



## Aging and social networks: A perspective on gender disparity in India

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### ABSTRACT

In India, the “feminization of aging” is one of the areas in which prejudice most frequently occurs. Noticeably, poverty, isolation, changes in residential care, and weak institutional support push women into several vulnerabilities. This study demonstrates that elderly women are often denied basic rights and are compelled to reside in old-age homes; the situation is worse for elderly widowed women. We examine the claims that the lives of elderly women are more precarious due to their lower literacy, limited social exposure, and monetary dependence. Being women, old, and widowed, they are affected by triple vulnerabilities that require concrete policy implications.

### KEYWORDS

discrimination; elderly; isolation; poverty; widowed

### The settings

A concomitant outcome of population growth in a country is the increase in the number of older persons, and the social recognition of the problem is in ensuring them a secure position in society (Bhatia, 1983). Globally, between 2013 and 2050, the population aged 60 years and above is projected to increase by more than double. By 2050, nearly eight in 10 of the world’s older people will live in the less-developed regions (UN Women, 2015). More importantly, the gender differential in life expectancy has been a major attribute of mortality trends in developed regions in the 20th century, and noticeably in most nations, females have lower mortality than males in every age group (Kinsella, 2000). Evidently, such accelerated global population aging will impact social and health-care demands in all countries (World Health Organization, 2007). In terms of absolute numbers of adults 60 and older, the aged population in India is currently the second largest in the world (Agarwal et al., 2016). In India, *the proportion of the population aged 60 years and above was 7% in 2009 and is projected to increase to 20% by the year 2050* (Subaiya & Bansod, 2011). In the Indian context, elderly women are one of the most vulnerable population groups, as they confront multiple disadvantages associated with both age and gender. Further, they are always prone to financial insecurity, lacking possessions, and other vulnerabilities. Old-age income security

in India is not well established (Ahuja, 2003). Due to the absence of financial security, a majority of the elderly population are victimized by brutal treatment while claiming their basic needs. In a study by HelpAge India,<sup>1</sup> it was found that around 60% of surveyed elders confirmed the prevalence of elder abuse in India, of which one-fourth (25%) confirmed being victimized by elder abuse with no gender variation (HelpAge India, 2018). In Indian culture, elders are always perceived with respect; however, with the changing society, they are more often treated as a burden.

## Role of social networks in old age

Social networks have been described as interpersonal relationships that provide social, emotional, and practical support (Gray, 2009) during an individual's life course (Litwin & Stoeckel, 2013). They significantly influence mental and physical health outcomes and apply across gender, socioeconomic groups, and countries (Olofsson, Padyab, & Malmberg, 2018; Rennemark & Hagberg, 1997). Willigen and Chadha (2003) suggested that "Network analysis provides a perspective to the entire social world of individuals." Studies in different cultures show that social interaction declines with age (Bowling, Grundy, & Farquhar, 1995; Willigen, Chadha, & Kedia, 1995), and absence of social support and social networks enhances the risk factors among elderly women. Social isolation and poor social support networks lead to depression and poor treatment in old age (Chachamovich, Fleck, Laidlaw, & Power, 2008; Richardson et al., 2012; Wurm & Benyamini, 2014). Unfortunately, women report a higher prevalence of depression than men, which may result from social isolation and mental illness (Wenger, 1997). Widowhood and difficult relationships with children or with grandchildren often lead to depression. Several studies have found lower life satisfaction among the older-old<sup>2</sup> who do not have a partner (Berg, Hoffman, Hassing, McClearn, & Johansson, 2009; Bryant et al., 2012). The predominant factors affecting the elderly population are family ties, living arrangements, social networks, and participation in community activities. As per the NSSO 71st round (2014), around 4% of the elderly population both in urban and rural areas live alone, and 61% in rural areas and 63% in urban areas live with their spouse only. Another 35% in rural areas and 33% in urban areas were living without their spouses but with their children or other relations and non-relations. Although social networks also extend outside the family, residing with children and family holds an important part of emotional and material resources for the elderly population (Gupta, 2009; House, Robbins, & Metzner, 1982). Developed nations have made significant efforts to establish institutionalized support systems, but in India, this is still under construction.

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<sup>1</sup>HelpAge India conducted a survey (2018) on elder abuse in 23 cities of India by interviewing elderly people over 60 years of age with almost equal distribution of both genders.

<sup>2</sup>Berg et al. (2009) considered the "older-old" to be persons aged 80 and older and persons aged 60–79 to be the "younger-old."

Therefore, there is a need for strong policy perspectives to address the concerns related to improving social relations and society's perspective of the elderly.

## **Review of prior studies, contemporary picture, and policy perspective**

The feminization of the older population is a global phenomenon that is more prominent in India. In addition to this, poor older people, especially women, are systematically challenged and disempowered by poverty and lack of access to social services (Kumar, 2003). Several factors like the social structure, demographic and cultural factors, and Indian law have a significant effect on the livelihood of the older population. Factors that show a significant association between gendered dimensions and social networks are analyzed in the following.

### ***Social structure***

#### ***Caste and religion***

Caste and religion-based discrimination/atrocities is a bitter reality of Indian society. Age barriers, limited resources, and social stratification victimize older adults. They experience frequent or regular age discrimination (Van den Heuvel, 2012) and a behavioral manifestation of negative attitudes, judgment, and unequal treatment in their society (Chou & Choi, 2011). Significantly, in India, *dalit*<sup>3</sup> women are less likely to own land than other castes, which forces them to participate in low-paid and often exploitative labor (Mangubhai & Capraro, 2015). Thus, older women face serious financial exploitation and discrimination in property rights.

#### ***Demographic factors***

The incidence of gender differences in longevity in both developing and developed nations has already been observed in the last several decades. In India, the tempo of population aging is accelerating, and it is interesting to note that females had a steep rise from 5.8% to 8.9% in the six census years from 1961 to 2011, while for males the increase was more modest, from 5.5% to 8.2%.<sup>4</sup>

#### ***Urbanization and modernization***

In developing countries, the shift from joint family to nuclear families due to urbanization and modernization has posed several challenges for older age groups (Knodel, Chayovan, & Siriboon, 1992; Pandey, 2009; Zhou & Walker, 2016). In some settings, the degree of isolation may vary, as elderly women

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<sup>3</sup>In Indian society, the *dalit* is described as an identity of vulnerable caste groups (caste-based discrimination).

<sup>4</sup>Government of India (GOI) (1961–2011), Census of India, Registrar General and Census Commissioner, Government of India.

living in metropolitan cities are more likely to feel socially alienated than their rural counterparts. It is interesting to note that with heavy industrial processes, out-migration, urbanization, and modernization, filial responsibilities are weakening interpersonal and intergenerational relations. Thus, elderly parents are being left alone in the native places for aching struggle for their remaining life. Older women living alone in urban areas and relying on domestic help are most susceptible to different crimes. Owning few assets, declined social engagement, and deteriorated cognitive functioning have made the lives of elderly women very stressful.

### ***Longer life span and widowhood***

Women in later years of their life are subjected to many hardships, such as economic dependency, emotional insecurity, and social estrangement—especially due to loss of spouse (Mohapatra, 2012). However, older women may be more valued as members of multigenerational households than non-working elderly men because of the greater contribution women make to domestic chores (Knodel & Ofstedal, 2003). Another factor that can promote a widening gender gap is education, which is positively related to survival. The evidence derived from prior studies shows that women are more likely to survive men in the oldest age groups and thus have a greater need for formal care (Velkoff & Lawson, 1998). Older men are more likely to be married and thus reside with their wives in later life, relying on their wives for care. A widowed woman may also experience greater incidences of discrimination due to patriarchal attitudes and lack of decision-making authority in the family and in society as well.

## ***Cultural factors***

### ***Role of caregivers and family relations***

It is well known that in old age the role of caregivers is one of the vital components that provide essential support to reduce the psychological changes that occur due to advancement of age. In the recent times, the availability and adequacy of caregivers has been a serious area of concern among the elderly, and situations are worse in metropolitan cities. Currently, in India, the financial crisis, lack of postretirement benefits, and the breakdown of the joint family structure have raised serious concerns about the well-being of older adults. In old age, family relations are a prominent source of developing strong associations to maintain familial values and supporting the possibilities of healthy aging.

### ***Unpaid care work***

In old age particularly, older women play a crucial role in providing unpaid care to partners, grandchildren, other members of the family, and relatives. According to the ILO (2018) report, “Women dedicate on average 3.2 times more time than men to unpaid care work: 4 hours and 25 minutes per day,

against 1 hour and 23 minutes for men.” This report further indicates that, in Asia and the Pacific, men perform the lowest share of unpaid care work of all regions, with 28 minutes in Pakistan and only 31 minutes in India. However, support provided by elderly women to their families often goes unrecognized (Berkman, Sekher, Capistrant, & Zheng, 2012).

### ***Discriminatory law and rights***

#### ***Property and inheritance rights***

Women’s low status and vulnerability starts from childhood and increases as they go through the aging process (HelpAge International, 2010). According to Jyotsna and Jamuna (2011), elderly women, especially widows, face many difficulties, such as substantial gender differentials existing in the ownership of property/assets and in roles and participation in the family. This consequently affects their access to various basic necessities like food, housing, and health (Paltasingh & Tyagi, 2012), and they have limited rights and a lack of opportunities in family and society as well. In the absence of stable support system, women in developing countries are poorer in old age than men. In India, nearly 30% of elderly men have no valuable assets; the figure for women is 60% (Stephen, 2009). There is an urgent need to recognize and determine a legal framework to protect and ensure older women’s rights against discriminatory behavior. HelpAge International (2019) argues for “rights to equality and non-discrimination on the basis of our age, to freedom from violence, abuse and neglect, to care and support for independent living, to a secure income in older age.”

### **Inception of social security: The Indian perspective**

In old age, the degree and intensity of social security is one of the crucial elements that defend people against vulnerabilities and allow them to remain independent. Many countries have considered social security to be a phenomena of financial stability and a large fraction of the government budget (Tabellini, 2000). Historically, one of the initial social security retirement structures was introduced by the Germans in 1889 (Kothari, 2014). Moreover, in the recent years, the growing proportion of the elderly population in India is an area of serious concern to both government and civil society organizations.

The International Labor Organization (1942)<sup>5</sup> has declared that social security services “provide the citizens with benefits designed to prevent or cure diseases, or to support them during their inability to earn and to restore them in gainful activity”. Some of the contingencies covered in the social security system are: sickness, maternity, occupational risks, invalidity, unemployment,

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<sup>5</sup>For details please see Rajan. (2000). Financial and social security in old age. In S. S. Raju & M. Desai (Eds.), *Gerontological social work in India: Some issues and perspectives* (p. 118). New Delhi, India: B.R. Publishing.

old age, retirement, and medical care. The basic objective of the social security scheme is to provide protection to the entire population of the country (Rajan & Mishra, 1999). Social security supplies an accurate support system to needy people. In light of this discussion, the concept of social security is heavily determined by both institutional and residential support systems. Theoretically, social security as a system evolved first in Western countries during the industrial revolution. The German and the British models are focused on the living standard and a subsistence income for all the elderly people at a flat universal rate (Rajan, Risseeuw, & Perera, 2008). To secure financial benefits, two life insurance plans, Jeevan Akshay and Jeevan Dhara, were enacted in India to grant sufficient financial security for the elderly in the 1950s.

In 1995, the Government of India (GOI) adopted the National Social Assistance Programme (NSAP), which was made up of three programs for older people of the country. The National Old Age Pension Scheme (NOAPS) in 1995 provided ₹75 per month per beneficiary. In subsequent years, the Government of India introduced a food security scheme for the elderly called Annapurna in 1999. Under the Annapurna plan, 10 kilograms of food grains are provided to the beneficiary every month at no cost. In the same year, under the flagship of the Ministry of Social Justice and Empowerment (MSJE), the Government of India adopted a National Policy on Older Persons in January 1999. This policy provides broad guidelines to the state government for taking action for the welfare of older persons in a protective manner.

Recently, to meet accurate health protection for all, the Government of India announced:

Ayushman Bharat, a flagship scheme of Government of India was launched as recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC). This initiative has been designed on the lines as to meet SDG and its underlining commitment, which is “leave no one behind.”<sup>6</sup>

Another scheme is Varishtha Pension Bima Yojana 2014 (VPBY-2014), which aims to protect elderly persons aged 60 years and above against a future fall in their interest income due to uncertain market conditions, thus providing social security during old age. This scheme is being implemented through the Life Insurance Corporation (LIC) of India.<sup>7</sup> It is widely recognized that the concept of social capital has been heavily split into structural and cognitive components (Lancee, 2012). The most striking feature in this juncture is the interpersonal relationships that have played a vital role in determining the extent of social protection in old age. The core intention of this research work is to describe the functions and availability of social networks in an Indian setting during old age.

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<sup>6</sup>For more details, please see <https://www.pmjay.gov.in/about-pmjay>.

<sup>7</sup>For more details please see [https://financialservices.gov.in/insurance-divisions/Government-Sponsored-Socially-Oriented-Insurance-Schemes/Pradhan-Mantri-Vaya-Vandana-Yojana\(PMVVY\)](https://financialservices.gov.in/insurance-divisions/Government-Sponsored-Socially-Oriented-Insurance-Schemes/Pradhan-Mantri-Vaya-Vandana-Yojana(PMVVY)).

This study also intends to explore the coverage and usability of social networks in old age.

## Objectives

This research work intends to analyze the gendered dimensions of population aging. Furthermore, this research work will:

- Study the changing patterns of elderly women in Indian families.
- Understand the issues and concerns faced by elderly women in their old age.
- Analyze the existing policies or schemes for the elderly population and the role of social security measures in reinforcing the situation of older women in Indian society.

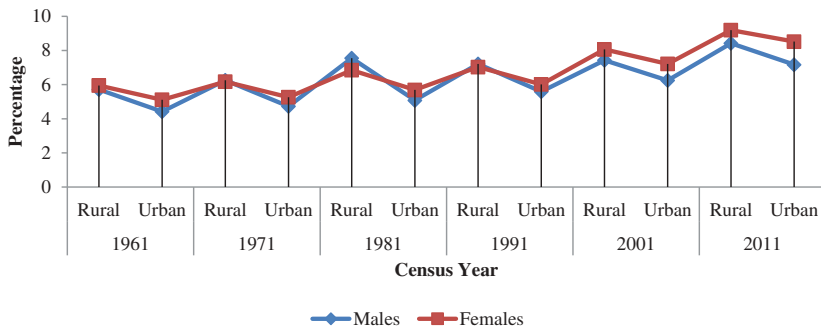
## Methods and materials

Primarily, the data for the present study have been extracted from the Census of India (1961–2011). The Census of India provides highly valuable information on various aspects about the elderly but with certain limitations. For the purpose of empirical specification, both descriptive and statistical designs have been adapted to the completion of these objectives. This study consists of four sections. The first is an attempt to describe the gendered dimension of population aging and its vague outcomes. The second section talks about the role of social networks and their impact on older women in the later stages of life. The third section outlines the objectives, methodological elements, and data sources. The fourth section summarizes the results of some empirical findings on gender disparities in old age and brings up the policy perspective. Finally, the conclusion underlines the importance of the “feminization of aging” and social disparities that determine women’s quality of life in old age.

## Key results

Predominantly, the article talks about social constraints on older women in later stages of their life. To illustrate the link between growing age and effective social networks, social networks can support the quality of care during old age. The purpose of this article is to explore the effectiveness of social networks and their associated attributes, which can be beneficial to older adults, especially elderly women.

The recent demographic trends depict population ageing as one of the key indicators which quantifies several aspects of human longevity. Factually, women in general have a longer life expectancy than men. In addition, more women live alone in older age than men because of greater life expectancy at birth and a lower rate of remarriage after divorce/widowhood.



**Figure 1.** Percentage Share of Elderly Population to total Population in India: 1961-2011

**Source:** Computed from Census of India, 1961-2011

Data given in the Figure 1 portray the demographic profile of senior citizens aged 60 years and above. The distribution of the elderly by place of residence (Figure 1) shows that the elderly are increasing in both rural and urban areas as a proportion of the total population. The share of the female rural population aged 60 years and above increased from about 5.96% in 1961 to 9.19% in 2011, while the older female urban population increased from about 5.11% to 8.52% throughout the same period.

A progressive increase in the proportion of females compared to males in the 60-plus age group is evident over the years. Table 1 depicts the trend in the age structure of the population of India for the period 1991–2011. It is pertinent to highlight that, over that period of time, in the age group 60 years and above the amount of the elderly population is significantly increasing. Notably, the most important concern is closely attached to the oldest-old (80+) cohort, who proves to be in a grave situation to both planners and policy makers.

The data given in Table 2 reveal the situation of Indian women according to various characteristics. In this study, we look into the concerns associated with the gendered dimensions of aging and strong ethical values which make familial bondings more supportive. It is important to note that declining authority, isolation, and alienation emerged as the most familiar psychosocial issues affecting quality of life among elderly women in Indian society. However, it is also seen that widowhood is treated as a curse and negatively affects (Pandey & Jha, 2012) and increases the probability of social separation. It is extremely significant to know that due to the nuclearization of the family system and greater incidences of widowhood, living alone and relying on domestic help intensifies the risk factor among older women. Table 2 shows the old-age dependency ratio, which is calculated as the number of persons 65 years and over per 100 persons 15 to 64 years. It is found that in a span of 10 years, the total female older population by old-age dependency ratio (OADR) has increased by 1.1% at the national level. The share is high in



Table 1. Distribution of five yearly populations by broad age categories in India:1991–2011.

Age group	1991*						2001**						2011					
	Total		Rural		Urban		Total		Rural		Urban		Total		Rural		Urban	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0-4	12.0	12.4	12.6	12.9	10.4	11.0	10.7	10.7	11.5	11.4	8.8	8.9	9.4	9.2	10.1	9.8	8.0	7.8
5-9	13.2	13.4	13.7	13.7	11.7	12.2	12.5	12.4	13.4	13.1	10.4	10.5	10.6	10.3	11.4	11.1	8.9	8.6
10-14	11.9	11.6	12.1	11.6	11.4	11.7	12.3	11.9	12.7	12.1	11.3	11.4	11.1	10.8	11.8	11.4	9.7	9.3
15-19	9.7	9.1	9.5	8.8	10.3	10.1	10.1	9.3	9.9	9.0	10.8	10.3	10.3	9.6	10.4	9.7	9.9	9.5
20-24	8.6	9.2	8.2	8.9	9.9	10.0	8.7	8.8	8.2	8.4	10.1	9.7	9.2	9.2	8.9	8.8	9.9	10.0
25-29	7.9	8.6	7.7	8.3	8.7	9.5	7.8	8.4	7.4	8.1	8.8	9.3	8.2	8.5	7.8	8.1	9.2	9.6
30-34	6.9	7.1	6.6	6.9	7.7	7.6	7.0	7.4	6.7	7.2	7.8	7.9	7.2	7.5	6.8	7.1	8.0	8.2
35-39	6.3	6.2	6.1	6.0	7.1	6.7	6.8	7.0	6.5	6.7	7.4	7.7	6.9	7.2	6.6	6.9	7.6	7.9
40-44	5.2	4.9	5.0	4.9	5.8	4.9	5.6	5.2	5.4	5.0	6.3	5.7	6.0	5.9	5.7	5.7	6.6	6.5
45-49	4.4	4.3	4.3	4.3	4.6	4.1	4.7	4.5	4.5	4.4	5.2	4.9	5.2	5.1	4.9	4.9	5.8	5.7
50-54	3.9	3.5	3.9	3.6	3.7	3.2	3.7	3.4	3.6	3.3	4.0	3.5	4.1	4.0	3.9	3.8	4.6	4.4
55-59	2.5	2.6	2.5	2.7	2.4	2.4	2.6	2.8	2.5	2.9	2.7	2.7	3.1	3.4	2.9	3.3	3.5	3.5
60-64	2.7	2.7	2.9	2.8	2.2	2.3	2.6	2.8	2.7	2.9	2.3	2.5	3.0	3.2	3.0	3.3	3.0	3.1
65-69	1.5	1.6	1.6	1.6	1.3	1.4	1.8	2.1	1.9	2.1	1.6	1.9	2.1	2.3	2.2	2.4	1.9	2.1
70-74	1.3	1.2	1.4	1.3	1.0	1.1	1.4	1.4	1.5	1.5	1.2	1.3	1.5	1.6	1.6	1.7	1.4	1.5
75-79	0.5	0.5	0.5	0.5	0.4	0.5	0.6	0.7	0.6	0.7	0.6	0.6	0.7	0.8	0.7	0.8	0.7	0.8
80+	0.8	0.8	0.8	0.8	0.6	0.7	0.7	0.8	0.8	0.8	0.6	0.8	0.8	1.0	0.9	1.0	0.8	1.0
60+	6.7	6.8	7.2	7.0	5.6	6.0	7.1	7.8	7.4	8.1	6.2	7.2	8.2	9.0	8.4	9.2	7.7	8.5

\*Excluding Jammu and Kashmir.

\*\*The population of Manipur state by sex includes the estimated population of Mao Maram, Pao Mata, and Purul subdivisions of Senapati district.

Source: Computed from Census of India, 1991–2011.

**Table 2.** Situation of women according to various characteristics in India: 2001–2011.

State/UTs	2001**						2011					
	[1]	[2]	[3]	[4]	[5]	[6]	[1]	[2]	[3]	[4]	[5]	[6]
India	48.3	56.9	7.8	13.8	7.2	8.4	48.5	60.4	9.0	14.9	8.2	9.1
Jammu & Kashmir	47.2	56.5	6.5	11.5	7.2	7.2	47.1	58.8	7.5	12.7	7.8	8.0
Himachal Pradesh	49.2	60.3	9.3	15.4	8.2	10.0	49.3	64.3	10.7	16.7	9.2	10.7
Punjab	46.7	59.8	9.8	15.9	8.1	10.3	47.2	64.7	10.9	16.8	9.3	10.1
Chandigarh	43.7	64.2	3.2	8.4	3.3	5.4	45.0	67.5	6.8	10.1	4.2	6.0
Uttarakhand	49.0	56.4	8.3	14.0	6.1	8.6	49.1	60.7	9.3	15.3	7.2	9.2
Haryana	46.3	56.2	7.9	14.4	7.2	9.2	46.8	61.9	9.3	15.1	7.8	8.7
NCT Of Delhi	45.1	60.7	4.5	9.3	4.1	5.8	46.5	65.6	7.3	11.2	5.8	6.3
Rajasthan	47.9	52.8	7.0	13.9	6.9	8.7	48.1	57.6	8.1	14.1	7.4	9.0
Uttar Pradesh	47.3	51.9	7.3	13.4	6.8	8.1	47.7	56.1	7.8	13.9	7.5	8.3
Bihar	47.9	51.6	6.7	12.6	5.7	7.4	47.9	52.2	7.2	13.8	6.2	7.8
Sikkim	46.7	57.8	5.6	8.7	3.9	5.3	47.1	65.1	6.4	9.8	5.2	6.3
Arunachal Pradesh	47.2	53.5	5.3	8.5	1.9	5.0	48.4	59.0	4.6	7.7	*	4.5
Nagaland	47.4	58.2	4.9	7.2	*	4.6	48.2	60.5	5.0	8.3	*	5.2
Manipur	49.4	60.8	6.4	11.1	7.4	7.2	49.6	63.2	7.4	11.2	8.7	7.0
Mizoram	48.3	58.4	5.7	9.7	1.7	6.2	49.4	61.3	6.3	10.3	1.2	6.4
Tripura	48.7	58.3	7.2	13.2	7.6	8.8	49.0	64.1	8.2	12.8	8.0	8.3
Meghalaya	49.3	53.0	4.6	8.5	5.0	5.3	49.7	55.6	4.9	8.8	5.1	5.5
Assam	48.3	56.2	5.9	10.5	6.7	6.3	48.9	60.4	6.7	11.1	7.5	6.7
West Bengal	48.3	58.8	6.6	12.8	7.0	8.1	48.7	63.9	8.8	13.7	8.1	8.6
Jharkhand	48.5	54.0	6.1	11.2	5.3	6.5	48.7	56.3	7.3	13.0	6.3	7.3
Odisha	49.3	58.5	8.6	14.5	8.4	8.7	49.5	61.7	9.6	15.5	9.2	9.3
Chhattisgarh	49.7	55.5	7.6	14.2	8.2	8.4	49.8	59.7	8.5	14.2	8.3	8.5
Madhya Pradesh	47.9	53.7	7.4	14.1	7.8	8.6	48.2	58.1	8.4	14.5	8.5	9.1
Gujarat	47.9	60.1	7.3	12.8	7.0	7.9	47.9	62.6	8.8	14.0	8.4	8.8
Daman & Diu	41.5	61.3	3.7	11.7	8.0	7.2	38.2	65.1	7.0	10.7	10.0	6.6
Dadra & Nagar Haveli	44.8	56.5	4.3	8.8	6.4	4.9	43.6	60.5	5.0	8.3	7.0	4.8
Maharashtra	48.0	58.2	10.2	16.7	10.0	10.5	48.2	62.7	10.8	17.2	10.6	10.9
Andhra Pradesh	49.5	60.2	8.1	13.4	7.3	7.6	49.8	63.6	10.4	16.3	9.2	9.3
Karnataka	49.1	60.0	8.3	13.7	7.5	8.4	49.3	64.0	10.1	15.8	9.1	9.7
Goa	49.0	65.6	9.1	14.5	6.4	8.8	49.3	66.1	12.4	18.8	8.9	11.3
Lakshadweep	48.7	59.6	5.7	10.5	*	6.1	48.6	65.5	8.3	12.7	*	7.5
Kerala	51.4	63.8	10.5	17.7	10.2	11.8	52.0	64.5	13.3	20.6	11.9	13.2
Tamil Nadu	49.7	64.2	9.2	13.9	7.0	8.3	49.9	66.3	10.7	16.1	8.3	9.7
Puducherry	50.0	64.3	8.3	14.2	7.1	8.8	50.9	66.3	10.6	15.9	8.1	9.8
Andaman & Nicobar Islands	45.8	63.6	5.5	7.3	*	4.5	46.7	68.0	6.3	9.3	*	5.3

\*Not reported.

\*\*The population of Manipur state by sex includes the estimated population of Mao Maram, Pao Mata, and Purul subdivisions of Senapati district.

Note: [1] Share of Female Population in Total Population, [2] Share of Female Population in the Occupational Cohorts (15–59), [3] Share of Elderly Women in the Total Population, [4] Old-Age Dependency Ratio of Elderly Women, [5] Share of Scheduled Caste Elderly Women, [6] Potential Support Ratio.

Source: Computed from Census of India, 2001–2011.

the southern states like Goa, followed by Kerala, Tamil Nadu, and Karnataka. It is also high in Delhi and Chandigarh. In rural areas, it has increased by 1.2% and 1.4% for urban areas. The gap between the rural and urban population is attributed to the dominance of agriculture in rural areas. It has also been observed that over thousands of years, both religion and caste have strongly influenced the society in so many ways. In Indian settings,

within castes, communities' enormous disparities in socioeconomic situation have been observed in their employability and cultural settings. In light of this, social networking from other castes is found to be negligible, which can affect their living conditions by social separation and hierarchical orders. Despite impressive economic growth in the past few decades, the search for regular employability, better education system, and quality of health-care services have forced the youth population to migrate to cities. In addition, these constraints have increased the prevalence of separation or generate an unsupportive environment during old age. The next element in this tale is the potential support ratio that calculates the number of persons aged 15 to 64 per every person aged 65 or older. Based on census data, it is found that at the national level, the ratio for females has increased by 0.7%. Statewide analysis shows that the increase in potential support ratio varies from 0.1% to 2.5%. Goa has shown the maximum increase in the support ratio, thus implying less pressure on the working-age population. However, five states—Punjab, Haryana, Arunachal Pradesh, Manipur, and Tripura—have shown decline in the support ratio. As per the population projections prepared by the Office of the Registrar General, India is predicted to enter the fourth stage of demographic transition by about 2026 (Premi, 2009). It is suggested that there is a need to address the upcoming issues resulting from the shrinking support base available for the older persons at the policy level.

Table 3 shows the marital status of the elderly population in India in 2001–2011. It is an established fact that marital status has played a vital role in determining the situation of women in society. It is well known that in old age spousal support defines the nature of caregiving and a concrete support system for the remaining years of life. The incidence of widowhood varies from 34% to 69% among women as compared to 8% to 30% among men in 2011. As per the social norms, widowed women live with their children and are economically dependent on them for maintenance. As per NSSO 71st round, the proportion of aged persons living with their children or other relatives fell between 2004 and 2014. Growing trends have highlighted that depressed socioeconomic attributes compel young people to leave their elderly parents for improved employability, quality of education, and other possibilities to enhance their standard of living. Another significant observation depicted in Table 3 is that the share of currently married elderly women is considerably smaller than currently married men in the same age group.

In the Indian context, financial dependency is one of the most prominent feature of vulnerability among older women. Overall, a higher proportion of older women are living without a proper institutional support system and residential care. In addition to this, a lack of basic education, a lower participation in employability, and a lack of property rights and decision-making authority in the society and in the family are key concerns that increase the probability of multiple kinds of weakness. It is interesting to

**Table 3.** Percentage share of the elderly population by marital status in India: 2001–2011.

Area	Age group	2001*																	
		2001						2011*											
		Never married		Currently married		Widowed		Separated		Divorced		Never married		Currently married		Widowed		Divorced/separated	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Total	60–64	2.2	1.6	88.8	63.0	8.7	34.7	0.3	0.6	0.1	0.2	1.9	1.1	88.0	58.3	9.8	40.0	0.3	0.6
	65–69	2.8	2.0	85.0	54.4	11.9	43.0	0.3	0.5	0.1	0.1	2.1	1.2	85.2	53.4	12.5	45.0	0.3	0.5
	70–74	2.2	1.6	79.8	37.7	17.6	60.2	0.3	0.4	0.1	0.1	2.5	1.5	79.7	34.8	17.5	63.3	0.3	0.5
	75–79	2.3	1.6	74.9	35.9	22.4	62.0	0.3	0.3	0.1	0.1	3.3	1.7	75.2	37.3	21.2	60.6	0.3	0.4
	80+	7.5	4.5	62.0	26.1	30.1	69.0	0.3	0.3	0.1	0.1	5.4	3.5	65.3	25.1	28.9	71.0	0.4	0.4
Rural	60–64	2.1	1.3	88.1	63.8	9.4	34.1	0.3	0.6	0.1	0.2	1.8	0.9	87.3	58.9	10.5	39.6	0.4	0.6
	65–69	2.6	1.6	84.4	55.3	12.6	42.5	0.3	0.5	0.1	0.1	2.0	1.0	84.6	54.3	13.1	44.2	0.3	0.5
	70–74	2.1	1.2	79.1	37.8	18.4	60.5	0.3	0.4	0.1	0.1	2.3	1.2	79.3	35.2	18.1	63.2	0.3	0.4
	75–79	2.1	1.3	74.4	37.5	23.1	60.9	0.3	0.3	0.1	0.1	3.0	1.4	75.1	39.0	21.6	59.3	0.4	0.4
	80+	6.8	4.0	61.9	26.3	30.9	69.4	0.3	0.3	0.1	0.1	5.0	3.2	65.3	25.6	29.4	70.8	0.4	0.4
Urban	60–64	2.3	2.3	90.2	61.0	7.1	35.9	0.3	0.6	0.1	0.2	2.0	1.7	89.9	56.5	7.8	41.2	0.3	0.6
	65–69	3.2	3.0	86.3	51.9	10.1	44.5	0.3	0.5	0.1	0.2	2.3	1.8	86.9	50.4	10.6	47.3	0.3	0.5
	70–74	2.6	2.4	81.6	37.6	15.5	59.5	0.3	0.4	0.1	0.2	3.2	2.4	80.9	33.5	15.7	63.7	0.3	0.5
	75–79	2.6	2.4	76.2	32.5	20.9	64.6	0.3	0.3	0.1	0.1	4.3	2.8	75.5	32.3	19.9	64.4	0.3	0.4
	80+	9.4	5.6	62.1	25.7	28.1	68.3	0.3	0.3	0.1	0.2	6.9	4.3	65.2	23.6	27.6	71.8	0.3	0.4

Note. T = Total (Persons), M = Male, F = Female.

\*The population of Manipur state by sex includes the estimated population of Mao Maram, Pao Mata, and Purul subdivisions of Senapati district. Source: Computed from Census of India, 2001–2011.

note that the work participation rate among the elderly is important from the point of view of understanding their economic dependence.

Table 4 provides the coverage of workforce participation of the elderly population in India in 1991–2011. During this period (1991–2011), the participation of elderly women in the workforce was reported to be lower compared to their male counterparts. This analysis shows that monetary constraints among older women make them dependent on others for their basic and essential requirements. The extent of workforce participation reveals that the people above 80 still contribute in the labor market due to economic compulsion. In the same context, due to lower participation in regular employment, the majority of older women have to survive without a pension system, insurance schemes, and other institutional benefits. Thus it is recommended that government and its stockholders should create a regular pension system and monetary concessions in banking, medical insurance, and housing for the elderly population, especially older women.

With the increase in age, there is an increase in the demand for care and support. In India, parents in their old age are mostly dependent upon their children, and supporting elderly parents is considered a norm in the traditional family setting. The duty is normally borne by the male child of the family through coresidence (Jadhav, Sathyanarayana, Kuma, & James, 2013). However, changes in the family structure have led to critical situations for the

**Table 4.** Workforce participation of the elderly population in India: 1991–2011.

Census year	Age group	Total			Rural			Urban		
		T	M	F	T	M	F	T	M	F
1991*	60–69	46.9	71.4	6.3	51.7	77.1	7.7	30.0	50.7	1.1
	70–79	28.8	47.0	2.9	31.9	51.2	3.6	17.8	31.3	0.5
	80+	19.3	31.7	1.8	20.9	33.5	2.2	13.4	24.7	0.4
	15–59	60.2	82.8	10	65.1	85.5	13.1	47.4	75.9	1.6
	60+	39.1	60.5	4.9	43.1	65.4	6.1	25.0	42.9	0.9
	Total	37.5	51.6	22.3	40.0	52.5	26.7	30.2	48.9	1.0
2001**	60–69	47.5	69.7	26.3	53.0	76.0	31.4	30.8	51.1	11.0
	70–79	31.6	49.3	13.3	35.4	54.1	15.8	20.2	34.4	6.2
	80+	21.3	34.6	8.6	23.3	36.8	10.0	15.4	27.8	4.7
	15–59	61.1	80.7	40.0	66.8	83.4	49.5	48.0	74.9	17.6
	60+	40.3	60.3	20.9	45.0	65.6	24.9	26.2	44.1	9.0
	Total	39.1	51.7	25.6	41.7	52.1	30.8	32.3	50.6	11.9
2011	60–69	49.1	69.8	28.9	55.5	76.7	35.1	33.8	53.7	13.7
	70–79	32.4	49.0	16.0	37.1	54.8	19.4	21.0	34.5	8.0
	80+	22.1	34.9	10.9	24.4	37.1	12.8	16.9	29.5	6.7
	15–59	58.5	78.4	37.4	63.0	79.8	45.4	49.5	75.7	21.4
	60+	41.6	60.4	23.4	47.1	66.4	28.4	28.5	46.1	11.3
	Total	39.8	53.3	25.5	41.8	53.0	30.0	35.3	53.8	15.4

\*Excluding Jammu and Kashmir.

\*\*The population of Manipur state by sex includes the estimated population of Mao Maram, Pao Mata, and Purul subdivisions of Senapati district.

Note. T = Total (persons), M = Male, F = Female.

Source: Computed from Census of India, 1991–2011.

**Table 5.** Living arrangements among the elderly population in India, 2011.

Household size	Place of residence	Number of aged persons 60 years and above					
		1		2		3	
		Male	Female	Male	Female	Male	Female
Household size 1	Total	2.52	6.75	0	0	0	0
	Rural	2.78	7.54	0	0	0	0
	Urban	1.92	4.99	0	0	0	0
Household size 2	Total	5.89	3.72	21.70	22.28	0	0
	Rural	6.03	3.73	23.03	23.54	0	0
	Urban	5.58	3.68	18.22	18.98	0	0
Household size 3	Total	5.46	4.01	8.55	8.65	15.74	22.21
	Rural	5.08	3.90	8.46	8.52	15.79	21.91
	Urban	6.31	4.26	8.80	9.00	15.63	22.92

Source: Computed from Census of India, 2011.

elderly in terms of living arrangements. The condition is worse for females as they outlive their male partners.

Table 5 shows that around 6.75% of women aged 60 years and above live alone in India. The share is significantly higher among women as compared to men in both rural and urban areas. It is also found that around 22.28% of elderly women are coresiding with an elderly person and 22.21% are coresiding with two elderly persons in a family; the percentages for men are 21.7 and 15.74 respectively. The majority are living with their spouse alone or with their unmarried siblings and taking care of each other. This study shows that having no children or the fact that children have migrated for a job or marriage are the most probable reasons that elderly people live alone. Other reasons are incompatibility among family members, not being willing to migrate, and a preference to live independently by choice.

## Discussion and policy imperatives

Debates on social networks indicate that social relationships are widely acknowledged to be an important predictor of psychological well-being (Fung, Carstensen, & Lang, 2001). In this study, social networks have been described through several dimensions (marital status, share of female population in the occupational cohorts, old-age-dependency ratio, living arrangements, and potential support ratio). In old age, people experience both physical and societal limitations that widely control their liabilities which fluctuate from society to society. In India, older women especially widowed women are more vulnerable physically, socially, and financially. Two main reasons are given for the marked gender disparity of widowhood in India: (a) the longer life span of women than of men, and (b) the general tendency in India for women to marry men older than themselves (Gulati & Rajan, 1999). In Indian settings, patriarchy is a social system in which women are suffering in terms of social, economic, and cultural societal restraints. More accurately,

patriarchy decreases the possibilities of social interaction in later life. In this study, a substantial association was reported between marital status and the aging process in different age groups. This study also found that being separated and being divorced are equally responsible for multiple constraints in later years. Nevertheless, in the recent past, the Indian family structure has been altering due to rapid growth in unemployment, urbanization, migration, and globalization. Moreover, rapid urbanization has influenced western culture, lifestyle, and growing individualism, which have had their impact on traditional family values. Another essential variable of these analyses points out that large numbers of older women are living alone, which suggests a lack of social relationships and support systems.

Adhering to the legal provisions, the Indian government has formulated several schemes and policies aimed at improving the welfare and maintenance of the elderly population. The Constitution of India directs the government to take up the responsibility of the welfare of the aged population. Article 41, a Directive Principle of State Policy, has directed that the State shall, within the limits of its economic capacity and development, make effective provision for securing the right of public assistance in cases of old age. In 1991, the Government of India (GOI) enforced an Integrated Programme for Older Persons (IPOP) to improve the quality of life of citizens aged 60 years and above by providing them basic amenities, care homes, and Medicare centers. Subsequently, in 1999, the National Policy on Older Persons (NPOP) was formulated and implemented to envisage state support for the elderly population; this was revised in 2011. Globally, October 1 has been declared International Day of Older Persons (IDOP); it aims to endorse pathways of equal opportunities and reduce disparities in later years. To promote GOI's idea of sustainable aging, other ministries such as the Ministry of Finance, Ministry of Home Affairs, Ministry of Rural Development, Ministry of Health, and Family Welfare have also extended their benefits in support of the older population. Instead of implementing several Acts, policies, and schemes, most of them have failed to achieve success, thus pointing toward the need for affirmative action by the government.

Addressing old-age financial security, the World Bank (2008, n.d.) developed the five-pillar pension framework as a guiding tool. The National Social Assistance Programme (NSAP) as a form of zero pillar which focuses on minimal level of social protection provides financial assistance from ₹200 per month to ₹500 per month for below poverty line (BPL) citizens under the scheme of the Indira Gandhi National Old Age Pension Scheme (IGNOAPS) and the Indira Gandhi National Widow Pension Scheme (IGNWPS). However, the Indian government suffered several problems in the first and second pillar due to a huge fiscal burden and major investment in debts. As a voluntary form of pension, the National Pension Scheme, mutual funds and insurance companies' plans, and the Public Provident Fund are the form of third pillar in India.

The fourth pillar which includes access to informal support, other formal social programs and other individual financial and non-financial assets has low penetration in India due to the firm family structure in India (Janani & Agarwal, 2017). In pursuance to the findings of the study, it is recommended that India should implement policies keeping in focus the increasingly female and disproportionately vulnerable aging population. Attention should also be given to old widowed women, as they are more prone to financial constraints and health issues and less likely to have access to medical facilities. There is a need for laws to ensure financial security, more independence for older women, and less discrimination against widowed women in society. By promoting education of women and girls and encouraging female workforce participation, a country can empower elderly women and make them less dependent on their husbands or families for their income in the future.

### ***Suggestions and way forward***

In the recent past, concern has been growing for the older cohorts as the key area of attention to both the aging planners and the policy formulators. In the wake of economic depression, a majority of older adults are unable to experience late-life security; inadequate access to ample institutional support systems and sympathetic health-care services, limited pension accessibility, and inaccessible caregivers have become more acute problems for older women. The major objective of this study was to discuss the gendered dimension of population aging and the role of social networks in measuring the standard of life in old age. Financial vulnerabilities, fluxes in marital relationships, and growing incidences of dependency have caused interpersonal relationships and social interaction to deteriorate. On a serious note, this is weakening the nature of support systems, with critical questions about social networks and their functionality and accountability for older adults, especially older women. It can be concluded that there is an utmost need to generate concrete policy initiatives and action plans to reduce the intensity of the grave concerns among the elderly and to promote the outlines of social coverage. This suggests that it is important to encourage both government agencies and societies to reduce depressive symptoms in the elderly by strengthening protective means for sustainable aging.

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## References

- Agarwal, A., Lubet, A., Mitgang, E., Mohanty, S., & Bloom, D. E. (2016). Population aging in India: Facts, issues, and options, *IZA Discussion Paper* No. 10162. Retrieved from <http://ftp.iza.org/dp10162.pdf>
- Ahuja, R. (2003). Old-age income security for the poor. *Economic and Political Weekly*, 38(37), 3873–3875.
- Berg, A. I., Hoffman, L., Hassing, L. B., McClearn, G. E., & Johansson, B. (2009). What matters, and what matters most, for change in life satisfaction in the oldest-old? A study over 6 years among individuals 80+. *Aging & Mental Health*, 13(2), 191–201. doi:10.1080/13607860802342227
- Berkman, L. F., Sekher, T. V., Capistrant, B., & Zheng, Y. (2012). Social networks, family, and care giving among older adults in India. In *Aging in Asia: Findings from new and emerging data initiatives* (pp. 261–278). The National Academies Press; Washington (DC), USA
- Bhatia, H. S. (1983). *Aging and society: A sociological study of retired public servants*. Udaipur, Rajasthan, India: The Arya Book Centre Publishers.
- Bowling, A., Grundy, E., & Farquhar, M. (1995). Changes in network composition among the very old living in inner London. *Journal of Cross-cultural Gerontology*, 10, 331–347. doi:10.1007/BF00972333
- Bryant, C., Bei, B., Gilson, K., Komiti, A., Jackson, H., & Judd, F. (2012). The relationship between attitudes to aging and physical and mental health in older adults. *International Psychogeriatrics*, 24(10), 1674–1683. doi:10.1017/S1041610212000774
- Chachamovich, E., Fleck, M., Laidlaw, K., & Power, M. (2008). Impact of major depression and subsyndromal symptoms on quality of life and attitudes toward aging in an international sample of older adults. *Gerontologist*, 48(5), 593–602. doi:10.1093/geront/48.5.593
- Chou, R. J. A., & Choi, N. G. (2011). Prevalence and correlates of perceived workplace discrimination among older workers in the United States of America. *Ageing & Society*, 31(6), 1051–1070. doi:10.1017/S0144686X10001297
- Fung, H. H., Carstensen, L. L., & Lang, F. R. (2001). Age-related patterns in social networks among European Americans and African Americans: Implications for socio-emotional selectivity across the life span. *The International Journal of Aging and Human Development*, 52(3), 185–206. doi:10.2190/1ABL-9BE5-M0X2-LR9V
- Government of India (GOI). (1961–2011). 'Census of India', Registrar General and Census Commissioner, Government of India., New Delhi, India
- Gray, A. (2009). The social capital of older people. *Ageing & Society*, 29(1), 5–31. doi:10.1017/S0144686X08007617
- Gulati, L., & Rajan, S. I. (1999). The added years: Elderly in India and Kerala. *Economic and Political Weekly*, 34(44), 46–51.
- Gupta, R. (2009). Systems perspective: Understanding care giving of the elderly in India. *Health Care for Women International*, 30(12), 1040–1054. doi:10.1080/07399330903199334
- HelpAge India Report. (2018). *Elder abuse in India – 2018 changing cultural ethos & impact of technology*. Retrieved from <https://www.helpageindia.org/wp-content/uploads/2018/08/ELDER-ABUSE-IN-INDIA-2018-A-HelpAge-India-report.pdf>
- HelpAge International. (2010). *Unreported lives: The truth about older people's work*. London, UK: Author. Retrieved from <http://www.helpage.org/what-we-do/work/>

- HelpAge International. (2019). *FAIR guidelines: Four steps towards a UN convention on the rights of older people*. London, UK. Retrieved from <https://www.helpage.org/resources/publications/>
- House, J., Robbins, C., & Metzner, H. (1982). The association of social relationships and activities with mortality: Prospective evidence from the Tecumseh community health study. *American Journal of Epidemiology*, 117, 384–396. [http://mospi.nic.in/sites/default/files/publication\\_reports/nss\\_rep574.pdf](http://mospi.nic.in/sites/default/files/publication_reports/nss_rep574.pdf)
- International Labour Organization. (2018). *Care work and care jobs for the future of decent work*. Geneva, Switzerland.
- International Labour Office (ILO). Retrieved from [https://www.ilo.org/global/publications/books/WCMS\\_633135/lang-en/index.htm](https://www.ilo.org/global/publications/books/WCMS_633135/lang-en/index.htm)
- Jadhav, A., Sathyanarayana, K. M., Kuma, S., & James, K. S. (2013). *Living arrangements of the elderly in India: Who lives alone and what are the patterns of familial support*. Busan, Korea: IUSSP.
- Janani, R., & Agarwal, S. (2017). *Demographic Dividend: Is India ready for its economy that will age? Contemporary Concern Study* (Unpublished manuscript). Indian Institute of Management, Bangalore (IIMB), India.
- Jyotsna, M. K., & Jamuna, D. (2011). Aging of Indian women in India: The experience of older women in formal care homes. *Journal of Women & Aging*, 23(3), 203–215. doi:10.1080/08952841.2011.587730
- Kinsella, K. (2000). Demographic dimensions of global aging. *Journal of Family Issues*, 21(5), 541–558. doi:10.1177/019251300021005002
- Knodel, J., Chayovan, N., & Siriboon, S. (1992). Impact of fertility decline on familial support for the elderly: An illustration from Thailand. *Population and Development Review*, 18(1), 79–103. doi:10.2307/1971860
- Knodel, J., & Ofstedal, M. B. (2003). Gender and aging in the developing world: Where are the men? *Population and Development Review*, 29(4), 677–698. doi:10.1111/padr.2003.29.issue-4
- Kothari, J. (2014). A social rights model for social security: Learning's from India. *Law and Politics in Africa, Asia and Latin America*, 47(1), 5–21.
- Kumar, S. V. (2003). Economic security for the elderly in India. *Journal of Aging & Social Policy*, 15(2–3), 45–65. doi:10.1300/J031v15n02\_04
- Lancee, B. (2012). The economic returns of bonding and bridging social capital for immigrant men in Germany. *Ethnic and Racial Studies*, 35(4), 664–683. doi:10.1080/01419870.2011.591405
- Litwin, H., & Stoeckel, K. J. (2013). Social networks and subjective wellbeing among older Europeans: Does age make a difference? *Ageing & Society*, 33(7), 1263–1281. doi:10.1017/S0144686X12000645
- Mangubhai, J. P., & Capraro, C. (2015). 'Leave no one behind' and the challenge of inter-sectionality: Christian Aid's experience of working with single and dalit women in India. *Gender & Development*, 23(2), 261–277. doi:10.1080/13552074.2015.1054206
- Mohapatra, T. (2012). Problems of elderly widows in Odisha: An empirical study. *Indian Journal of Gerontology*, 26(4), 549–563.
- National Sample Survey Organisation. (2014). *Health in India, 2014: NSS 71st Round January – June 2014*, (Report No. 574 71/25.0). Author. Retrieved from [http://mospi.nic.in/sites/default/files/publication\\_reports/nss\\_rep574.pdf](http://mospi.nic.in/sites/default/files/publication_reports/nss_rep574.pdf)
- Olofsson, J., Padyab, M., & Malmberg, G. (2018). Health disparities in Europe's ageing population: The role of social network. *Global Health Action*, 11(1), 1445498. doi:10.1080/16549716.2018.1445498
- Paltasingh, T., & Tyagi, R. (2012). Demographic transition and population ageing: Building an inclusive culture. *Social Change*, 42(3), 391–409. doi:10.1177/0049085712454053
- Pandey, M. K. (2009). On ageing health and poverty in rural India, *ASARC working paper 2009/14*. Delhi, India: Institute of Economic Growth. Retrieved from <https://pdfs.semanticscholar.org/ae78/db6921616410d2ebfb3abc21e1cf5ace7d08.pdf>

- Pandey, M. K., & Jha, A. K. (2012). Widowhood and health of elderly in India: Examining the role of economic factors using structural equation modelling. *International Review of Applied Economics*, 26(1), 111–124. doi:10.1080/02692171.2011.587109
- Premi, M. K. (2009). *India's changing population profile* (pp. 202–203). New Delhi, India: National Book Trust.
- Rajan, S. I., & Mishra, U. S. (1999). *India's elderly burden or challenge* (pp. 140–141). New Delhi, India: Sage Publication.
- Rajan, S. I., Risseuw, C., & Perera, M. (Eds.). (2008). *Institutional provisions and care for the aged: Perspectives from Asia and Europe* (pp. 115–116). New Delhi, India: Anthem Press.
- Rennemark, M., & Hagberg, B. (1997). Social network patterns among the elderly in relation to their perceived life history in an Eriksonian perspective. *Aging & Mental Health*, 1(4), 321–331.
- Richardson, T. M., Friedman, B., Podgorski, C., Knox, K., Fisher, S., He, H., & Conwell, Y. (2012). Depression and its correlates among older adults accessing aging services. *American Journal of Geriatric Psychiatry*, 20(4), 346–354. doi:10.1097/JGP.0b013e3182107e50
- Stephen, K. (2009). Equal pensions, equal rights: Achieving universal pension coverage for older women and men in developing countries. *Gender and Development*, 17(3), 377–388.
- Subaiya, L., & Bansod, D. W. (2011). demographics of population ageing in India: Trends and differentials, *BKPAI working paper No. 1*. United Nations Population Fund (UNFPA), New Delhi, India. Retrieved from [https://www.researchgate.net/publication/316605954\\_Demographics\\_of\\_population\\_ageing\\_in\\_India](https://www.researchgate.net/publication/316605954_Demographics_of_population_ageing_in_India)
- Tabellini, G. (2000). A positive theory of social security. *Scandinavian Journal of Economics*, 102(3), 523–545. doi:10.1111/sjoe.2000.102.issue-3
- UN Women. (2015). *Progress of the world's women 2015–2016: Transforming economies, realizing rights*. Retrieved from [http://progress.unwomen.org/en/2015/pdf/UNW\\_progressreport.pdf](http://progress.unwomen.org/en/2015/pdf/UNW_progressreport.pdf)
- Van den Heuvel, W. J. (2012). Discrimination against older people. *Reviews in Clinical Gerontology*, 22(4), 293–300. doi:10.1017/S095925981200010X
- Velkoff, V., & Lawson, V. (1998). *International brief: Gender and aging. U.S. department of commerce, economics, and statistics administration*. Washington, DC: Bureau of the Census.
- Wenger, G. C. (1997). Social networks and the prediction of elderly people at risk. *Aging & Mental Health*, 1(4), 311–320. doi:10.1080/13607869757001
- Willigen, J. V., & Chadha, N. K. (2003). Social networks of old people in India. *Journal of Aging & Social Policy*, 15(2–3), 109–124. doi:10.1300/J031v15n02\_07
- Willigen, J. V., Chadha, N. K., & Kedia, S. (1995). Personal networks and sacred texts: Social aging in Delhi, India. *Journal of Cross-cultural Gerontology*, 10, 175–198. doi:10.1007/BF00972239
- World Bank. (2008/n.d.). Retrieved from [http://siteresources.worldbank.org/INTPENSIONS/Resources/3954431121194657824/PRPNoteConcept\\_Sept2008.pdf](http://siteresources.worldbank.org/INTPENSIONS/Resources/3954431121194657824/PRPNoteConcept_Sept2008.pdf)
- World Health Organization. (2007). *WHO, global report on falls prevention in older age?* Retrieved from <https://extranet.who.int/agefriendlyworld/wp-content/uploads/2014/06/WHO-Global-report-on-falls-prevention-in-older-age.pdf>
- Wurm, S., & Benyamini, Y. (2014). Optimism buffers the detrimental effect of negative self-perceptions of ageing on physical and mental health. *Psychology & Health*, 29(7), 832–848. doi:10.1080/08870446.2014.891737
- Zhou, J., & Walker, A. (2016). The need for community care among older people in China. *Ageing & Society*, 36(6), 1312–1332. doi:10.1017/S0144686X1500034

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