48.25	20.52	64.83
Psychological resources					
Low	1717 (26.18)	18.99	62.13	25.98	51.53
Medium	2433 (37.09)	25.77	54.49	17.42	60.54
High	2409 (36.73)	43.33	42.82	16.27	69.48

of life reporting are declining with the increase in age whereas depression and physical inactivity increases with age. Female older adults showed lower self-rated good health, quality of life and higher levels of depression symptoms and highly physical inactive to their male counterparts. With increasing education the SRH and quality of life are also increasing whereas the depression and physical inactivity is declining. SRH and quality of life are positively associated with wealth quintile and negatively associated with the depression and physical inactivity. Elderly residing in rural area show higher prevalence of depression and physical inactivity and lower prevalence of SRH and quality of life

Table 2
Odds ratio results for Self-Rated good health and Depressive symptom for older adults in India.

	SRH (OR)	Functional limitation (OR)
Age		
50-59	**1**	1
60-69	0.67*** [0.59 : 0.77]	1.66*** [1.47 : 1.87]
70:79	0.50*** [0.42 : 0.60]	2.94*** [2.49 : 3.46]
80 +	0.30*** [0.22 : 0.43]	7.46*** [5.40 : 10.31]
Gender		
Male	1	1
Female	0.81** [0.71 : 0.94]	2.26*** [1.99 : 2.57]
Education		
No Education	1	1
Primary	1.20* [1.03 : 1.40]	0.93 [0.82 : 1.07]
Secondary	1.54*** [1.25 : 1.90]	0.72** [0.59 : 0.88]
High School	1.87*** [1.50 : 2.34]	0.75** [0.60 : 0.93]
Higher Study	2.52*** [1.90 : 3.35]	0.56***[0.41 : 0.75]
Wealth quintile		
Poorest	1	1
Poor	1.05 [0.86 : 1.29]	0.80* [0.67 : 0.96]
Middle	1.12 [0.91 : 1.37]	0.92 [0.77 : 1.11]
Higher	0.98 [0.80 : 1.21]	0.77** [0.64 : 0.93]
Highest	1.09 [0.88 : 1.35]	0.81* [0.67 : 0.98]
Place of residence		
Urban	1	1
Rural	0.91 [0.80 : 1.05]	1.31*** [1.15 : 1.49]
Caste		
ST	1	1
SC	1.06 [0.80 : 1.40]	1.14 [0.89 : 1.46]
Other	0.99 [0.76 : 1.28]	1.23 [0.98 : 1.54]
Religion		
Hindu	1	1
Muslim	0.91 [0.75 : 1.10]	1.42*** [1.20 : 1.68]
others	0.89 [0.64 : 1.22]	1.19 [0.89 : 1.60]
Social Capital Variables		
Marital status		
Not currently married	1	1
Currently Married	1.00 [0.86 : 1.16]	1.01 [0.88 : 1.15]
Social action		
Low	1	1
Medium	1.39*** [1.20 : 1.62]	0.86* [0.75 : 0.99]
High	1.31** [1.08 : 1.60]	0.97 [0.79 : 1.17]
Sociability		
Low	1	1
Medium	1.01 [0.89 : 1.15]	1.06 [0.94 : 1.19]
High	1.11 [0.89 : 1.37]	0.82 [0.67 : 1.01]
Trust and Solidarity		
Low	1	1
Medium	1.08 [0.93 : 1.25]	0.88 [0.77 : 1.01]
High	1.17* [1.02 : 1.35]	0.81** [0.71 : 0.92]
Safety		
Low	1	1
Medium	1.66*** [1.36 : 2.03]	1.07 [0.90 : 1.28]
High	1.78*** [1.54 : 2.06]	1.05 [0.92 : 1.19]
Civic engagement		
Low	1	1
Medium	0.99 [0.72 : 1.36]	0.96 [0.73 : 1.27]
High	1.01 [0.72 : 1.41]	1.01 [0.75 : 1.35]
Psychological resources		
Low	1	1
Medium	1.15 [0.98 : 1.35]	0.77*** [0.67 : 0.88]
High	2.32*** [1.99 : 2.73]	0.54*** [0.47 : 0.62]

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

compared to urban area.

6.2. Predictors of health outcomes

Results of multivariate logistic regression analysis shows that; to be elderly, female gender, having more than primary education, and great social capital (i.e. medium and high social action, high trust and solidarity, medium and high safetyness and greater psychological resource) are the important factor that influence the self-rated good health among older adults in India. Furthermore, multivariate logistic regression analysis showed that higher age, for female, having at least and more than secondary levels of education, and holding higher position in society, residing in rural area, belonging to muslim community and social capital (medium social action, and higher psychological resources) are associated with functional limitation in daily living (Table 2).

Further, the depressive symptom is highly associated with increase in age, for female gender, having education, holding a higher position (in terms of wealth), being schedule cast & other cast and different aspects of social capital which includes (medium and high sociability, medium trust and solidarity, and having medium and high psychological resources). In addition linear regression analysis results showed that higher age, being female and belonging to Muslim religions, are negatively associated with their quality of life. Whereas the older adults having education (at least more than secondary level of schooling), holding some assets (in terms of wealth), and high social capital (currently married, medium and high social action, sociability, trust and solidarity, safetyness, civic engagement, and having greater psychological resources) are significantly associated with their quality of life (Table 3).

7. Discussion

Using SAGE Wave-1 India data, the study presents result on the relationship between moderating role of social capital on several health outcomes (i.e., self-rated good health (SRH), depression, functional health) and quality of life among elderly in India. Investigation confirms a significant association between the moderating role of social capital and its embedding function in elderly individual's health outcomes, the results are also consistent across several earlier studies conducted (Berkman et al., 2014; Krause, 2004; Newsom & Schulz, 1996; Seeman et al., 1996). As hypothesized the study proves that socail capital playes an decisive role in self rated good health,among elderly. Elderly having education, and higher social capital reported to experience notably high self-rated good health. Depression among elderly has been closely associated with an increase in age, elderly with higher education, and the individuals holding high social capital (House et al., 1988; Jusot et al., 2008; Stephens et al., 2011).

Elder individuals in the community with high sociability, trust, solidarity receive recognition reducing psychological stress. Elderly currently living with spouse, and occupied in a greater degree of civic activities experience a better quality of life. Greater social capital attneuated the functional limitation in the daily living of elderly(Berkman, 1995). Intriguing findings suggest social capital increases the utilization of health care among elderly as it appears a number of health outcomes experienced by elderly differed by social capita. Self-rated good health, depression, functional health, and quality of life is lower among the elderly those who had a higher degree of social support and trust in the society. Further, it explains that elderly with a greater degree of social capital received assistance when they seek help for (Shibuya et al., 2002; Tolasa, 2017; Shiovitz-Ezra & Litwin, 2015; Honjo, 2004).

Females experienced a greater degree of poor health and depression than their male counterparts, a confirm icon of the Indian patriarchal society, where females societal interaction are limited. A component of social capital measured as being currently married has a profound implication to elderly health, individuals married and living with a spouse are notably healthy than the ones who are separated, widowed

Table 3
Odds ratio and coefficient results for Active Daily living and quality of life for older adults in India.

All	Depression	Quality of life (Coff.)
Age		
50-59	**1**	1
60-69	1.23** [1.05 : 1.44]	−2.31*** [−2.99 : −1.61]
70-79	1.63*** [1.35 : 1.98]	−4.84*** [−5.75 : −3.93]
80+	1.62** [1.21 : 2.19]	−7.74*** [−9.21 : −6.27]
Gender		
Male	1	1
Female	1.24** [1.06 : 1.46]	−0.90** [−1.628 : −0.17]
Education		
No Education	1	1
Primary	0.76** [0.64 : 0.89]	−0.44 [−1.21 : 0.34]
Secondary	0.65** [0.49 : 0.86]	1.45** [0.29 : 2.59]
High School	0.62** [0.46 : 0.85]	3.00*** [1.76 : 4.25]
Higher Study	0.50** [0.32 : 0.79]	4.91*** [3.31 : 6.52]
Wealth quintile		
Poorest	1	1
Poor	0.94 [0.76 : 1.15]	2.41*** [1.39 : 3.42]
Middle	0.85 [0.69 : 1.05]	3.59*** [2.55 : 4.62]
Higher	0.75** [0.60 : 0.93]	5.47*** [4.43 : 6.51]
Highest	0.52*** [0.41 : 0.66]	8.21*** [7.12 : 9.30]
Place of residence		
Urban	1	1
Rural	1.12 [0.94 : 1.33]	0.27 [−0.48 : 1.01]
Caste		
ST	1	1
SC	1.52* [1.08 : 2.14]	−1.01 [−2.43 : 0.42]
Other	1.79*** [1.30 : 2.46]	0.49 [−0.81 : 1.80]
Religion		
Hindu	1	1
Muslim	1.12 [0.92 : 1.37]	−2.59*** [−3.54 : −1.63]
others	0.75 [0.49 : 1.15]	0.43 [−1.24 : 2.09]
Social Capital Variables		
Marital status		
Not currently married	1	1
Currently Married	0.99 [0.84 : 1.17]	1.57*** [0.81 : 2.33]
Social action		
Low	1	1
Medium	1.00 [0.84 : 1.20]	2.50*** [1.69 : 3.31]
High	1.02 [0.79 : 1.30]	2.01*** [0.92 : 3.10]
Sociability		
Low	1	1
Medium	1.17* [1.02 : 1.36]	1.36*** [0.71 : 2.02]
High	1.70*** [1.32 : 2.19]	2.12*** [0.95 : 3.29]
Trust and Solidarity		
Low	1	1
Medium	1.20* [1.02 : 1.41]	3.48*** [2.70 : 4.25]
High	0.95 [0.81 : 1.11]	2.82*** [2.10 : 3.54]
Safety		
Low	1	1
Medium	0.92 [0.79 : 1.20]	1.54** [0.53 : 2.54]
High	0.90 [0.77 : 1.06]	2.66*** [1.94 : 3.38]
Civic engagement		
Low	1	1
Medium	1.13 [0.80 : 1.59]	2.00* [0.43 : 3.56]
High	1.35 [0.94 : 1.93]	2.92*** [1.28 : 4.56]
Psychological resources		
Low	1	1
Medium	0.67*** [0.57 : 0.79]	5.82*** [5.05 : 6.60]
High	0.60*** [0.51 : 0.72]	13.02*** [12.22 : 13.83]

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

and unmarried (Berkman et al., 2000; Eriksson et al., 2010; Bourdieu, 1986; Portes, 1998; Syndrome, 2004). Other indicators studied in the path view of social capital were medium and high trust solidarity, sociability, social action, and civic engagement where findings suggest elderly with high responses enjoy a better quality of life. Religion and caste have evolved as one of the least confounders to elderly health (Vanneman et al., 2006). One of the paramount variables coming out of the study is the access to psychological resources regarding controlling essential commodities and wealth in the household (Rözer et al., 2016; Weich et al., 2002). Access to resources predicts a high impact on the quality of life in elder ages (Tolasa, 2017). Findings also suggest elderly in India with higher education and are from higher wealth quintile report better health (Arokiasamy et al., 2015). The study stresses on the fact that education and wealth are incongruent to social capital, as a positive association can be affirmed between the experiences.

8. Conclusion

This paper provides the evidence that different social capital components significantly associated with self-rated good health, lower depression symptom, better functional health and a higher quality of life among the older adults in India. The study concludes that those who having high sociability, trust & solidarity and psychological resources report significantly declined depressive symptoms. Apart from this, it also found that other component of social capital as currently married, medium and high social action, sociability, trust, and solidarity, feeling of saftyness, more civic engagement resulted in a better quality of life among elderly compared to those who have low social capital. Simultaneously higher access to psychological resources in terms of controlling important things in life exerted high impact on the quality of life. From the results, we conclude that social capital is an important factor in getting better and healthy ageing where more focus on disease-free and quality of ageing. Henchforth policy makers should frame such policy that elderly feel safer, trust and can be involved in decision making in the programme, and they not feel as a burden on society but as a productive resources of society.

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Conflicts of interest

None.

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