Living Arrangements and Chronic Morbidity Among Older Adults in India: Evidence from a Large-scale Survey

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Abstract

This study examines the association between living arrangements and the prevalence of chronic morbidity (having ≥2 chronic conditions) among older adults in India. It has used the data of 9,852 persons aged 60 years and above from the survey of Building Knowledge Base on Population Aging in India (BKPAI) conducted in 2011. Bivariate and binary logistic regression analyses were employed to investigate the influence of confounding factors on morbidity. Regression models demonstrated that older adults living with children/others are more likely to suffer from chronic morbidity than those who are living alone. Chronic morbidity was the highest among 80 years and above age group (77.9%) than the other two age groups of 60-69 (57.6%) and 70-79 (66.3%) years. There is a strong association between increased morbidity and living arrangements of older adults. The high prevalence of morbidity observed among older adults living with children/others suggests that programmes and policies should also be oriented towards the living arrangements of older adults while framing the public health support system in India.

Keywords: Living arrangements, chronic morbidity, older adults, public health, ageing.

I. Introduction

With the increasing number of older adults, the need for their social support and care, particularly physical, psychological, economic and emotional support also increases proportionally (Burke et al. 2012; Janssen et al. 2011). Traditionally, Indian older people are cared for and supported by their children and grandchildren in the form of co-residence. However, the current demographic shift has a profound bearing on the family structure and care of older adults (Krishnaswamy et al., 2008; Rajan & Kumar 2003). An empirical study based on Building Knowledge Base on Population Ageing in India (BKPAI 2011) reported that about 80 per cent of older adults co-reside with their spouses and children (Alam et al., 2012). Given the fact that a majority of older adults are illiterate and poor, they are dependent on their families, particularly on their sons, for economic and material support (Siva Raju, 2011). Though a majority of them prefer to live with their sons, some of them prefer to live with their spouses or relatives or alone (Subaiya & Bansod, 2011).

As the population gets aged, the prevalence of chronic morbidity becomes more prominent and common (Walker, 2007; Salisbury et al., 2011; Barnett et al., 2012; Guo et al., 2015). Moreover, the social surroundings including the living arrangements of older adults have a significant influence on their health and wellbeing (Greenfield & Russell, 2011; Yen et al., 2012). Several studies have established that there is a strong association between living arrangements including intergenerational relations and older adults' health (Gray, 2007; Russell, 2007; Ng et al., 2004; Tsutsui et al., 2014; Vera-Sanso, 2004). Studies in western societies have confirmed the direct and indirect impact of living arrangements on the health of older people (Chen & Short, 2008; Michael et al., 2001; Sarwari et al., 1998). Previous research has also established that older adults living with spouses/family members reported fewer health issues like mental depression and loneliness than those living alone (Greenfield & Russell, 2011; Russell & Taylor, 2009; Takahashi et al., 2020). Other studies on the prevalence of multi-morbidity were conducted in Europe (Uijen & Lisdonk, 2008; Schram et al., 2008; Marengoni et al., 2008), the Middle-east (Fuchs et al., 1998), Australia (Britt et al., 2008), the

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United States (Verbrugge et al., 1989; Wolff et al., 2002; Guralnik, 1996; Hoffman et al., 1996), Canada (Daveluy, 2000; Rapoport et al., 2004; Fortin et al., 2005) and Sweden (Marengoni et al., 2011) have also demonstrated the influence of living arrangements on chronic diseases and multi-morbidity. However, limited studies on chronic morbidity have been conducted in developing countries.

Although a number of studies (see Agarwal, 2012; Rajan & Kumar, 2003; Rajan, 2006; Sathyanarayana et al., 2012) on trends and changes in living arrangements have been conducted in India, a systematic analysis of living arrangements and chronic morbidity is still lacking. While a growing number of studies have focused on the association between family structure, social networks and wellbeing (Berkman et al., 2012, Samanta, 2014; Sudha et al., 2006). This limited investigation of living arrangements and chronic morbidity is due to the inadequate availability of population-based representative demographic data (Agrawal, 2012). In this context, the present study has been drawn on a population-based cohort of older adults in India to fill this gap. It also differs from previous studies in terms of its analysis of chronic morbidity of different age-groups among older adults.

II. Materials and methods

Data

The study has used the large-scale survey data of Building Knowledge Base on Population Aging in India (BKPAI) collected by the Institute for Social and Economic Change (ISEC), Bangalore; Institute for Economic Growth (IEG), New Delhi and Tata Institute of Social Sciences (TISS), Mumbai with the sponsorship of the United Nations Population Fund (UNFPA), India in 2011. A sample of 9852 older adults from 8329 households from rural and urban areas was selected. The survey was conducted in seven states - Kerala, Tamil Nadu, Maharashtra, Himachal Pradesh, Punjab, Odisha and West Bengal - which account for a higher proportion of 60+ population than the national average. A two-stage probability sampling was adopted. A sample of 1280 households was selected from each state irrespective of proportion, and the households were equally divided into rural-urban categories. First, the villages were classified into different strata based on population size and then primary sampling units (PSUs) were selected by using probability proportional to population size (PPS) technique. Thus, 80 PSUs (40 urban and an equal number of rural) and 16 households having older adults per PSU have been covered.

BKPAI used two sets of questionnaires: (i) a household questionnaire providing demographic and socio-economic details; and (ii) an individual questionnaire eliciting information on work history and benefit, income and assets, living arrangement, social activities, the health status of older adults and social security (UNFPA 2013).

Description of variables

Control variables

Age-group and living arrangement were considered as control variables. The age group was categorised as 60-69, 70-79 and 80+ years old. Chronic morbidity was categorised as 0 and 1: 0 which presents no chronic morbidity in the study population, whereas 1 presents the population having chronic morbidity.

Dependent variables

Chronic morbidity was taken as the dependent variable. Diseases such as high blood pressure, diarrhoea, asthma, sugar/diabetes; gastric, malaria, arthritis, headache, leg problems and others (body pain, cataract, typhoid, ulcer etc.) have been taken into consideration for chronic morbidity. Here we

have taken only those respondents who had suffered from any morbidity which may include multi-morbidity as well. Multi-morbidity refers to the existence of two or more chronic diseases.

Independent variables

The following were considered as independent variables: living arrangements, age group (60-69, 70-79 and 80+ years), place of residence (rural, urban), sex (male, female), religion (Hindu, Muslim, others), caste (SCs/STs, OBCs, others), level of education (illiterate, primary, secondary, high school and more), marital status (currently single including widowed, divorced, never married and separated; and currently married/living together), financial support (no, partial support and full support), work participation (no, 3-6 months, more than 6 months), and wealth index of household (poor, middle and rich). The wealth index has been calculated by using data on possession of certain belongings, such as televisions and bicycles; house construction materials; and types of water access and sanitation facilities.

Statistical analysis

The bivariate analysis was applied to see the prevalence of chronic morbidity in the study population according to selected socio-demographic characteristics. Binary logistic regression was also employed to understand the confounding factors of chronic morbidity. Out of 9,852 older adults in the sample population, 6,356 were detected as having chronic morbidity. Non-communicable diseases (NCDs), including mental health, have been covered in the chronic morbidities. The results of binary logistic regression have been presented in the form of odds ratio (OR) with 95 per cent confidence intervals (95% C.I). The whole analysis was done by using the SPSS 20.0 version.

III. Results

The results in Table 1 demonstrate that the prevalence of chronic morbidity is higher among older adults living with children/others (64.8 per cent) than older adults living alone (60.9 per cent). The findings also indicate that the prevalence of chronic morbidity becomes progressively more common with increasing age irrespective of their living arrangements: 55.8 per cent among 60-69, 66.5 per cent among 70-79, and 76.7 per cent among 80+ older adults living alone, whereas this rate increases from 59.4 per cent among 60-69 to 72.2 per cent among 70-79 to 79.1 per cent among 80+ older adults living with children/others. Another significant finding is that chronic morbidity is higher among women (67.2 per cent) than men (61.5 per cent). Older adults with a high school education or more are less likely to suffer from chronic morbidities (61.0 per cent) than those with primary or no education (68.5 per cent). Prevalence is also higher (69.1 per cent) among older adults who belong to the rich wealth group than those older adults who belong to the poorer category (59.6 per cent). Older adults with full economic support are less (56.6 per cent) likely to suffer from chronic morbidities than those with no economic support (74.4 per cent). Prevalence is also somewhat lower (51.1 per cent) among older adults who are still involved in work participation for at least 3-6 months than those who are not involved in work (67.2 per cent).

While looking from the living arrangements perspective, the prevalence of chronic morbidity is higher among older women (68.0 per cent) living with children/others than those women living alone (59.4 per cent). Table 2 also shows that morbidity is more prevalent among oldest-old (80+ age group) living with family members/others (79.1 per cent) than young-old (60-69 age group) living alone (55.8 per cent). Older adults, who are living alone, with a higher level of education, have reported less morbidity (57.6 per cent) than those with primary or no education (64.9 per cent), whereas there is no significant difference in morbidity prevalence among educated and non-educated older adults living with children/others. The prevalence of morbidity is higher among older adults who are living alone and are still participating in work (70.3 per cent) than those who are not involved in any work (58.6 per cent). But the situation is reversed with the older adults living with family members/others and still involved in work. They have experienced a noticeably lower (49.2 per cent) prevalence of chronic morbidity than the older adults who are not involved in work (67.7 per cent).

By religion, the older adults belonging to Hindu religion have reported lower prevalence of chronic morbidity (61.4 per cent) than the older adults belonging to Muslim (74.9 per cent) and other religions (77.0 per cent) in both the living arrangements. The prevalence of chronic morbidity is also higher among older adults who have no or partial economic support than those who have sufficient economic support.

Table 1. Distribution of chronic morbidity among elderly (≥60 years old) by age-group and selected background characteristics (N=6356)

Background characteristics	60-69		70-79		80+		Total	
	N	%	N	%	N	%	N	%
Sex								
Male	1655	55.7	861	69.3	359	78.2	2875	61.5
Female	2035	62.3	1006	74.1	440	79.6	3481	67.2
Marital status								
Currently single*	1254	61.1	895	73.1	552	80.2	2701	68.1
Currently married/living together	2436	58.2	972	70.6	247	76.2	3655	62.1
Living arrangements								
Living alone	208	55.8	119	66.5	46	76.7	373	60.9
Living with children/others	3482	59.4	1748	72.2	753	79.1	5983	64.8
Religion								
Hindu	2756	55.9	1428	69.0	595	76.3	4779	61.4
Muslim	372	69.3	160	84.2	70	90.9	602	74.9
Others	562	72.9	279	82.1	134	86.5	975	77.0
Caste								
SC/ST	887	57.2	398	66.6	178	75.7	1463	61.4
OBC	1187	53.8	594	70.9	241	78.5	2022	60.3
Others	1616	65.1	875	75.2	380	80.9	2871	69.8
Education								
Illiterate	1558	60.5	979	70.3	494	79.7	3031	66.1
Primary	484	63.3	251	74.7	127	80.9	862	68.5
Secondary	866	57.2	348	72.7	109	75.7	1323	61.9
High school and more	782	56.5	289	73.5	69	75.8	1140	61.0
Work participation								
No	2703	61.3	1629	73.3	764	80.2	5096	67.2
More than 6 months	827	55.2	191	63.5	29	61.7	1047	56.7
3-6 months	160	48.6	47	61.8	6	50.0	213	51.1
Household wealth index								
Poor	1381	55.3	684	64.8	277	73.7	2342	59.6
Middle	752	59.1	358	73.8	152	84.4	1262	65.1
Rich	1555	63.2	825	77.8	370	81.1	2750	69.1
Sufficient economic support								
Full support	858	50.6	415	67.4	136	76.4	1409	56.6
Partial support	976	63.9	476	73.1	194	76.7	1646	67.7
No	272	70.5	148	76.3	70	88.6	490	74.4
Own source of income								
Yes	1579	60.2	826	72.6	399	79.5	2804	65.8
No	2111	58.4	1041	71.2	400	78.4	3552	63.6

*Including widowed, divorced, never married and separated/deserted.

Chronic morbidity among older adults of different age-groups

The binary logistic regression analysis (Table 3) indicates that chronic morbidity is higher among urban older adults [OR (95% CI) 1.27 (1.096-1.482)] in the 60-69 age-group than rural older adults. Surprisingly, the odds ratio shows that the prevalence of chronic morbidity is lower among older women compared with their counterparts across the age groups: among 60-69 [OR (95% CI) .721 (.593-.876)], among 70-79 [OR (95% CI) .713 (.508-1.002)], among 80+ [OR (95% CI) .713 (.508-1.002)]. The study also shows that Muslims have lower chronic morbidity in all age-groups:

Table 2. Prevalence of chronic morbidity among elderly by selected background characteristics (N=6356)

Background characteristics	Living alone		Living with family members		Total	
	N	%	N	%	N	%
Sex						
Male	79	67.5	2796	61.4	2875	61.5
Female	294	59.4	3187	68	3481	67.2
Age group (years)						
60-69	208	55.8	3482	59.4	3690	59.2
70-79	119	66.5	1748	72.2	1867	71.8
80+	46	76.7	753	79.1	799	79
Marital status						
Currently single*	347	61	2354	69.3	2701	68.1
Currently married/living together	26	60.5	3629	62.1	3655	62.1
Religion						
Hindu	302	58.4	4477	61.6	4779	61.4
Muslim	31	75.6	571	74.8	602	74.9
Others	40	74.1	935	77.1	975	77
Caste						
SCs/STs	93	60	1370	61.5	1463	61.4
OBCs	136	53.1	1886	60.9	2022	60.3
Others	144	71.6	2727	69.7	2871	69.8
Education						
Illiterate	226	64.9	2805	66.2	3031	66.1
Primary	40	64.5	822	68.7	862	68.5
Secondary	69	50.7	1254	62.7	1323	61.9
High school and more	38	57.6	1102	61.1	1140	61
Work participation						
No	262	58.6	4834	67.7	5096	67.2
More than 6 months	85	66.4	962	56	1047	56.7
3-6 months	26	70.3	187	49.2	213	51.1
Household wealth index						
Poor	279	62.3	2063	59.3	2342	59.6
Middle	46	47.4	1216	66.1	1262	65.1
Rich	48	71.6	2702	69.1	2750	69.1
Own source of income						
Yes	98	64.9	2706	65.8	2804	65.8
No	275	59.7	3277	63.9	3552	63.6
Sufficient economic support						
No	40	76.9	450	74.1	490	74.4
Partial support	76	65.5	1570	67.8	1646	67.7
Full support	158	54.1	1251	57	1409	56.6

*Including widowed, divorced, never married and separated/deserted.

among 60-69 [OR (95% CI) .496 (.396-.623)], among 70-79 [OR (95% CI) .588 (.410-.845)], among 80+ [OR (95% CI) .588 (.410-.845)]. Older adults who belong to 'Others' religious groups also have lower chronic morbidity [OR (95% CI) .606 (.429-.855)] in the 60-69 age-group than the Hindu religious group. Older adults in the 60-69 age group who belong to OBCs and others have reported a lower prevalence [OR (95% CI) .737 (.611-.889)] and [OR (95% CI) .689 (.584-.813)] than SCs/STs castes. Besides, the prevalence of chronic morbidity is lower among older adults who have partial or full economic support in all age groups than older adults who have no financial support. Surprisingly, the older adults who are involved in work for more than six months have reported

higher prevalence than those who are not involved in work in all age groups; among 60-69 [OR (95% CI) 1.547 (1.192-2.008)], among 70-79 [OR (95% CI) 1.224 (.729-2.054)] and among 80+ [OR (95% CI) 1.224 (.729-2.054)]. In the wealth index, the prevalence is lower among older adults who belong to middle and rich wealth index category in all age groups than poor older adults.

Table 3: Odds Ratio (95% CI) showing chronic morbidity among elderly of different age-groups (N=6356)

Background characteristics	Model 1			Model 2			Model 3		
	OR	95% CI		OR	95% CI		OR	95% CI	
		Lower	Upper		Lower	Upper		Lower	Upper
Sex									
Male®									
Female	0.721**	0.593	0.876	0.713*	0.508	1.002	0.713*	0.508	1.002
Marital status									
Currently single®									
Currently married/ living together	0.999	0.826	1.209	0.734*	0.530	1.016	0.734*	0.530	1.016
Place of residence									
Rural®									
Urban	1.274**	1.096	1.482	0.966	0.746	1.251	0.966	0.746	1.251
Religion									
Hindu®									
Muslim	0.496***	0.396	0.623	0.588**	0.410	0.845	0.588**	0.410	0.845
Others	0.606**	0.429	0.855	0.984	0.509	1.900	0.984	0.509	1.900
Caste									
SC/ST®									
OBCs	0.737**	0.611	0.889	0.757*	0.552	1.038	0.757*	0.552	1.038
Others	0.689***	0.584	0.813	0.981	0.731	1.316	0.981	0.731	1.316
Level of education									
Illiterate®									
Primary	1.036	0.822	1.307	0.925	0.613	1.397	0.925	0.613	1.397
Secondary	1.223	0.938	1.595	0.925	0.575	1.489	0.925	0.575	1.489
High school & more	1.076	0.872	1.328	1.078	0.719	1.616	1.078	0.719	1.616
Work participation									
No®									
More than 6 months	1.547**	1.192	2.008	1.224*	0.729	2.054	1.224*	0.729	2.054
3-6 months	1.264*	0.980	1.629	0.896	0.524	1.534	0.896	0.524	1.534
Household wealth index									
Poor®									
Middle	0.674***	0.552	0.824	0.619**	0.442	0.867	0.619**	0.442	0.867
Rich	0.688***	0.562	0.843	0.775*	0.540	1.110	0.775*	0.540	1.110
Financial support									
No®									
Partial support	0.417***	0.324	0.536	0.569**	0.381	0.849	0.569**	0.381	0.849
Full support	0.747*	0.582	0.959	0.833*	0.567	1.225	0.833*	0.567	1.225

P values: ***significant at 1 per cent; **significant at 5 per cent; *significant at 10 per cent. ® Reference category.
Model 1 represents age group of 60-69, model 2 represents age group of 70-79 and model 3 represents age group of 80+.

Chronic morbidity among older adults living alone comparing with those living with family members

The odds ratio in Table 4 displays that the older adults in the 70-79 age group experienced a lower prevalence of chronic morbidity than the 60-69 age groups irrespective of their living arrangements. Here it is noteworthy that older adults living with children/others are more likely to suffer from prevalence [OR (95% CI) .508 (.398-.648)] than older adults living alone [OR (95% CI) .129 (.042-.401)] in 70-79 age group. The Table also demonstrates that the prevalence is lower among Muslim older adults living alone [OR (95% CI) .478 (.230-.995)] or living with children/others [OR (95% CI) .527 (.435-.639)] than Hindu older adults. Prevalence is also lower among older adults belonging to OBCs and others in both living arrangements than SCs/STs categories. Irrespective of living arrangements, older adults having partial support and full support have reported a lower prevalence of chronic morbidity than those with no economic support. Interestingly, older adults who

are still involved in work participation for 3-6 months or more than six months and living with children/others have considerably higher prevalence [OR (95% CI) 1.242 (.982-1.570)] and [OR (95% CI) 1.727 (1.362-2.189)] respectively than the older adults who are not involved in work participation in the same living arrangement. In addition, older adults who belong to the middle and rich wealth category and live with children/others are less likely to suffer from chronic morbidity than those who belong to the poor wealth index category.

Table 4: Odds Ratio (95% CI) showing chronic morbidity among elderly living alone (Model 1) compared with those elderly living with family members (Model 2) (N=6356)

Background characteristics	Model 1			Model 2		
	OR	95% C.I.		OR	95% C.I.	
		Lower	Upper		Lower	Upper
Age group (years)						
60-69®						
70-79	0.129***	0.042	0.401	0.508***	0.398	0.648
80+	0.151**	0.047	0.483	0.806	0.625	1.040
Sex						
Male®						
Female	1.357	0.728	2.527	0.688***	0.581	0.815
Marital status						
Currently single®						
Currently married/living together	1.191	0.470	3.016	0.904	0.765	1.068
Place of residence						
Rural®						
Urban	1.109	0.700	1.758	1.188*	1.041	1.356
Religion						
Hindu®						
Muslim	0.478*	0.230	0.995	0.527***	0.435	0.639
Others	0.620	0.179	2.147	0.696*	0.514	0.943
Caste						
SCs/STs®						
OBCs	0.364**	0.201	0.658	0.772**	0.657	0.908
Others	0.391**	0.228	0.670	0.805**	0.696	0.930
Level of education						
Illiterate®						
Primary	1.690	0.682	4.191	0.999	0.818	1.220
Secondary	1.253	0.440	3.568	1.169	0.929	1.470
High school and more	0.917	0.394	2.133	1.174	0.974	1.416
Work participation						
No®						
More than 6 months	0.491	0.216	1.12	1.727***	1.362	2.189
3-6 months	0.976	0.417	2.285	1.242*	0.982	1.57
Household wealth index						
Poor®						
Middle	0.589	0.242	1.43	0.666***	0.561	0.792
Rich	0.356*	0.147	0.863	0.794*	0.666	0.947
Financial support						
No®						
Partial support	0.339**	0.161	0.717	0.483***	0.389	0.599
Full support	0.393*	0.177	0.874	0.779*	0.632	0.961

P values: ***significant at 1 per cent; **significant at 5 per cent; *significant at 10 per cent. ® Reference category.
Model 1 represents elderly living alone whereas model 2 represents elderly living with family.

IV. Discussion

This study broadly categorised older adults into living alone and living with children/others and examined their effects on the prevalence of chronic morbidity among different age-groups of

older adults in India. Consistent with prior research (Walker, 2007; Jylha, 2009; Salisbury et al., 2011; Barnett et al., 2012; Pandey & Ladusingh, 2015), the bivariate analysis of our study found that the living arrangements of the older adults have a strong association with the prevalence of chronic morbidity in all age groups and it increases with increasing age. It also found that older adults with full economic support are less likely to suffer from chronic morbidities than those with no economic support. Several large-scale studies have confirmed that there is a strong positive association between economic support and health of the older adults both in developing (Bos & Bos, 2007; Strauss, 2010; Pulatova et al., 2012; Mazumder, 2008) as well as developed societies (Smith, 2007; Kiuila et al., 2007; Cutler et al., 2008; Tsimbos, 2010). The findings surprisingly indicated that chronic morbidity is higher among older adults living with children/others than the older adults living alone. Epidemiological studies have also argued that older adults with chronic disease are more likely to reside with their adult children and grandchildren (Cohen et al., 2011; Goodman & Silverstein, 2002). Here, it can be inferred that the prevalence of chronic morbidity sometimes compels older adults to live with family members/others due to limited access to health care primarily because of their poor economic condition and dependence on children. Some of the previous studies also argued in a similar line and established that older adults living with children and other family members are more likely to suffer from morbidity (Young et al., 2004; Chad et al., 2005). This unexpected result might also be due to the actual reporting of diseases of older adults by the family members with whom they live than the older adults living alone (Agrawal & Arokiasamy, 2010). Our study has also found that women living with children/others have reported more chronic morbidity than those women living alone, though many previous studies have established the reverse situation (Benoot et al., 2014; Klinenberg, 2012; Russell, 2009; Tan et al., 2015). However, some of the studies have also mentioned that women living alone have better health than those living with family members (Michael et al., 2001; Russell & Taylor, 2009; Weissman & Russell, 2016). The plausible reasons may be deeply embedded patriarchal social structure and associated cultural and financial dependence on husbands and (male) children in their everyday lives (Sengupta & Agree, 2003).

Our study has found higher odds of chronic morbidity among 60-69 older men compared with older women in the same age group. This finding conforms to some of the previous studies (Chen et al., 2009) which stated that men are more likely to report higher morbidity due to neglect of their health and risky health behaviour (Agrawal & Arokiasamy, 2010; Guo et al., 2015). This finding is contrary to what has been suggested by several epidemiological studies on gender differences in morbidity prevalence where odds are higher among women (Hirve et al., 2012; Singh et al., 2013; Bora & Saikia, 2015). The cross-sectional analysis revealed that SCs/STs and Muslim older adults had a comparatively higher rate of chronic morbidity due to their relatively disadvantageous socio-economic and educational status (Sen, 1999).

The relationship between economic support and the prevalence of chronic morbidity is strong because older adults with no economic support have experienced higher morbidity (Marengoni et al., 2011; von dem Knesebeck & Vonneilich, 2009; McMunn, 2006). In line with Sewdas et al. (2017), we found that older adults still involved in the workforce are more likely to suffer from chronic morbidities than those who are not involved in work. This finding validates the previous research, particularly in western European societies, which advocated that older workers often suffer from chronic diseases more frequently than those who have retired (Harbers & Achterberg, 2012; Boot et al., 2104; Leijten et al., 2015). Though the reason is not clear, a large and growing literature in western societies argued that older adults are discouraged from retiring with disability pension which leads to an increase of older workers with chronic diseases in the workforce (OECD, 2007; Roskes et al., 2005; Baanders et al., 2002). We also found that older adults in middle and rich (high) economic groups living with family members have reported higher occurrences of chronic morbidity than those who are living alone in the same wealth index. This finding is consistent with the observations of Henning-Smith (2016) in the US and of Honjo et al. (2016) in Japan. Several studies have extensively argued to explain such exclusive findings. One of the reasons is that higher economic groups of people living with children are more likely to report poor health because of awareness (Case et al., 2002; Cutler et al., 2008). Another plausible reason is that economically

advanced older adults are more exposed to a sedentary lifestyle which also significantly contributes to the rise of chronic morbidities (King & Guralnik 2010; Hamilton et al. 2008).

V. Conclusion

Given the increasing prevalence of chronic morbidity, understanding the living arrangements of older adults along with existing socio-economic differentials is important to help policymakers and health planners to address the issues from a broader perspective. The findings from our analyses (bivariate and binary logistic regression) reveal a mixed understanding of the association between living arrangements and the prevalence of chronic morbidity. We extended earlier work on living arrangements by examining the different age groups of older adults. This enables us to understand if older adults living with children/others have experienced any differential effect on their health in different age groups compared with older adults living alone. Along with the existing general perceptions of the prevalence of higher morbidity among older adults living alone, the unanticipated findings of higher prevalence of chronic morbidity among older adults living with family members have indicated to contemplate on the ambiguity of multigenerational living arrangements. The present study has paved the way to sceptically look deeper into the emerging complexities of multigenerational living arrangements in India. More detailed research on the factors behind the higher prevalence of chronic morbidity among older adults living with family members in fast-changing social and family situations is necessary and may provide useful insights.

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