Intergenerational solidarity, social participation and psychological wellbeing of the elderly in India

Abstract: This study investigates whether social relationships measured by intergenerational solidarity and social participation are the critical determinants of subjective wellbeing and psychological distress of the elderly in India. The data has been collected from a cross-sectional survey *Building Knowledge Base on Population Ageing in India*, 2011 (hereafter, BKPAI) for seven states of India with a total sample of 9852. In particular, the study captures the impact of structural, affectional, associational functional, and consensual solidarity and the role of social engagement. I use multiple regression and logistic regression to see the impact of intergenerational solidarity and social participation on wellbeing and psychological distress, respectively. The study reveals that social participation is positively associated with subjective wellbeing even after controlling socio-economic demographic factors and all forms of intergenerational solidarity. However, social participation can significantly reduce the psychological distress of older only when intergenerational solidarity is not taken into consideration. Emotional solidarity, functional solidarity and consensual solidarity have shown significant impact on Indian elderlies subjective wellbeing and psychological distress. Structural solidarity (living with an adult son) has a protective effect on Indian parents' wellbeing; however, fully mediated through emotional solidarity. The study suggests that both social participation and intergeneration solidarity have significant protective impact on elderlies subjective wellbeing, but for psychological distress intergenerational solidarity is much more significant.

Introduction

Social relation in later life appeared to be one of the principal themes in aging research. A rich tradition of gerontological literature has established that individuals who have a satisfactory social relation more likely to have higher social support and a higher level of social integration, and subsequently better physical & mental health and a higher level of life satisfaction. Various theories across disciplines have conceptualized and identify the form, function, and quality of social relations and their impact on elderly's health and wellbeing. Existing literature has found two primary contexts of social relation: household context (close family relation measured by marital status, living arrangement intergenerational relationship) and second, the community /neighbourhood context (distant formal community relation commonly measured by participation in social activities). Numerous studies have suggested that in a household context, the intergenerational living arrangement provides a platform for intergenerational exchanges of material supports as well as for more significant social interaction that influences the wellbeing of the elderly (Knodel & Ofstedal, 2002). Similarly, substantial literature also found that the elderly with the active involvement in social and recreational activities reported good physical and psychological wellbeing (Compare et al. 2012). However, less studies have considered the role of social support in family relation and participation in social networks simultaneously. In this study, I aim to incorporate social support from family network and social network and investigates their role in adults' subjective wellbeing and psychological distress in India.

Previous studies on the Indian context have identified family structure (measured by living arrangement, household size, marital status etc.) as the most crucial issue of healthy aging (Agarwal 2012; Samanta, Chen & Vanneman 2014). Most investigators concentrated on traditional multigenerational households vs. modern nuclear households in experiencing health benefits of older adults in India. However, there is a limited understanding on the role of intergenerational support i.e. exchange of material, instrumental and emotional exchange between older parents and their children as the determinant of health status for the Indian elderly. Further, to date, no studies have considered social participation as an explanatory mechanism of elderly's health. In this paper, I contend that social participation as a defensive factor merits a lot more noteworthy consideration in developing countries like India.

Theoretical framework:

Scholars of gerontology and family demography have created an extensive body of research utilizing the several theoretical approaches across various disciplines. This study has focused on two broad theoretical aspects Intergenerational solidarity (Bengtson & Roberts,1991) and social participation (Putnam 2000)

Intergeneration solidarity:

Intergenerational relationship refers to the conjoining relationship between two generations specially the parent-children relation. The intergenerational solidarity framework clarifies intergeneration relations as "emotional cohesion" among family members and generations (Silverstein et al. 2012, p.1249). The model of intergenerational solidarity as proposed by Bengtson & Roberts (1991) consists of six dimensions of family solidarity. They are: affectional or emotional solidarity, associational or socially interactive solidarity, structural solidarity or locational proximity, normative solidarity or dutiful commitments, consensual solidarity or ideological similarity and functional solidarity or instrumental social support

(Silverstein et al. 2012). Mutual reciprocity and support exchanges across generations is the central theme of this framework and support exchanges take various modes like material support (supply and utilization of financial resources) emotional support (emotional closeness and companionship) and instrumental support (assistance in daily activities) and informal health care (specially long term care) (Zhou et al. .2018). The theoretical premise of intergenerational solidarity gained much validation in the countries where the filial obligation is a deep-rooted tradition, and co-residential living arrangement specially with adult children is normative (Chen & Short,2008). Filial piety is considered as the 'dutiful repayment' (Zimmer 2005, p.527) of physical emotional and material support from the younger generation to the older generation, particularly from adult son to old parents (Zimmer 2005). Significant implementation of intergenerational solidarity theory in aging research focusing on the influence of household composition on geriatric health has been found in Asian countries like China (Zimmer 2005; Zimmer & Korinek, 2010), Thailand, Vietnam, Myanmar (Teerawichitchainan, Knodel and Pothisiri 2015), India (Samanta, Chen, and Vanneman, 2015).

Social participation:

Social particiaption or engagement , which is a significant segment of social capital, has been proposed as one determinant of wellbeing status (Hyyppa¨ and Ma¨ ki, 2003; Lindstro¨m et al., 2004). It is commonly characterized as the social sharing of interpersonal resources and is measured by how effectively an individual participates in social activities, like involvement in a religious group, volunteer group, social club, etc. The mechanism underlying the relationship between social participation and health is broadly categorized as physiological advantage i.e., lowering the association between the morbidity level, psychological advantage i.e. increasing support and strengthing self-efficacy and third promoting and diffusing health-protecting knowledge and practices. Participation in social associations encourages the promotion of ties between two individuals (who are unknown otherwise), bringing about an extended social network that facilitates access to "embedded " resources (Feld 1981; Lin 1999). Hence, more active social participation could expand one's access to resources that give a scope to improve health status. For instance, Social activities may disseminate health-protecting advice more adequately through information channels, and it leads to a supportive environment where harmful health practices transform positively (Ganster and Victor, 1988).

Regardless of long-standing discussion and full acknowledgment that social participation is an important determinant of health, there is an astounding absence of endeavours to test this proposition in developing countries context. Most of the studies were directed in Western nations with well developed income support programme and medical care frameworks and preponderance of single generation nuclear family system, thus the relationship between productive activities and health in less-developed countries remains unexplored . This study aimed to address these holes by researching the impacts of social participation on wellbeing among older adults in India.

Data:

To empirically assess the abovementioned relationship, the study has utilized cross-sectional data - Building a Knowledge Base on Population Ageing in India (BKPAI)(2011) in India. The survey has collected data from on sociodemographic characteristics, family relation, health status , old age security from seven states of India, namely, Kerala, TamilNadu, Maharashtra, Himachal Pradesh, Punjab, Odisha and West Bengal, that have higher proportion of elderly (above 60 years) population and from the household having at least one member above the age 60 years. The total sample size is 9852

Measures:

Dependent variables: I have taken subjective wellbeing (SWB) of the elderly and psychological distress to assess the psychological wellbeing of the elderly.

SWB is measured by nine items capturing evaluation of one's life in terms of overall life satisfaction as well as one's experience of pleasant and unpleasant emotions. The answer is taken by three-point psychometric scale (1,2,3), with 1 represents a poor evaluation of life satisfaction and three good evaluations of life satisfaction. Taking nine answers for 9 items the total score of SWB ranges from 9-27, where a higher value represents the better evaluation of life satisfaction.

Psychological distress is measured by 12 items , where respondents are asked if they have experienced a particular symptoms or behaviour recently. The answers were taken in a four-point scale (less than usual=0, no more than usual=1, rather more than usual=2, or much more than usual=3). The total score of 12 items ranges from 0-36. A higher score indicates a greater degree of psychological distress. The accepted threshold score is 12 or below, reflecting better mental health status. Any score above 12 reflects psychological distress. It ranges from 0 to 36. The GHQ-12 questionnaire in this study is scored based on the Likert scale. Psychological distress is categorised as low=0 if the score is 12 or below and high=1 if the score is more than 12

Independent variables:

Social participation:

Social participation is measured as a summated score of the frequency of being active in five types of social activities like attending public meeting community/ political affairs, attending group/club/ union meeting, working in the neighbourhood, attending religious services/ gatherings, visiting friends/ relatives in past 12 months. The response was collected as never, once or twice per year, once or twice per month, once or twice per week and daily. Based on the distribution of responses to these questions, the variables were recoded into three categories never, occasionally and daily. The range of summated scale varies 0-10 with higher values represents higher social activities.

Intergenerational solidarity:

The original model consists six aspects of solidarity —structural, associational, consensual, affectional, functional and normative solidarity. However, due to the limitation of data I incorporated four types of solidarity which include:

Structural solidarity : Structural solidarity or the geographical proximity is measured by living arrangement. I have categorized and coded living arrangement as living alone =0 , living with only spouse =1 living with an adult son=2 , living with others=3

functional solidarity :

Functional solidarity is measured by two factors financial transfer and instrumental support provided by the elderly at household. Respondents were asked if they send or receive money to and from their children. The answer is taken separately and coded dichotomously as yes=1 no=0. The instrumental support is measured based on the support provided by older adults in various household task in the last 12 months. The household activities like taking care of young children, cooking/cleaning, paying bills, shopping, settling down disputes etc. The answer was taken dichotomously and coded dichotomously as yes=1 no=0. Further the answers are summated and coded dichotomously as low instrumental help = 0 and high instrumental help=1

Affectional solidarity:

Affectional solidarity is measured by perceived emotional attachment of the older adults to their family. Respondents were asked i) if they feel comfortable with their living arrangement and answer is taken in 3 point psychometric scale (comfortable=2 satisfactory=1 and uncomfortable=0) ii) if they think they are important to their family iii) if they think that their family members think them as important in their family. The answer is taken in 3 point psychometric scale (not important =0, somewhat important=1 and very important =2). The answer of these three items are summated to build the variable affectional solidarity the scores range from 0-6

Consensual solidarity:

It measures ideological similarities between parents and children. This has been measured whether older adults and their children participate in decision-making for some significant events in the household. I assume if there are intergenerational ideological similarities everyone in the household will be involved in decision making. Respondents were asked "Who usually makes the following decisions in regard to the marriage of son / daughter, buying and selling property, buying household items, gifts to relatives or the household members, arranging religious event, education of children or grandchildren. For all questions answer was measured in three categories and code as no role for elderly coded as 0 , decision made by elderly and spouse=1 decision taken by everyone of the household =3

Associational solidarity: It is measured by total communication of non-resident children to their older parents. The total communication is measured in an ordinal scale and coded as rarely= 0, sometimes in a year =1. Sometimes in a month =2, daily =3

Results

Multivariate Analyses:

I use ordinary least square regression to assess the impact of for assessing the impact of four dimensions of intergenerational solidarity (structural, emotional, associational, functional and consensual) and social participation on the score of subjective well being (SWB) of the older adults. Since psychological distress is measured by a dichotomous score, I used multivariate logistic regression to assess the impact of solidarity and social participation on the status of psychological distress. In total, I ran six models for each of these two dependent variables. In the first model, I added all control variables, including socio-demographic factors and physical health condition and social participation, to understand if social participation is an independent determinant of SWB and psychological distress for the Indian older adults. For the rest of the five models I added sequentially all four solidarity dimension along with the control variables and social participation. This hierarchically progressive ordering explained if the effect variables entered in the previous model mediated by the effects of variable added later. The result revealed that social participation has a protective impact on SWB but not on psychological distress. The impact of social participation on SWB remains positive and significant (b= 0.18-0.10, $p<0.001$) although the strength gradually decreases with addition of each dimension of solidarity. In the second model structural solidarity measured by living arrangement of the older adults has been added. The older parents who lived with only spouse (b= 0.39, $p<0.05$)and with an adult son (b=0.38, $p<0.05$) have higher SWB score than those who stay alone. For psychological distress living with a spouse only have a negative significant impact on older adults compare to living alone, also, living with an adult son doesn't show any significant impact (OR= 0.75 $p<0.05$) on the psychological distress of the elderly. The third model explains the impact of affectional solidarity measured by perceived emotional cohesion of older parents. Parents who have higher level of perceived emotional cohesion have significantly better score in SWB (b= 0.86-0.80, $p<0.00$) and also lower levels (OR= 0.61-0.67, $p<0.00$) of psychological distress. The third model also reveals that the positive impact of structural solidarity on SWB is mediated through affectional solidarity. In the fourth model the effect of associational solidarity or the communication with non-residential children with their parents has been added. Older parents who communicate daily or at least sometimes in a month have higher and significantly better SWB. For psychological distress, no significant impact is visible in the fourth model. The fifth model reveals the impact of functional solidarity measured by instrumental support provides by elderly at household level and financial receipt and transfer between non residential children and older parents. The result shows that older parents who provide instrumental support will significantly have higher SWB scores and lower levels of psychological distress. Contrary to the expectation exchange of financial resources between older parents and their non residential children doesn't show any significant impact on SWB, receiving money from non-residential children has increased the odds of psychological distress for the older parents. The final model shows the impact of consensual solidarity measured by ideological similarities in decision-making at the household level on SWB and psychological distress. The result reveals that parents who make vital decisions of the household with children , spouses, and other family members are more likely to have better SWB and lower psychological distress.

Reference :

Agrawal, S. (2012). Effect of living arrangement on the health status of elderly in India: Findings from a national cross sectional survey. *Asian population studies*, *8*(1), 87-101.

Bengtson, V. L., & Roberts, R. E. (1991). Intergenerational solidarity in aging families: An example of formal theory construction. *Journal of Marriage and the Family*, 856-870.

Chen, F., & Short, S. E. (2008). Household context and subjective wellbeing among the oldest old in China. *Journal of family issues*, *29*(10), 1379-1403.

Hyyppä, M. T., & Mäki, J. (2003). Social participation and health in a community rich in stock of social capital. *Health education research*, *18*(6), 770-779.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon and schuster.

Knodel, J., & Ofstedal, M. B. (2002). Living arrangements, and in particular coresidence with an adult child, lie L. the heart of the traditional system of familial support for elders in all. *The Well-Being of the Elderly in Asia: A Four-Country Comparative Study*, 143.

Lindstrom, M., Moghaddassi, M., & Merlo, J. (2004). Individual self-reported health, social participation and neighbourhood: a multilevel analysis in Malmo, Sweden. *Preventive medicine*, *1*(39), 135-141.

Samanta, T., Chen, F., & Vanneman, R. (2015). Living arrangements and health of older adults in India. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *70*(6), 937-947.

Silverstein, M., Conroy, S. J., & Gans, D. (2012). Beyond solidarity, reciprocity and altruism: moral capital as a unifying concept in intergenerational support for older people. *Ageing & Society*, *32*(7), 1246-1262.

Teerawichitchainan, B., Knodel, J., & Pothisiri, W. (2015). What does living alone really mean for older persons? A comparative study of Myanmar, Vietnam, and Thailand. *Demographic Research*, *32*, 1329-1360.

Zhou, Z., Mao, F., Ma, J., Hao, S., Qian, Z., Elder, K., ... & Fang, Y. (2018). A longitudinal analysis of the association between living arrangements and health among older adults in China. *Research on aging*, *40*(1), 72-97.

Zimmer, Z. (2005). Health and living arrangement transitions among China's oldest-old. *Research on Aging*, *27*(5), 526-555.

Zimmer, Z., & Korinek, K. (2010). Shifting coresidence near the end of life: Comparing decedents and survivors of a follow-up study in China. *Demography*, *47*(3), 537-554.

Table 1: Multiple regression on the score of subjective wellbeing (SWB) with social participation, intergeneration solidarity and socio economic variables

	SWB	SWB	SWB	SWB	SWB	SWB
	coeff.	coeff.	coeff.	coeff.	coeff.	coeff.
Age (60-69 ref.)						
70-79	-0.278**	-0.290***	-0.075	-0.014	0.046	0.088
80+	-0.310*	-0.321*	0.022	-0.004	0.133	0.173
Female (male=0)	0.311***	0.321***	0.358***	0.304**	0.293**	0.339***
More than 5 years (less than 5years=0)	1.236***	1.248***	0.881***	0.977***	0.964***	1.021***
High wealth (low wealth=0)	2.182***	2.148***	1.533***	1.629***	1.626***	1.697***
Income_elderly (no income=0)	0.652***	0.685***	0.554***	0.453***	0.409***	0.379***
Urban (rural=0)	-0.250**	-0.231**	-0.251***	-0.312***	-0.307***	-0.431***
Currently married (otherwise=0)	0.623***	0.567***	0.452***	0.391***	0.353***	0.336**
Chronic health	-0.162***	-0.161***	-0.156***	-0.148***	-0.144***	-0.146***
ADL	-0.541***	-0.540***	-0.378***	-0.382***	-0.347***	-0.337***
Social participation	0.188***	0.188***	0.157***	0.128***	0.111***	0.100***
Structural solidarity (living alone=0 ref.)						
Living with spouse only		0.392*	0.034	-0.139	-0.117	-0.103
Living with an adult son		0.386*	0.141	-0.052	-0.044	-0.002
Living with others		0.122	-0.045	-0.339	-0.342	-0.274
Affectional solidarity						
Emotional cohesion			0.863***	0.863***	0.825***	0.805***
Associational solidarity (communicate rarely=0 ref.)						
Communicate sometimes in a year				0.247	0.226	0.339
Communicate sometimes in a month				0.251*	0.244*	0.314*
Communicate daily				0.765***	0.742***	0.850***
Functional solidarity						
Provides instrumental support high(low=0)					0.498***	0.481***
Recived financial support					-0.013	0.033
Provides financial support					0.23	0.218
Consensual solidarity						
Decision making alone or with wife						0.463**
Decision making with others						0.400**
_Cons	14.51***	14.22***	11.12***	11.11***	10.99***	10.61***
Observations	9507	9507	9492	7552	7552	6977
R-squared	0.199	0.199	0.277	0.286	0.289	0.295

Table 2: Logit model estimate (odd ratio) of psychological distress (having distress=1) with social participation, intergeneration solidarity and socio economic variables

	Psy_distress	Psy_distress	Psy_distress	Psy_distress	Psy_distress	Psy_distress
	OR	OR	OR	OR	OR	OR
Age (60-69 ref.)						
70-79	1.358***	1.377***	1.253***	1.188**	1.125	1.073
80+	1.331***	1.350***	1.148	1.057	0.921	0.854
Female (male=0)	0.953	0.959	0.94	0.912	0.921	0.862*
More than 5 years (less than 5years=0)	0.557***	0.560***	0.665***	0.655***	0.661***	0.631***
High wealth (low wealth=0)	0.379***	0.377***	0.491***	0.479***	0.475***	0.476***
Income_elderly (no income=0)	0.714***	0.708***	0.748***	0.741***	0.774***	0.780***
Urban (rural=0)	1.039	1.023	1.033	0.993	0.989	1.009
Currently married (otherwise=0)	0.823***	0.874*	0.927	0.897	0.937	0.992
Chronic health	1.130***	1.129***	1.137***	1.133***	1.123***	1.118***
ADL	1.467***	1.461***	1.371***	1.322***	1.268***	1.253***
Social participation	0.981	0.981	0.995	0.99	1.007	1.007
Structural solidarity (living alone=0 ref.)						
Living with spouse only		0.757*	0.883	0.913	0.897	1.038
Living with an adult son		0.88	0.973	1.023	1.065	1.012
Living with others		1.047	1.118	1.156	1.187	1.151
Affectional solidarity						
Emotional cohesion			0.618***	0.635***	0.653***	0.675***
Associational solidarity (communicate rarely=0 ref.)						
Communicate sometimes in a year				0.811	0.841	0.797*
Communicate sometimes in a month				0.89	0.896	0.905
Communicate daily				0.896	0.9	0.889
Functional solidarity						
Provides instrumental support high(low=0)					0.620***	0.599***
Recived financial support					1.262***	1.255***
Provides financial support					1.046	1.043
Consensual solidarity						
Decision making alone or with wife						0.410***
Decision making with others						0.607***
_Cons	0.651***	0.729***	2.560***	2.619***	2.679***	3.150***

N	9734	9734	9719	7740	7740	7151