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A Statistical Exposition of the State of Empowerment at Older Ages in India

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Well-being is desired and drives all ages and all societies. Empowerment is a means to well-being. The issue of empowerment endures at older ages also. Addressing this issue is central as the Indian population continues to age. The present work examines the state of autonomy in financial matters namely, the management of owned assets and the management of owned property, as autonomy is a manifestation of empowerment. For this purpose, data sets from the 42nd and the 52nd round of the National Sample Survey have been made use of. The associations of states of financial autonomy with various socioeconomic factors are investigated using logit models. The results show that when controlled for various socioeconomic factors the older men are 2.78 times more likely than the older women to participate in the management of the owned property. They are also 3.09 times more likely than their female counterparts to participate in the management of owned assets. Older adults who are not employed, who are financially dependent, who have difficulty in mobility and who suffer from chronic diseases are less likely to be autonomous in managing their financial resources.

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Introduction

Human beings age since the time of inception and their chronological span is divided into different realms of childhood, youth, adulthood and older adulthood, in that order, on the basis of their age. The social roles expected out of an individual change accordingly while transcending from one realm to the next. Hence, each such realm is identified by the status one acquires and the corresponding role one has to perform; although depending on the cultural context the status and the corresponding roles may differ. Whatever may be the status of an individual all human beings strive to attain maximum well being. The sum of individuals passing through these realms constitutes the demographic space of a society. When the share of the older adults, in the demographic space of a society, shows an increasing trend over time, the population of the society is said to be ageing. This phenomenon has been a common feature among most of the countries, the world over in the latter half of the twentieth century and continues to be so till the present.

Indian population also shows a gradual ageing trend over the past century. Although there is no universally accepted cutoff age that distinguishes the older adults from the non-older adults, the national level surveys in India conducted by the National Sample Survey Organization consider persons aged sixty years and above as older adults. This definition is adhered to in the present study.

--/Fig.1 here/--

As mentioned earlier the status and roles of an individual change as the age proceeds. Moving into the realm of older adulthood most of the people find themselves to be either retired from active economic life or at the verge of retirement. The marital status too is at the risk of a change from married to widowed one. The social role and status also changes with younger generation occupying the roles that were once performed by the older adults. Further, physical mobility is at stake and vulnerabilities to chronic health conditions are also very common. Looking at these peculiar changes, detrimental to power in a sense, the question naturally arises regarding the capability of the older adults to make choices regarding the issues that matter them the most. This vulnerability cannot be overcome unless the older adults are powerful enough to make choices about the alternatives in deciding about these issues. Hence, the salience of power and empowerment at the older ages is self evident. Consequently the concerns about the well-being of this group are not unwarranted in the backdrop of the socioeconomic circumstances. Notwithstanding the vulnerability of this group vis-à-vis the well-being the gender differentials at older ages may prevail in social setups that are known for gender differentials at comparatively younger ages.

The reasons being firstly that the older women in traditional societies were never a part of the work force and secondly their social status has association with the marital status and having son (Vlassoff, 1990). Their continuous financial dependence during the life course shall be detrimental to their well-being at large. It is, therefore, imperative to assess, in quantitative terms, the extent to which these factors that are associated with inducing capacity within the older adults.

Kar *et al.* (1999) have identified four domains or aspects of life that affect overall quality of life of the powerless. These are basic human rights, equal rights for women, economic enhancement and health promotion and disease prevention. Citing from earlier works (Freire, 1973; Rappaport, 1987; Zimmerman *et al.*, 1992; Zimmerman, 1995 and Wallerstein *et a.*, 1994), the author has defined empowerment as a process through which individuals, communities and organizations gain control over issues and problems that concern them most. According to Kabeer (1999) the process of empowerment is about making choices. The concept incorporates three interrelated dimensions namely, agency, resources and achievements, defined as follows:

Choices: choice necessarily implies the possibility of alternatives, the ability to have chosen otherwise.

Power: the ability to make choices.

Resources/Pre-conditions: resources include not only material resources in the more conventional economic sense, but also various human and social resources which serve to enhance the ability to exercise choice.

Agency/Process: the ability to define one's goals and act upon them. Agency is more than about observable action; it also encompasses the meaning, motivation and purpose which individuals bring to their activity, their sense of agency, or "the power within".

Achievements are outcomes.

The studies conducted in south Asia address the state of status and autonomy of younger women considering a variety of indicators. In a study of women aged 15-59, Roy *et al.* (2004), citing from Jejeebhoy (1998), have considered decision-making, freedom of movement and access to money as direct indicators of autonomy. In the same study education, work participation, age and educational difference between husband and wife are included as indirect indicators of autonomy. Moreover, religion, caste, place of residence, economic status and family type are also included. Balk (1997), in a study of women aged between 15 and 56, identifies physical mobility and women's authority in household decision making as indicators of status of women. Though gender issues are well addressed in recent literature

(Bhattacharya, 2006; Devi, 1993; Gulati, 1993; Koenig *et al.*,1992; and Selveratnam, 1988) we lack quantitative studies of the issues of older adults in the empowerment perspective.

As explained earlier empowerment is a concept pertaining to a group or an individual depending on the context. In the latter case ones power should get reflected in his/her exercising agency. Making choices or independent decision making is akin to exercising agency. However, there needs to be sufficient grounds to exercise agency. For example, consider an aspect of well-being say financial condition. Property and /or assets can serve as a source of financial security at older ages. The question of exercising agency in respect of these resources arises only if one has these resources. In other words ones power can be ascertained or confirmed only if he/she is provided sufficient ground to exercise it and then he/she shall be deemed powerful if he/she is able to exercise agency. Thus, having financial resources provides a sufficient ground for exercising agency in financial matters. Therefore, the older adults who do not have sufficient *grounds* cannot be tested for being powerful.

Kabeer (1999) while discussing empowerment points out that “not everyone accepts that empowerment can be clearly defined, let alone measured.” Dixon (1998), while discussing empowerment of women says “it is undoubtedly premature, if not impossible, to develop a universally acceptable set of indicators that would be sensitive to variations in social contexts and meaning and yet, at the same time, be comparable across settings.” Likewise the “power within”, which is functionally manifested as exercising agency, is difficult to measure. Further, indicators for the “power within” can be many but may fall short of any universal acceptability. With these considerations and relying on the nationwide information that is available on this matter in the 42nd and the 52nd round of the National Sample Survey the present study proposes two indicators namely, management of the owned property and management of the owned assets. Both these variables are binary. There are, however, few cases where the older adults report managing the resources not owned by them. The present study does not include these cases. Given sufficient *grounds* it is imperative that the act of exercising agency is influenced by various socioeconomic and cultural characteristics of the older adult especially, the states of marital status, health, financial dependence and work status that are bound to change at older ages. Added to these are gender differentials that may prevail even at older ages. To test the association of these factors with the empowerment and the changes in these effects the following test hypotheses are formulated:

H_{01} : net of all effects, the states of marital status (currently married/widow) do not differ significantly pertaining to their effect on exercising agency.

H_{02} : net of all effects, the states of work status (in work force/not in work force) do not differ significantly pertaining to their effect on exercising agency.

H_{03} : net of all effects, the states of having/ not having a chronic disease do not differ significantly pertaining to their effect on exercising agency.

H_{04} : net of all effects, the states of immobility (severe/partial/no difficulty in mobility) do not differ significantly pertaining to their effect on exercising agency.

H_{05} : net of all effects, the states of financial dependence (dependent/partially dependent/not dependent) do not differ significantly pertaining to their effect on exercising agency.

H_{06} : net of all effects, the effects of gender (male/female) on exercising agency do not differ significantly.

H_{07} : all the effects mentioned above have not changed significantly over the two time periods considered (1986-87 and 1995-96).

Data

The information pertaining to the nature and dimensions of the socioeconomic problems of the older adults, in a country wide perspective, is available in the three sample surveys conducted by the National Sample Survey Organization (NSSO). These sample surveys were conducted during the periods July 1986 – June 1987, July 1995 - June 1996 and January 2004 – June 2004 as a part of the 42nd, 52nd and the 60th rounds of the NSS. The whole of Indian Union excepting the Ladakh, the Kargil and the Doda districts of the state of Jammu and Kashmir, interior villages of the state of Nagaland and inaccessible villages of Andaman and Nicobar Islands were covered by these surveys. The former two rounds included information on owing and participation in management of financial assets and owing and participation in management of property by the older adults.

The *participation in management of financial assets* is defined as” involvement in making decisions such as making or enchasing fixed deposits etc. in bank or post office, purchase or encashment of (National

Saving Certificates) N.S.C. / bonds/ shares, and generally deciding the change in portfolio of financial assets held by the household (conversion of one form of assets into another).” (N.S.S.O., 1998)

The 42nd round of the national sample survey covered 64993 households spread over a sample of 8312 villages and 4546 urban fame survey blocks (NSS Report No. 367). The sample consisted of 34081 older males and 21989 older females. The 52nd round of the national sample survey covered about 72983 households were surveyed spread over 7663 villages and 4991 urban blocks (N.S.S.O., 1989). The sample consisted of 14594 older males and 13949 older females.

As the household was the ultimate unit of selection in the multistage stratified sampling design that was adopted for the above mentioned surveys, all the older adults residing in the selected household were interviewed. Consequently, the statistical analyses that are based on the older adults as observation units fall short of the assumption of a random sample that is essential for the application of statistical techniques that assume independence of observations. Moreover, logical inconsistencies arise if an older adult couple responds affirmative to owning and managing a common property/financial asset. For example, two people (or more) responding affirmative to a case on the basis of common property/ financial assets contribute to the total frequency as 1 and 1 or 0.5 and 0.5 or any other combination summing to 1 has no basis to assign frequencies to them. Therefore, as a recourse, the present study, further draws a sample from the given sample such that one older adult is selected for each of the selected households while assigning equal probability of selection to each older adult in a household. For the sample thus obtained, each observation is weighted accordingly and all the analyses are carried out using the weighted observations.

Methods

As mentioned earlier marital status, employment, financial dependence, living arrangements and health are some of the factors whose states show transition at older ages. Added to this the gender differentials may prevail in the older adult population with respect to aspects of well-being. Further, education, household economic condition and place of residence may influence the agency among the older adults. These factors serve as controls as these do not directly represent the changes in socioeconomic profiles that occur at the older ages. Hence the following model may be utilized to assess the association of these factors with the agency.

agency = age + gender + marital status + employment + financial dependence + living arrangements + health(immobility and selected chronic diseases) + controls (education, household economic condition and place of residence)

The agency here is managing owned assets and managing owned property. These are binary variables with two states namely, managing and not managing. The states of categorical explanatory variables are shown in the Table-1. Logit model is utilised to model the associations of the explanatory variables with the agency. ® in Table – 1 denotes the reference category. The reference categories are so chosen so as to represent a state considered to represent greater well being. For example currently married in the case of marital status is a category of greater well being when compared to widowed. The states of the variables namely, gender, marital status, level of education, work participation, living arrangements, financial dependence, chronic diseases namely, chronic cough, piles, pain in joints, and place of residence are self-explanatory. The chronic diseases namely blood pressure, heart disease, urinary problems and diabetes require diagnosis for being detected, therefore, the response categories for these chronic diseases are having, not having and not known. “not having” serves as the reference category. Further, no inferences regarding the effect of the category “not known” can be meaningfully interpreted as the responses for this category may be a mix of those actually having the disease and those who do not have the disease. The household economic conditions are captured by income pentiles separately constructed for rural and urban areas. The fifth quintile serves as reference category as it contains households with highest income.

-/Table 1 here/-

The significance of the change in the effects for the logit regression model for the two reference periods is tested using large sample properties of the maximum likelihood estimates. The tests are bases on the standard normal distribution.

Findings

The 42nd round of the National Sample Survey and the profile of older adults by gender

The older males

The mean age of older males was 66.87 years. 93.3% older males were currently married and 5.9% were widowed. 54.3% reported being employed either as self-employed, wage/salary earner or as casual labor. 63.6% were illiterate and 5.2% reported having at least 10 years of school education. 49% were financially independent. Children were the source of support for majority (64.6%) of the financially dependent older adults. 55.29% of the older males owned financial assets and 75.55% of the older males who owned financial assets were able to manage their assets. Property was owned by 78.99% of the older males. Among them only 77.05% were able to manage the owned property. Participation in social matters, religious matters and daily household chores was reported by 79.82%, 83.53% and 79.28% of the older males respectively. The estimated prevalence rates (per 1000) of selected chronic diseases namely, chronic cough, piles, problem of joints and limbs, hypertension, heart disease, urinary problems and diabetes, among the older males was 229.41, 27.16, 299.27, 71.22, 36.91, 30.15 and 24.61 respectively. On an average there were 0.69 chronic diseases per older male. Immobility was also a problem with older males. 4.73% of the older males were immobile due to health reasons. 6.88% had restricted mobility due to similar reasons.

The older females

The mean age for older females was 66.84 years. Most of the older females (62.30) were widows whereas 36.92% were married. Only 10.69% of older women reported employed. Literacy rates among older women were low as 89.95% of older women were illiterate. Only 0.61% of older women had at least 10 years of school education. Children were a major source of support to majority (73.36) of the financially dependent older females followed by the spouse (11.98) as only 7.03% of the older females were financially independent. Financial assets were owned by 45.15% of the older women but only 32.80% of those who owned assets were managing their financial assets. A higher percentage (59.88%) of older women reported having property but only 35.13% of those who owned property were involved in managing it. Participation in social matters, religious matters and daily household chores was reports by 65.38%, 73.41% and 68.83% of the older females respectively. The estimated prevalence rates (per 1000) of selected chronic diseases namely, chronic cough, piles, problem of joints and limbs, hypertension, heart disease, urinary problems and diabetes, among the older females was 207.68, 16.79, 340.46, 76.72, 35.75, 18.41 and 15.64 respectively.

The 52nd round of the National Sample Survey and the profile of older adults by gender

The older males

The mean age of the older males was found to be 67.73 years. 80.69% of older males reported to be currently married and 18.43% of the older males reported to be widowed. 54.45% of the older males were illiterate. Only 9.88% of the older adults had 10 years or more of school education. 55.06% of the older adults were either self employed or wage/salary earners. 50.26% of the older males were financially independent. Those who were not financially independent were mostly (79.58%) supported by their children followed by spouse (10.74%). 70.78% of the older males owned financial assets. Among those who owned financial assets 81.87% reported that they were participating in the management of financial assets. 80.59% of the older males had property. Among those who had property, 80.78% were involved in its management. The participation rate of older males in social matters, religious matters and daily household chores was found to be high with 82.75%, 85.89% and 79.64% of the older males reporting respective participations. On the health front physical immobility was reported by 1.66% of the older males. Another 7.67% of the older males were in a slightly better situation as they could move but to a limited extent. A majority of the physically immobile older males (72.9%) were taken care of by a household member. The prevalence rates (per 1000 person years) for the impairments, namely, visual, hearing, speech, locomotor and senile dementia are respectively 246.26, 134.09, 31.59, 96.45 and 91.08 respectively. The estimated prevalence rates for selected chronic diseases, namely, chronic cough, piles, problems of joints and limb, hypertension, heart disease, urinary problems and cancer are respectively 236.01, 32.85, 350.97, 141.07, 44.42, 42.78, 52.11 and 1.98. 72.98% of the older males rated their health as good/fair. The scale used for self-reported health was a four point scale having categories as excellent, very good, good/fair and poor. On a five point scale of relative health (with reference to the previous year) consisting of categories namely, much better, somewhat better, nearly the same, somewhat worse and worse, 68.31% of the older males reported their relative health to be nearly the same and 20.81% reported their relative health to be worse.

The older females

The mean age of the older females was 67 years. The percentage of currently married and widowed older females was found to be 41.65% and 57.55% respectively. Only 13.68% of the older females ever visited a school. The percentage of older females who had at least ten years of schooling was 1.64%. 43.40% of the older females reported that they were engaged in domestic duties. The percentage of older women who were employed in some capacity or other was only 14.40%. Most of the older females were financially dependent on others. The extent of financial dependence was such that 74.25% reported being fully dependent on others and 13.57% reported being partially dependent on others. The dependent older

women received financial support mostly from their children (73.38%) whereas 16.74% were supported by their husbands. 39.02% of the older females owned financial assets. However, only 45.09% of the older females who owned financial assets were involved in managing their assets. A bit higher percentage of the older females owned property (45.37%). Among those who owned property only 44.94% were involved in managing it. Participation in social matters, religious matters and daily household chores was reported respectively by 69.89%, 79.28% and 78.28% of the older adults. Though the instances of physical immobility on health grounds were reported by only 1.77% of the older females, 9.21% of the older females had their mobility restricted for health reasons. These older women relied mostly (78.07%) on some household member to support them. The estimated prevalence rates (per thousand) for selected impairments namely, visual, hearing, speech, locomotor and senile dementia are respectively 288.02, 154.4, 34.91, 114.04 and 105.71 respectively. The prevalence rates for selected chronic diseases among the older females namely chronic cough, piles, problem of joints, hypertension, heart disease, urinary problems, diabetes and cancer are respectively 189.60, 17.07, 418.60, 156.33, 34.80, 22.87, 38.83 and 3.51 respectively. On a four point scale of excellent, very good, good/fair and poor 71.66% of the older females reported their health to be good/fair and 20.43% of the older females reported their health to be poor. Regarding the state of relative health (when compared to previous year) about 66.54% of the older females reported it to be nearly the same, 23.29% reported it to be somewhat worse and 4.19% reported it to be worse.

In what follows, inferences based on the logit regression model are presented for the later time period (1994 - 95) along with a comparison with the former time period (1986-87). Any change in the covariance structure is reflected in the change in the regression parameters over the two time points (Table 2 and Table 3).

Marital status and exercising agency

Exercising agency in case of owned property differs by marital status. The widowed older adults are 0.85 times less likely to exercise agency when compared to their currently married counterparts. However, the effect has significantly increased when compared to the earlier time period. Consequently the odds ratio has increased from 0.74 to 0.86.

Owned property is also 0.86 times less likely to be managed by the widowed older adults when compared to their married counterparts but the effect of being widow on this aspect of autonomy has increased over the years.

-/Table 2 here/-

-/Table 3 here/-

Employment and exercising agency

Consider the case of management of owned property. The odds for exercising agency are 0.32 times lesser for the unemployed older adults when compared to their employed counterparts. However, this effect has significantly decreased when compared to the earlier time period. This indicates that there is a relative decrease in the odds in favour of managing assets for the older adults who are not employed.

Unemployed older adults also have 0.27 times lesser odds (when compared to their employed counterparts) for exercising agency in case of management of owned property. During the earlier time period this figure was 0.42 that had significantly fallen to 0.27.

Health and exercising agency: the effect of difficulty in mobility

The older adults who have partial and severe kind of difficulty in mobility have lesser odds in favour of exercising agency when compared to their healthy counterparts (who do not have any difficulty in mobility). The odds are 0.52 and 0.19 times lesser respectively. Even the odds in favour of exercising agency have changed over the two reference periods. For partially as well as severely immobile older adults the odds ratios have decreased from 0.92 to 0.52 and 0.51 to 0.19 respectively.

Looking at the case of exercising agency for owned property the state of older adults seems to be similar. When compared to the older adults with no difficulty in mobility, the partially and severely immobile older adults have respectively 0.46 times and 0.22 times lesser odds in favour of exercising agency. For the two states the odds ratios show a significant decline from 0.76 to 0.46 and 0.50 to 0.22 respectively when compared to the earlier time period.

Health and exercising agency: the effect of selected chronic diseases

Among the selected chronic diseases, namely, chronic cough, piles, problem of joints, hypertension, heart disease, urinary problems and diabetes only chronic cough and pain in joints and limbs are found to affect

the exercise of agency by the older adults. The odds in favor of exercising agency are reduced by 0.76 times and 0.83 times for the older adults who suffer from chronic cough and pain in joints and limbs respectively when compared to the older adults who are free from these ailments. For the two chronic diseases the odds ratios show a significant decline from 1.19 to 0.76 and 0.95 to 0.83 respectively.

The exercise of agency in the management of owned property is affected by two among the selected chronic diseases namely chronic cough and pain in joints and limbs. The odds in favour of exercising agency are reduced by 0.81 times and 0.89 times respectively for those older adults who report these diseases. Further for chronic cough there is a significant reduction in odds ratio from 1.12 to 0.81 when compared to the earlier reference period.

Gender and autonomy

Older males are more likely to exercise agency in respect of managing owned property and owned financial assets than older females. The odds in favour of exercising agency are higher for males by 3.09 times and 2.78 times respectively. Further when compared to the earlier period the odds ratios have increased from 2.00 to 2.28 in case of management of property. The wide gender differentials may arise because women may not be willing to exercise agency due to cultural norms.

Financial dependence and exercising agency

The older adults who are partially dependent or completely dependent on others are less likely to exercise agency in the management of owned assets. The odds in favour of exercising agency are lowered by 0.37 times and 0.17 times respectively. However, the odds ratios for the two cases show a significant increase from 0.24 to 0.37 and 0.12 to 0.17 respectively.

Exercising agency for owned property is also affected by financial dependence. Partially dependent and dependent older adults have lesser odds in favour of exercising agency when compared to the older adults who are not financially dependent on others. The odds are reduced by 0.40 times and 0.18 times in these cases respectively. The odds ratios for the above cases have increased from 0.25 to 0.40 and 0.13 to 0.18 respectively in both the cases.

Discussion

The capacity to execute agency is significantly associated with marital status, indicators of health, employment and financial dependence of the older adults. Further, gender differentials also prevail in exercising agency. The states of the above mentioned factors namely, widowhood, having chronic ailments, not being employed and partial or complete financial dependence are associated with the lack of agency among the older adults. If these states predominate the older adulthood, it is not wrong to encapsulate the period of older adulthood as a period of lack of agency eventually leading to disempowerment; a process that is the reverse of the process of empowerment discussed earlier. Never the less, the effects of these factors vary with time. This reflects the varying salience of socioeconomic factors with time in respect of empowerment. In this context it is quite plausible that in a given social setup certain factors lose their importance and new factors appear as important factors over time. To sum up all these changes that accompany older adulthood are irreversible and therefore do not lend themselves to any rectifiable policy measures. A deeper insight into the process of disempowerment demands knowledge of the pathways to disempowerment.

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Table 1: The categorical explanatory variables

Variables	Variables
<i>gender</i>	<i>living arrangements</i>
male	alone
female®	Co-residence®
<i>marital status</i>	<i>financial dependence</i>
never married / divorced / separated	dependent
widowed	Partially dependent
currently married®	not dependent®
<i>level of education</i>	<i>difficulty in mobility</i>
Illiterate	severe
less than ten years of schooling	partial
ten or more years of education®	no difficulty®
<i>employment</i>	chronic cough: having
not employed	chronic cough: not having®
employed®	
piles: having	pain in joints: having
piles: not having®	pain in joints: not having®
blood pressure: having	urinary problems: having
blood pressure: not known	urinary problems: not known
blood pressure: not having®	urinary problems: not having®
heart disease: having	diabetes: having
heart disease: not known	diabetes: not known
heart disease: not having®	diabetes: not having®
<i>household economic condition</i>	<i>place of residence</i>
first quintile	rural
second quintile	urban®
third quintile	
fourth quintile	
fifth quintile®	

Table 2: Parameter estimates for logit regression for exercising agency in case of management of owned assets

Variables	1986-87			1995-96			Change
	effect (b) (p-value)	e ^b	95% C.I. for e ^b	effect (b) (p-value)	e ^b	95% C.I. for e ^b	
Intercept	4.22(0.00)			6.18(0.00)			1.96(1.00) ↑
age	-0.03(0.00)	0.97	(0.97, 0.98)	-0.05(0.00)	0.95	(0.94,0.96)	-0.02(0.00) ↓
<i>gender</i>							
male	0.69(0.00)	2.00	(1.82, 2.19)	1.13(0.00)	3.09	(2.73, 3.48)	0.43(1.00) ↑
female®							
<i>marital status</i>							
never married / divorced / separated	-0.55(0.02)	0.58	(0.36, 0.93)	0.29(0.36)	1.34	(0.72, 2.48)	0.84(0.02) ↑
widowed	-0.30(0.00)	0.74	(0.67, 0.83)	-0.08(0.16)	0.92	(0.83, 1.03)	0.22(0.00) ↑
currently married®							
<i>level of education</i>							
Illiterate	-0.38(0.00)	0.68	(0.56, 0.84)	-0.23(0.06)	0.79	(0.62,1.01)	0.15(0.82) ×
less than ten years of schooling	-0.28(0.01)	0.76	(0.62, 0.93)	-0.16(0.19)	0.85	(0.67, 1.08)	0.12(0.77) ×
ten or more years of education®							
<i>employment</i>							
not employed	-0.84(0.00)	0.43	(0.39, 0.48)	-1.14(0.00)	0.32	(0.28, 0.37)	-0.30(0.00) ↓
employed®							
<i>financial dependence</i>							
dependent	-2.10(0.00)	0.12	(0.11, 0.14)	-1.80(0.00)	0.17	(0.14, 0.19)	0.30(1.00) ↑
Partially dependent	-1.45(0.00)	0.24	(0.21, 0.26)	-0.99(0.00)	0.37	(0.32, 0.43)	0.45(1.00) ↑
not dependent®							
<i>living arrangements</i>							
alone	0.12(0.01)	1.13	(1.04, 1.23)	0.46(0.00)	1.58	(1.35, 1.85)	0.34(1.00) ↑
Co-residence®							
<i>difficulty in mobility</i>							
severe	-0.68(0.00)	0.51	(0.43, 0.59)	-1.68(0.00)	0.19	(0.12, 0.30)	-0.99(1.00) ↓
partial	-0.09(0.23)	0.92	(0.80, 1.06)	-0.65(0.00)	0.52	(0.43, 0.64)	-0.56(1.00) ↓
no difficulty®							
<i>selected chronic diseases</i>							
chronic cough: having	0.17(0.00)	1.19	(1.09, 1.30)	-0.28(0.00)	0.76	(0.67, 0.85)	-0.45(0.00) ↓
chronic cough: not having®							
piles: having	-0.13(0.25)	0.88	(0.70, 1.10)	0.09(0.59)	1.09	(0.79, 1.50)	0.22(0.87) ×
piles: not having®							
pain in joints: having	-0.06(0.18)	0.95	(0.87, 1.03)	-0.19(0.00)	0.83	(0.75, 0.92)	-0.13(0.02) ↓
pain in joints: not having®							
heart disease: having	0.36(0.00)	1.43	(1.15, 1.78)	-0.03(0.84)	0.97	(0.71, 1.32)	-0.39(0.02) ↓
heart disease: not known	0.04(0.64)	1.04	(0.89, 1.22)	0.07(0.48)	1.07	(0.89, 1.29)	-0.03(0.60) ×
heart disease: not having®							
diabetes: having	-0.42(0.00)	0.66	(0.51, 0.85)	-0.05(0.75)	0.95	(0.71, 1.28)	0.38(0.97) ↓
diabetes: not known	-0.12(0.08)	0.89	(0.78,1.01)	-0.13(0.14)	0.88	(0.74, 1.04)	-0.01(0.47) ×
diabetes: not having®							
blood pressure: having	-0.35(0.00)	0.70	(0.60,0.82)	0.14(0.16)	1.15	(0.95, 1.39)	0.49(1.00) ↑
blood pressure: not known	-0.13(0.10)	0.88	(0.76,1.03)	-0.10(0.23)	0.91	(0.77, 1.06)	0.03(0.60) ×
blood pressure: not having®							
urinary problems: having	-0.17(0.11)	0.84	(0.68, 1.04)	-0.22(0.16)	0.80	(0.59, 1.09)	-0.05(0.40) ×

urinary problems: not known				0.26(0.00)	1.30	(1.09, 1.54)	
urinary problems: not having®							
<i>household economic condition</i>							
first quintile	-0.06(0.32)	0.94	(0.83,1.06)	-0.48(0.00)	0.62	(0.52, 0.73)	-0.42(0.00)↓
second quintile	0.17(0.00)	1.19	(1.06,1.33)	-0.40(0.00)	0.67	(0.57, 0.79)	-0.57(0.00)↓
third quintile	0.15(0.04)	1.16	(1.01,1.33)	-0.36(0.00)	0.69	(0.59, 0.81)	-0.51(0.00)↓
fourth quintile	0.16(0.01)	1.17	(1.05, 1.31)	0.04(0.64)	1.04	(0.88, 1.22)	-0.12(0.12) ×
fifth quintile®							
<i>place of residence</i>							
rural	-0.05(0.32)	0.95	(0.86,1.05)	-0.23(0.00)	0.79	(0.69,0.91)	-0.18(0.02)↑
urban®							

note: the p-value indicative of the test of the hypothesis that the effect is zero against the alternative that the effect is not zero.

®denotes the reference category

↑ indicates that the respective effect has significantly increased.

↓ indicates that the respective effect has significantly decreased.

× indicates that the respective effect has not changed significantly.

The level of significance is fixed at 0.05.

Table 3: Parameter estimates for logit regression for exercising agency in case of management of owned property

Variables	1986-87			1995-96			Change
	effect (b) (p-value)	e ^b	95% C.I. for e ^b	effect (b) (p-value)	e ^b	95% C.I. for e ^b	
Intercept	3.91(0.00)			6.17(0.00)			2.25(1.00) ↑
age	-0.02(0.00)	0.98	(0.97, 0.98)	-0.05(0.00)	0.95	(0.95, 0.96)	-0.02(0.00) ↓
<i>gender</i>							
male	0.80(0.00)	2.22	(2.05, 2.40)	1.02(0.00)	2.78	(2.48, 3.11)	0.23(1.00) ↑
female®							
<i>marital status</i>							
never married / divorced / separated	-0.24(0.22)	0.79	(0.54, 1.16)	-0.02(0.95)	0.98	(0.58, 1.67)	0.22(0.75) ×
widowed	-0.30(0.00)	0.74	(0.68, 0.81)	-0.15(0.00)	0.86	(0.77, 0.95)	0.15(0.98) ↑
currently married®							
<i>level of education</i>							
Illiterate	-0.03(0.77)	0.97	(0.81, 1.17)	-0.34(0.00)	0.71	(0.56, 0.90)	-0.32(0.02) ↓
less than ten years of schooling	0.01(0.94)	1.01	(0.84, 1.21)	-0.31(0.01)	0.73	(0.58, 0.92)	-0.32(0.02) ↓
ten or more years of education®							
<i>employment</i>							
not employed	-0.87(0.00)	0.42	(0.38, 0.46)	-1.32(0.00)	0.27	(0.213, 0.30)	-0.46(0.00) ↓
employed®							
<i>financial dependence</i>							
dependent	-2.03(0.00)	0.13	(0.12, 0.14)	-1.69(0.00)	0.18	(0.16, 0.21)	0.34(1.00) ↑
Partially dependent	-1.37(0.00)	0.25	(0.23, 0.28)	-0.91(0.00)	0.40	(0.35, 0.46)	0.46(1.00) ↑
not dependent®							
<i>living arrangements</i>							
alone	0.14(0.00)	0.16	(1.08, 1.24)	0.35(0.00)	1.41	(1.22, 1.63)	0.20(0.99) ↑
Co-residence®							
<i>difficulty in mobility</i>							
severe	-0.69(0.00)	0.50	(0.44, 0.57)	-1.51(0.00)	0.22	(0.14, 0.33)	-0.83(0.00) ↓
partial	-0.27(0.00)	0.76	(0.68, 0.85)	-0.77(0.00)	0.46	(0.38, 0.55)	-0.50(0.00) ↓
no difficulty®							
<i>selected chronic diseases</i>							
chronic cough: having	0.11(0.00)	1.12	(1.04, 1.21)	-0.21(0.00)	0.81	(0.72, 0.91)	-0.33(0.00) ↓
chronic cough: not having®							
piles: having	-0.02(0.79)	0.98	(0.81, 1.17)	-0.14(0.35)	0.87	(0.64, 1.17)	-0.12(0.25) ×
piles: not having®							
pain in joints: having	-0.07(0.04)	0.93	(0.87, 1.00)	-0.11(0.02)	0.89	(0.81, 0.98)	-0.05(0.22) ×
pain in joints: not having®							
heart disease: having	0.28(0.00)	1.32	(1.11, 1.57)	-0.02(0.92)	0.98	(0.74, 1.31)	-0.29(0.04) ↓
heart disease: not known	0.04(0.51)	1.05	(0.92, 1.19)	-0.03(0.72)	0.97	(0.82, 1.15)	-0.08(0.25) ×
heart disease: not having®							
diabetes: having	-0.25(0.03)	0.78	(0.63, 0.97)	-0.03(0.83)	0.97	(0.74, 1.27)	0.22(0.89) ×
diabetes: not known	-0.21(0.00)	0.81	(0.73, 0.91)	-0.17(0.04)	0.85	(0.72, 0.99)	0.04(0.66) ×
diabetes: not having®							
blood pressure: having	-0.30(0.00)	0.74	(0.65, 0.84))	0.02(0.79)	1.02	(0.86, 1.22)	0.32(1.00) ↑
blood pressure: not known	-0.07(0.30)	0.94	(0.82, 1.06)	-0.04(0.56)	0.96	(0.82, 1.11)	0.02(0.59) ×
blood pressure: not having®							
urinary problems: having	-0.18(0.05)	0.84	(0.70, 1.00)	-0.21(0.15)	0.81	(0.61, 1.08)	-0.04(0.42) ↓
urinary problems: not known				0.32(0.00)	1.38	(1.18, 1.62)	
urinary problems: not having®							

<i>household economic condition</i>							
first quintile	-0.09(0.07)	0.91	(0.82,1.01)	-0.55(0.00)	0.58	(0.49,0.68)	-0.45(0.00)↓
second quintile	0.05(0.27)	1.05	(0.96,1.06)	-0.50(0.00)	0.61	(0.52,0.71)	-0.55(0.00)↓
third quintile	-0.01(0.90)	0.99	(0.88,1.11)	-0.35(0.00)	0.71	(0.61,0.82)	-0.34(0.00)↓
fourth quintile	0.01(0.76)	1.01	(0.92,1.12)	-0.05(0.55)	0.96	(0.82,1.11)	-0.06(0.25)×
fifth quintile®							
<i>place of residence</i>							
rural	-0.15(0.00)	0.86	(0.79,0.93)	-0.27(0.00)	0.76	(0.67,0.87)	-0.12(0.06)×
urban®							

note: the p-value indicative of the test of the hypothesis that the effect is zero against the alternative that the effect is not zero.

®denotes the reference category

↑ indicates that the respective effect has significantly increased.

↓ indicates that the respective effect has significantly decreased.

× indicates that the respective effect has not changed significantly.

The level of significance is fixed at 0.05.

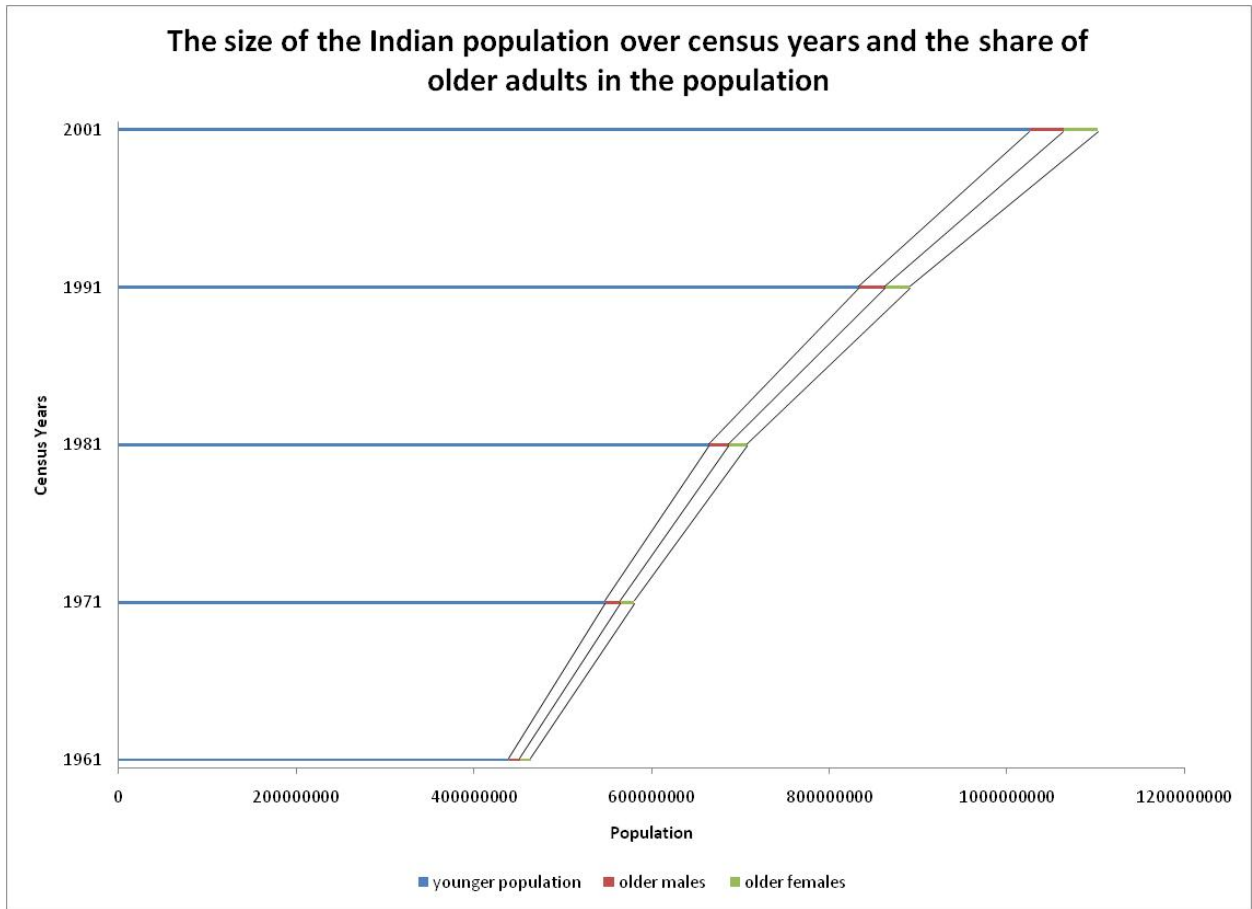


Figure 1