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INTER-LINKAGE BETWEEN THE HEALTH STATUS AND SOCIO-ECONOMIC LIFE OF INDIAN ELDERLY: AN EXPLORATION BASED ON 71ST ROUND OF NSS DATA

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Abstract:

Like many other countries in the world, India is also in the process of major age-related structural changes with an acceleration of growth in its elderly populations. The present study focused on economic independence and living arrangements and about how such factors shape perceived health status among the elderly. On the basis of the unit level data from the NSS 71st Round taken for the 18 major Indian states, an attempt was made in this analysis to establish the inter-linkage between the perceived health status and the financial self-dependence along with aspects of filial status and the factor of co-residence. "Self-reported health status" has been used as a response variable in the present study. The perception of "Poor" health status was significantly reported more by the economically dependent elderly as compared to their independent counterparts, irrespective of their place of residence. The study found that when the elderly are co-residing with their spouse, psychologically they remain more satisfied and on such occasions fifty percent or more of them expressed their health status to be either excellent or good. It has also been empirically found that whenever the elderly lack financial autonomy, they are increasingly found to reveal poor health status may be because of feeling mentally distressed and are having low self-esteem.

Keywords: Ageing, Perceived Health Status, Living Arrangement, Economic Independence

1.0 Introduction:

Ageing of population is the process in which the elderly cohort expands to form a significantly large share of the total population of an economy. Population ageing is the result of "demographic transformation", which is actually the outcome of two forces acting together and it is explained by overall decline in mortality and at the same time reduction in total fertility. Ageing of the population has presently been a worldwide phenomenon as a result of the changing demographic transition. It has been one of the most distinctive dynamic processes which was very much prevalent in post-industrial European societies in the twentieth century. The United Nations Conference of Ageing Populations in the context of the family held in Japan in 1994 observed that all developed countries have at least one demographic issue in common – population ageing – which was the inevitable consequence of fertility decline. The United Nations defines a country as 'ageing', where the proportion of people of a nation with age of 60 years or more, reaches just 7 per cent or above.

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When at the onset of the 21st century, the world's total population stood at 6.1 billion in the year 2000, the elderly cohort comprised of around 10% of the global population. During the next ten years, world elderly population grew at the decadal growth rate of 25%. At the end of the year 2020 when the figure of world population was around 7.8 billion (7794.8 million), the global burden of elderly population crossed the 1.0 billion mark (1402.4 million) which was around 13.5% of the entire population. As per the projection estimates provided by the Population Division of the United Nations, the world elderly population figure in the upcoming year 2030 could be 1.4 billion, increasing at a decadal growth rate of 34% during the present decade, slowing down a bit as compared to 37.4% of the previous decade. However, while the world population is projected to approach 9.2 billion in 2040 and to increase further to 9.7 billion in 2050, the world's collective ageing population is predicted to be crossing the 2 billion mark by the mid of the 21st century. According to the United Nations (2002), the share of elderly population across the globe is going to be around 15 percent by the year 2025 and it is projected to remain above 20 percent in 2050 also. As a consequence, the phenomenon of population ageing is becoming a major concern both for developed and developing countries across the world.

Let us look at the share of the figure of the world's total elderly population in the Table 1 below:

Table – 1: Global Figure of Elderly Population and its Share in World Population

Year	World Population (in million)	World Elderly Population (in million)	% Share of Elderly Population in World Population*
2000	6143.5	610.8	9.9%
2010	6956.8	763.9	10.9%
2020	7794.8	1049.7	13.5%
2030	8548.5	1402.4	16.4%
2040	9198.8	1738.0	18.9%
2050	9735.0	2092.6	21.5%

Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, custom data acquired via website. (*Authors Calculation)

In the Table 1 above, it can be seen that globally the number of ageing population (age 60 years and above) is going to be almost double within a span of thirty years (1049.7 million in 2020 to 2092.6 million in 2050). And the share of elderly population in the world will be such that while it is going to be 1 in every 6 people world-wide to be of 60 years or more in 2030, the ratio will turn out to be like more than 1 out of every 5 persons in the world will be an aged person by the year 2050. Glimpses of India's ageing picture has been portrayed in the United Nations Population Fund's (UNFPA) "India Ageing Report – 2017", which projected that the share of population over the age of 60 in India is going to increase from 8 percent in 2015 to 19 percent in 2050. Beginning the 21st century with the number of elderly population of 77 million in 2001, the size of elderly population in absolute numbers is expected to rise to 190 million by 2030 (which is 13% of the country's population) and 330 million by 2050 (i.e. 20% of the country's population) [World Population Ageing, 2015]. Henceforth, India is likely to rapidly turn into greying society in the coming decades with the load of increasing number of elderly intensifying further by the year 2050.

2.0 Background Studies:

The ageing of the world's population is going to have deeper impact on every aspect of life of single individual or for societies as a whole. This prodigy was realised, way back in World Assembly on Ageing in Vienna, Austria 1982, and the well-being of the elderly was emphasized. Many researchers, while focussing on wellbeing of ageing, emphasized on the health status of the elderly and mentioned that the elderly people while growing old along with disease, disability, frailty, and dependence may also bring in anxiety and stress due to a low status in the family, and lack of financial security amongst them (Ashok & Ali, 2003). While morbidity may be related more

to one's biological age which can't be totally controlled, the filial structure can be an area to ponder upon to aid to their social status. However, with modernization, the traditional family system is fast eroding leaving the elderly to reside on their own. With shrinking kith and kin relationships, they are losing their traditional support that makes them all the more vulnerable (Rajan and Kumar, 2003). On the other side, addressing the effect of economic independence on the overall wellbeing and quality of life; Alam and Mukherjee (2005) studied the relationship between variables like - old age monetary dependence, chronic ailments and lack of functional flexibility among the elderly. Few years later, Ghosh and Husain (2010) also established the interconnections between economic independence, living arrangements and the prevalence of morbidity. Talking about the health profile of the elderly, the authors claimed that morbidity situation does indicate their physiological overview. However, more holistic approach can be adopted if the elderly can be made to reveal about their self-perception on their current health situation because that may include the emotional wellbeing of the elderly in addition to their physical wellbeing. A year later, in an article, Husain and Ghosh (2011) used 'Self-reported health status' as a response variable where they provide changes in demographic and socioeconomic conditions in the self-perceived health status of the elderly population in India over a decade, based on the 52nd and 60th rounds of surveys by NSSO. The study reported a decline in the perceived health status, even after controlling the factors of the category of socio-economic behavioural features. A study of similar nature by Das, et. al. (2018) addressed the wellbeing of the elderly and its determinants from the seven Indian states, where in they used the database of the BKPAI – 2011. They constructed wellbeing indices clubbing the Physical, Social and Emotional wellbeing indices and treating the combined measure as dependent variable, also searched for the determinants with the predictor variables which include a wide array of socio-economic and health variables. Also using the responses from the field survey in Assam, Nath, et. al. (2007) depicted the health problems of elderly population and identified the socio-demographic factors and their degree of influence. In all such instances, researchers have used logistic regression using the categorical or binary responses of health wellbeing as the dependent variable.

The elderly population is increasing due to demographic transition and the pace of such increase is at an alarming rate in the developing countries like India. For this, issues connecting their quality of life and wellbeing need to become the matter of concern for policy makers in our country.

3.0 Research Hypotheses:

- There is association between self-perceived health status of the elderly and their living arrangements across the rural and urban areas.
- The self-perception of the elderly about their health status may have a direct bearing on the fact whether they themselves or their spouses are the head of household.
- The self-perceived health status of the elderly is associated with their nature of economic dependence.

4.0 Data Source and Methodology:

The present study pools data of the elderly in India from the national data source of NSSO (National Sample Survey Organization) of the Ministry of Statistics and Programme Implementation, Govt. of India. Post 2004, NSS survey dealing with the elderly section of people took place in the 71st Round (January - June 2014). The data set of the 71st NSS Round, besides containing information on basic demographic features all also contains information on living arrangements, economic independence of the elderly, health and morbidity condition and self-reported health indicators.

In our study, focus has been restricted to the eighteen major states of the country (including Delhi) while speaking about the elderly of the country so as to substantiate the figure of individual state frequencies and at the same time depicting the all-India figure as well.

The responses given by the elderly respondents on being asked about their self-perception of current health status are presented in terms of 'excellent', 'good/fair' and 'poor'. These three responses are treated as three categorical variables and are plotted against certain variables of interest which reflects the socio-filial scenario and the economic structure to which the elderly belong. Taking into account the sectoral difference between rural and urban, the analysis for validating the mentioned hypotheses are done by framing the contingency tables for one principal variable at a time and separately for rural and urban.

The entire analysis of the NSSO unit level data is done by taking the weighted estimations into account so as to reflect the country's entire elderly scenario on a macro sense. The obtained cell values of the tables are the observed frequencies in percentage pertaining to each of the variables under study. The association between the pairs of each of such variables are statistically tested using the 'Chi-square' test statistic at 5% level of significance.

The present study can be an alternative to regression approach for showing the interconnectedness of health status with the familial living and economic factors.

5.0 Growth and Position of India's Elderly:

Ageing, the process by which elderly persons come to form a significantly larger share of the total population, is one of the most distinct demographic events in today's world. According to the report on 'World Population Ageing – 2015', the two major population giants of Asia are India and China, because they are sharing a significant proportion of growing elderly population. The Indian aged population is currently the second largest in the world standing behind China, with 100 million of the aged. While India has been able to put brake on the decadal growth rate of the overall population (from above 20% in 2001 to 17% in 2011 and close to 12% projected rate in 2021), but the rate at which the non-elderly are getting converted to elderly of 60 years and above, is on the rise. Before proceeding to analyse the implications of ageing population in India, its growth and behavioural pattern needs to be studied first.

Table 2: Dynamics of Overall Population and Elderly Population in India for the Present & Last Four Decades

Year	Overall Population (in million)	Decadal Growth Rate [^]	Elderly Population (in million)	Decadal Growth Rate [^]	Share of Elderly Population to Overall Population [^]
1991	846.4	23.9%	56.6	31.1%	6.75%
2001	1028.7	21.5%	76.6	35.3%	7.45%
2011	1210.8	17.7%	103.8	35.5%	8.38%
2021 (projected)	1361.3	12.4%	137.9	35.9%	10.1%

Sources: Census of India, www.censusindia.gov.in; 'Elderly in India-2016', A Report by MOSPI, GoI; (^ Author's Calculation)

According to the statistics provided by the Census of India, the decade of 2001 to 2011 has been the one which lessened the growing population burden of the country by close to 5%. The percentage of decadal growth of overall population in the nation was registered at 17.7 % from the rate of 21.5% in the earlier Census of the year 2001. The subsequent decade has also been able to subdue the growth rate further and pull it down at close to 12%. But the burgeoning elderly cohort of the country showed no respite as the share of ageing nationals to the country's population seem to rise from below 7% in 2001 to projected 10% in 2021. Due to the visible change in the age composition of the population over the last forty years or so, there has been a spike in both the

number and proportion of aged people. The number of India's older people is likely to get increased from a little above 77 million in 2001 to roughly 138 million in 2021.

While the country's macro picture regarding the growth and share of the spurt in elderly population is clearly visible, the weighted estimations involving the unit level data of the 71st NSS Round are being further used here to bring out the country's gender and sectoral division of the elderly cohort.

Table 3: Gender & Sector-wise distribution of India's Elderly Population (71st NSS Round)

(Figures are in absolute millions)

	Rural	Urban	Total
Male Elderly	27.6	12.5	40.1
Female Elderly	28.2	13.0	41.2
Combined Elderly	55.8	25.5	81.3

Source: Author's calculation (weighted) from NSS unit level data of Round 71

The country's elderly scenario as revealed through the major Indian states shows that there has been almost equal representation of both the sexes in the ageing cohort of the nation. But at the same time there is clear predominance of the elderly to be residing in the rural fringes of the country.

5.1 Elderly Scenario according to the Structured Dimensions:

Once the country's elderly figure is known, the ageing cohort can be distributed according to certain principal variables so chosen from the survey schedule that can be differentiated into the three dimensions.

6.0 Living Dimension:

The survey schedule addresses certain few areas of daily living which can be categorised as the aspect touching the Social-Living Dimensions of the day-to-day life of an aged individual.

6.1 Elderly and their Living Arrangement:

The table below illustrates that the majority of elderly people are found to be more accustomed in living along with their spouse. It may be interpreted that the quality of life of the elderly is restored while they stay with their spouse and with their children as it helps them to get rid of loneliness during their ageing days.

Table 4: Distribution of Elderly by their Living Arrangements

Living Arrangement	71 st Round, (2014)		
	Rural	Urban	All
Living with Spouse only	15.1%	15.0%	15%
Living with Spouse and Children	46.8%	48.3%	47.3%
Living without Spouse but with Children	31.2%	30.6%	31%
Others	6.9%	6.2%	6.7%
Total	55.8M	25.5M	81.3M

Source: Author's calculation from NSS unit level data of Round 71

6.2 Elderly and their position in the family:

In the context of giving the elderly due respect in the family, they or their spouse should be given the position of head of the family. Because of the wisdom gained through age-old experience and the prevailing societal structure, the ageing members deserve that position in the family. But it may not always so happen and in that case they hold the filial relations with some other members.

Whether the ageing members are head of the household or they are related to other members being the head are extracted sector wise in the table below:

Table 5: Distribution of Elderly by their Familial Status

Relation to Head of Family	71 st Round, (2014)		
	Rural	Urban	Total
Self	52.1%	53.7%	52.6%
Spouse of Head	19.6%	20.2%	19.8%
Father / Mother/ Father-in-law/Mother-in-law	26.1%	23.7%	25.3%
Others	2.3%	2.4%	2.3%
Total	55.8M	25.5M	81.3M

Source: Author's calculation from NSS unit level data of Round 71

The figures in the table states that in more than fifty percent cases the elderly individual themselves are being treated as head in the family, followed by another 20 percent where their spouses are given such position.

7.0 Economic Dimension:

Pertaining to the economic dimension, the Schedule 25.0 of the 71st Round of NSS asked the respondents about their status of economic dependency.

7.1 Elderly and their economic dependency:

As the older adults turn 60 years of age, they retire from their work and occupation. Many of them who are in the unorganized sector also lose their work because of the falling productivity. In either case, the elderly are faced with reduced or no earning. This feeling of insecurity arising out of reduced or no earning makes them financially dependent totally or partially on the other supporting members of the family or other sources. Let us take a look at the elderly numbers under these categories of financial dependencies.

Table 6: Distribution of Elderly by their Economic Dependence

Categories of Economic Dependence	71 st Round, (2014)		
	Rural	Urban	Total
Not Dependent on Others	26.1%	31.5%	27.8%
Partially Dependent on Others	21.4%	16.7%	19.9%
Fully Dependent on Others	52.5%	51.8%	52.3%
Total	55.8M	25.5M	81.3M

Source: Author's calculation from NSS unit level data of Round 71

8.0 Health Dimension:

The third most talked about dimension is the health and physical dimension of the older adults. With growing old, the ageing individuals become prone to various illness and morbidity conditions. As a result their physical condition worsens. It may get compounded when the elderly people are further accompanied by physical disabilities and confinement to their beds or homes. These physical health related problems together with their state of emotional wellbeing is reflected on being asked about their perception on their state of health.

8.1 Elderly and their Perception on Current Health Status:

It is often considered to be a common notion that old age is a period of onset of various diseases. This time people speak about their sufferings and diseases (which are of the variant like hypertension, asthma, kidney disease, dementia, impaired hearing, eye-sight problem, joint pain, etc) which are very much chronic in nature. Along with the chronic morbidity conditions, the older

adults are also often found to be the victim of various physical disabilities and lack of movements. All these factors make them feel very much distressed, isolated and as a result a feeling of low self-esteem sets in among them. Such physiological and psychological sufferings can get reflected once they are made to reveal their perceptions on their overall health status. Their responses as captured in the survey data are being reflected in the following table.

Table 7: Distribution of Elderly by their Perceived Health Status

Perceptions on Health Status	Round 71, (2014)		
	Rural	Urban	Total
Excellent / Very Good	5.9%	9.0%	6.9%
Good / Fair	70.6%	71.0%	70.7%
Poor	23.5%	20.0%	22.4%
Total	55.8M	25.5M	81.3M

Source: Author's calculation from NSS unit level data of Round 71

So, as one can see that the average trend of the respondents is that around 70 percent of the elderly respondents consider their health status to be fairly good. This may be because of the fact that these groups of people often consider their ailing condition to be somewhat natural and inevitable, owing to rising age and low-body-functioning capacity. Such indifferent perceptions about one's own health status make them feel like fairly good. But another 20 percent have expressed to be in poor state of health, with the rural elderly marginally above the urban section.

If the reasons for the poor perception of health status for the older men and women are being searched for, the biological causes for remaining sick or being in ailing condition can be considered to be somewhat unavoidable. However, the probable causes which may lead them to social isolation, emotional distress and ultimately leading to mental indisposition, may be addressed. On that ground, certain factors from the familial and societal front and the economic constraints are being hypothesized to be possibly leading them to feeling poor and low about their health situation.

9.0 Bi-variate Association between Perceived Health Status and the Living and Financial Dimensions of Life:

Researchers have often been found to study the impact of economic independence and living arrangements on wellbeing and health status of the elderly. Previously, besides addressing the issue of living arrangement among the Indian elderly, the impact of economic independence on quality of life of the aged was also examined by Rajan and Kumar (2003), while the relationship between old age poverty, chronic ailments and lack of functional autonomy among elderly was studied by Alam (2009). Using the survey data - Ghosh and Husain (2010) examined the effect of economic independence and living arrangement on perceived health status among elderly and obtained that the tendency of possessing 'poor perception' about one's own health status is more frequent among the financially dependent aged members.

Observing the survey schedule (Schedule 25.0) of the 71st Round of NSS, it can be claimed that the individual perception of the elderly respondent regarding their current state of health are very much triggered by their health-cum-morbidity factors and are also largely associated with their state of economic wellbeing and socio-familial living arrangements. This section therefore discusses some of the key familial living, economic and health related correlates and their association with the self-perceived health among the elderly population.

9.1 Hypothesis 1: Self-perceived Health Status of the Elderly is associated with their Living Arrangements

Table 8	Rural				Urban			
Perceptions on Health Status	Living with Spouse only	Living with Spouse and Children	Living without Spouse but with Children	Others	Living with Spouse only	Living with Spouse and Children	Living without Spouse but with Children	Others
Excellent / Very Good	14.8%	54.9%	25.8%	4.5%	11.5%	57.9%	21.2%	9.4%
Good / Fair	15.6%	49.5%	27.9%	7.0%	16.2%	49.9%	28.3%	5.6%
Poor	13.5%	36.9%	42.4%	7.2%	12.0%	38.1%	42.9%	7.0%
Test Significance	p = 0.000 < 0.05				p = 0.000 < 0.05			

Source: Author's calculation from NSS unit level data of Round 71

Going on similar line of thought with Sen and Noon (2007) that living arrangements are quite crucial to the self-perceived health status of older persons in India, the NSS 71st Round survey data also shows that there is a significant association between the self-perceived health status and the familial living arrangement of the elderly people across the country, residing in either towns or in villages. Elderly residing with their spouse and children are found to have significantly higher percentage reporting of excellent health status compared with those who were residing without their spouse. In fact, the elderly residing without their spouse are increasingly tended to be in poor health status. The crucial finding is that the elderly in the urban or rural houses, staying with their spouses are reportedly in better health status while those staying without their spouse but with children only, may most likely be the widows, are largely in poor health status.

9.2 Hypothesis 2: Self-perceived Health Status of Elderly is associated with their Relation to Head of Family:

Table 9	Rural				Urban			
Perceptions on Health Status	Head is Self	Spouse of Head	Father/ Mother/ Father-in-law/ Mother-in-law	Others	Head is Self	Spouse of Head	Father/ Mother/ Father-in-law/ Mother-in-law	Others
Excellent / Very Good	6.8%	5.1%	4.8%	3.9%	11.1%	7.9%	4.9%	10.4%
Good / Fair	72.2%	77.4%	62.9%	60.9%	72.2%	74.5%	66.5%	61.0%
Poor	21.0%	17.5%	32.2%	35.2%	16.7%	17.6%	28.6%	28.6%
Test Significance	p = 0.000 < 0.05				p = 0.000 < 0.05			

Source: Author's calculation from NSS unit level data of Round 71

Here the elderly adult's perception on their own health status is being made to be associated with their position in the family as either being head or is being related to the head. The data establishes the fact that the older adults are more in fair state of health if either he/she is the head of the family or his/her spouse. The scenario does not vary for between the urban and rural residences. The perception on health status is not only the reflection of physical aspect, it reflects the mental state of health as well. So as long as the elderly people or their spouses are the head of the family, they are psychologically in better state of mind as they consider their position, value and dignity in the family being maintained with their self-esteem. On the other hand, the data shows that the older people, if found residing in families with others being the heads, eventually indicate a comparatively poorer health status.

9.3 Hypothesis 3: Self-perceived Health Status of Elderly is associated with their Economic Dependency:

Table 10	Rural			Urban		
Perceptions on Health Status	Elderly not dependent on others	Elderly Partially dependent on others	Elderly Fully dependent on others	Elderly not dependent on others	Elderly Partially dependent on others	Elderly Fully dependent on others
Excellent / Very Good	10.9%	5.6%	3.5%	14.8%	10.3%	5.0%
Good / Fair	75.2%	78.4%	65.1%	74.8%	70.2%	69.0%
Poor	13.9%	16.0%	31.4%	10.4%	19.5%	26.0%
Test Significance	$p = 0.000 < 0.05$			$p = 0.000 < 0.05$		

Source: Author's calculation from NSS unit level data of Round 71

The elderly members are categorised according to the extent of economic dependence and accordingly their reported perceptions are tabulated as in the above table to establish the association between the two categorical variables. It is being noticed that, “poor” perceived health status was significantly more likely to be reported by the fully dependent elderly than by their economically independent counterparts, irrespective of place of residence. And when the elderly are not dependent, more than 85% in rural areas and around 90% in urban areas have reported of being in ‘fair’ and ‘very good’ state of health. Economic conditions may be considered to be the elemental factor for determining the wellbeing of the elderly across any places as financial independence provides them the much-required social security and can almost outweigh all other determinants of living conditions and health status.

10.0 Concluding Remarks:

From the present study it may be argued that economic conditions in terms of financial autonomy and issues related to family and living arrangements appeared to be the crucial implicit factors for the elderly that can be associated when it comes to revealing their perceived health status. Researchers have mentioned about the presence of high proportion of ailing persons among the aged. For most of the chronic ailments, the treatment requires lengthy medical budgeting along with daily life expenses. All these raise the economic vulnerability of the ageing members which add to their mental stress and affect their psychological wellbeing and perceived health status. At this juncture of financial burden and increased economic dependencies, filial structure and living arrangements may seem to be an important source of security. On the contrary, lack of honour and respect in the family and isolation in living pattern may give rise to feeling excluded and a sense of dejection and humiliation may set in, leading to feeling of poor mental health status. The observations, made in this study, are in line with the facts that older people living in joint families with spouse and children get care and attention and can avoid being in isolation and thus are healthier. The quality of life in old-age, which the researchers often talk about, depends on individual autonomy and such can be attained through a balanced mix of physical, economic and psychological factors.

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