

# Exploring Functional Independence in Elderly Population: A Study with Special Reference Malappuram District

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## Abstract

Globally, people are living longer. Most people nowadays are expecting living into their sixties and beyond. The number of elderly people in every nation on the earth is increasing, as is their share of the total population. Opportunities arise from living longer, not just for elderly individuals and their families but also for whole societies. An extra year offers the opportunity to explore new interests, a new job, or a long-neglected passion. Elderly individuals also make numerous contributions to their communities and families. The study aims to determine older people's functional independence, acknowledging that it is everyone's societal duty to respect and defend their right to autonomy and independent. The functional independence toward a healthy aging process was measured by analysing social, psychological, economical, and physical independence. The quantitative portion of the study was conducted using a cross-sectional survey methodology, while the qualitative data was obtained using an interview schedule. Primary data was gathered via multi-stage sampling. Mean value of the responses of each category is calculated separately. An index for each category's mean value is calculated. Most respondents are financially, socially, and physically independent, according to the information gathered. Factors including age, gender, work situation, family support, financial status, and educational background have a big impact on this. Most of them can make decisions on their own and managing their everyday activities on their own. Even if they are self-sufficient, many nevertheless encounter obstacles that might lower their standard of living. A sizable percentage still depends on their kids to provide for them financially. The main issues they deal with include physical health issues, social alienation and isolation, lack of digital awareness, financial insecurity, and inaccessibility to healthcare services.

## Key words

Aging, Physical independence, financial independence, psychological independence, social independence, functional independence.

## Introduction

The population is living longer, birth rate is dropping. Population aging has emerged as one of the most significant societal trends of the twenty-first century due to the quick expansion of the economy and society as well as the ongoing advancements in medical science. According to the World Population Prospects 2022, the population over 65 is increasing at a greater rate than the population under 65. By 2050, 16% of the world's

population will be 65 years of age or older, up from 10% in 2022. (Liu et al 2024). By 2030, one in six people on the planet will be 60 years of age or older. By now, there will be 1.4 billion people aged 60 and beyond, up from 1 billion in 2020. The number of adults 60 and older worldwide is expected to increase to 2.1 billion by 2050. By 2050, there will be 426 million people 80 years of age or older, a threefold increase from 2020 (WHO 2023)

The World Health Organization (WHO) has proclaimed the current age the "Decade of Healthy Aging" due to the increase in the number of older people worldwide and the recent increase in life expectancy. (Amuthavalli Thiyagarajan et al., 2022). In the developing countries, the growth of older population is occurring more rapidly due to faster pace of fertility decline that has resulted from the success of reproduction health and family planning programmes. (Chanana, Talwar 2000). These changes will have impact upon all aspects of human life; from family composition, living arrangements and social support, economic activity, employment rates and social security and inter generational transfers (Bond, Peace et al 2007).

Aging can often reduce an individual's independence. Elderly people cannot realistically expect more from society and their family members in light of the altered socioeconomic conditions. Elders need to be encouraged to become self-sufficient in all areas of their lives, including social, medical, financial, and emotional, in order to live a comfortable and dignified existence in the rapidly evolving world of today. (Agewell foundation 2023)

Due to socioeconomic development, Kerala is entering the third and fourth phases of the demographic transition at a different pace than other Indian states. Notably, the state has a high life expectancy, a low death rate, and a low birth rate. Consequently, the proportion of older people in the population has increased, growing the demographic cohort. The requirements and problems brought up by the aging population eventually fall under the purview of the state.

## **Aging**

The term "aging" describes a condition in which an individual endures structural changes in their social, economic, and cultural lives in addition to losing their physical capabilities. The mindsets of the elderly varied; thus, these changes appropriately provide both opportunities and tragedies. New Handbook of Biology of Ageing (2010) defines ageing "as the process of systems deterioration with time" (page. 7). In India, the Census Reports classify a person aged 60 or over as aged. They are further regrouped into three categories viz., young-old (60-69), old-old (70-79) and oldest-old (80+). Most older people in every nation take an optimistic step to join the labour when there is a lack of young workers in the global economy. Considering this, the United Nations declared October 1, 1999, the year that the world's population surpassed 6 billion, to be the "International Year for Older Persons as on October 1st, 1999."

## **Significance of the study**

According to the 2011 Indian census, Kerala has not seen any increase in population as it transitions from the end of the third to the beginning of the fourth stage of the demographic transition. Notably, from 2001 to 2011, the annual growth rate was 0.43 % and the decadal growth rate was 4.86 % (Economic survey 2022).

The decadal growth rate for the state's over-60 population increased from 5.8% in 1961 to 12.6% according to 2011 census. Malappuram district has the lowest %age of elderly residents ,8.4 % out of all fourteen districts, according to an assessment by the state planning board. So, Malappuram district is selected as study the area. The state's old age reliance ratio increased to 19.64 % in 2011 from 11.3 % in 1961, significantly higher than the national average, which increased to 14.2 % from 10.9 % in 1961(Economic survey 2022). Elderly individuals can contribute socioeconomically to many aspects of society and are ready and willing to work. As a result, the productive economic activities of older adults can mitigate several issues such as changing social roles, physical and financial reliance, feelings of isolation and poverty, and more.

Kerala has implemented numerous programs for aged care to support healthy aging and the wellbeing of older adults. With medical advancement, increased healthcare awareness and economic progress in India, many older persons, particularly young older persons (age group of 60-70 years) are living longer and enjoying independence in old age. In this regard, a comprehensive view of the aging population's independence evolves into a crucial compass directing societies in the right way of the future. Recognizing that it is everyone's societal duty to respect and defend older people's right to independence and autonomy, the study endeavors to identify their functional independence, physical, financial, psychological, and social independence were analyzed to measure the functional independence towards a healthy aging.

## Review of literature

Population ageing, or the increase in the number of individuals over 65 in absolute terms, both relative to the younger population and as a %age of the total population, is one of the most significant demographic transitions — and societal changes — of the twenty-first century. (United Nations, 2015). The elderly population has its own vulnerabilities based on their socio-economic conditions like income, gender place of residence, education. (Malik, Khanna, et al 2021). Elderly people who are physically independent can enjoy busy, satisfying lives with less stress on caregivers and lower healthcare expenses (Age well foundation 2023). As life expectancy rises, healthcare expenses rise, and family relationships change, it is imperative that older persons have sufficient financial resources. (Age well foundation 2023). If older people make economic contributions and healthcare systems change to meet evolving health demands, the economic effects of aging may be negligible. (Stoodley, & Conroy 2024). Social pension can enable older persons enhance their social status and have a role in the decision making in families (The World Health Organisation 2015).

Socially independent elderly individuals often experience greater self-esteem, a stronger sense of purpose, and improved resilience in facing life's challenges (Alpass, Towers, et al 2007) One important aspect of good aging that many older persons cherish is increasing their social activity. However, rather than concentrating on programs that help older persons connect with their community, many service providing organizations tend to fulfil the specific physical needs. Social participation as a sign of good aging. baseline social activity has a beneficial correlation with both mental and physical health (Douglas, Georgiou, et al 2016).

In older age, maintaining psychological independence is essential for overall quality of life, life satisfaction, and mental health (Ferreira, Maciel et al 2012). 13 % of senior people in India lived with their spouse alone, 2 % were single, and the remaining eighty-five % shared a home with their children. For the care and support

of India's elderly population, this suggests that the family will remain an important social structure (Golondaj, Javeed et al 2013). Functional independence helps older people become more integrated into the society by fostering friendship, leisure, and social and familial ties—all of which are seen to be indicators of an active aging process. (Ferreira, Maciel et al 2012).

People may have a variety of neurological and psychological issues as they age. This trend is also observed in India, as it is in numerous other nations, necessitating the need to address the specific challenges faced by the aging population. In India, a thorough approach required to involve the professionals in health care, policy makers, families and the community to enhance the psychological, and behavioural well-being of aged population (Pandey& Singh 2024). As one grows old, they face many problems such as family crises, stress from children's problems, negative attitudes from children, and cultural changes. It is necessary to provide them with emotional support, which includes encouraging them to volunteer in order to feel more connected, fostering the idea of self-care and self-love, communicating through technology, putting in place intergenerational programs to foster emotional support among various age groups, and working with neighborhood organizations. (Zainuddin, Faizah & Hamidi et al 2025).

## Objective of the Study

To assess functional independence of the elderly population in the society.

## Hypothesis

Social and economic factors have an influence on the level of independence of elderly population.

## Data source and methodology

Both quantitative and qualitative approaches for attaining the objective. A cross-sectional survey design was adopted for the quantitative part of the study and interview schedule was used to get qualitative information. Multi-stage sampling was adopted to collect primary data. Data collected from 6 blocks out of 15 blocks by using lottery method. In each block respondents were chosen through snowball sampling technique. Various census reports economic survey economic reviews were considered for secondary data. Considering the proportion of older persons in Malappuram district as 8.4% according to 2011 census, the minimum sample size required was 118 based on the sample formula

$$n = z_{\alpha}^2 pq/d^2 \quad (1)$$

where  $z_{\alpha}$  as 1.96,  $p$  as 8.4,  $q$  as 91.6 (100–8.4) and  $d$  as 5. Individuals over 60 who were long-term inhabitants of the chosen area and did not suffer from any chronic disabilities, were covered by the research. The study aims to assess the psychological, financial, physical, and social independence of elderly population. For this mean value of the responses of each category is calculated separately. Using the following formula, an index is created for the mean value of each category.

$$\frac{\text{Actual value} - \text{Minimum Value}}{\text{Maximum value} - \text{Minimum Value}} \times 100 \quad (2)$$



Those who gets index above 30 has been considered as independent in each catagory. To analyse the observations one-way Anova, Regression analysis, Chi-square test, correlation techniques were adopted.

## Financial independence

The financial independence of the elderly has emerged as a crucial social and economic issue. Financial independence refers to the ability of individuals to support themselves financially. For the elderly, this independence is often closely related to their quality of life, dignity, and sense of self-worth. For measuring financial independence factors like their present financial status, management of assets, decision making in financial matters, health insurance was analyzed. Pension or family pension, assistance from their children, salary/job rent interest on deposits are the main source of income. Of the total response majority 62.71 claim that they are financially independent.

Table 1: Mean and F value of financial independence

Demographic factors		Mean	F value	Significance
Sex	Male	49.7	7.762	0.002
	Female	34.79		
Age	60-70	48.54	1.345	0.261
	70-80	47.46		
	80-90	43.35		
Educational Qualification	No formal education	28.46	2.8	0.02
	Primary	34.5		
	Secondary	45.56		
	Pre-degree	38.45		
	Graduate	64.53		
Marital Status	Postgraduate	64.13	0.878	0.455
	Married	43.23		
	Not Married	53.28		
	Widow/Widower	43.18		
	Government Sector	52.34		
Previously employed	Private Sector	39.09	7.9	0.002
	Self employed	48.64		
	Abroad	42.46		
	Business	39.45		
Presently employed	Not employed	23.56	30.51	0.001
	Yes	65.8		
	No	35.68		
Income	Below 25000	19.46	30.94	0.001
	25000-50000	26.05		
	50000-75000	52.24		
	above 75000	68.46		

Field Survey

The degree of financial independent index is significantly affected by the factors like sex, educational qualification, previously employed, presently employed and income since F value is significant at 5% significance level. Male category is more financially independent (49.7) than female category (34.79). According to Table 1, respondents with a Graduate degree had the highest level of financial independence (64.53), followed by those with post graduate degree (64.13%), secondary education (45.56). Financial independence is high for those who were previously employed in government sector (52.34) followed by self-employed (48.64), abroad (42.46), private sector (39.09). The result shows that more the income more will be financial independence. Financial independence is correlated with the present status of employment. It is very high for those who are presently employed (65.8) than those who are not employed (35.68). The degree of financial independence exhibited by the various age groups does not significantly differ. And marital status does not have any significant impact on financial independence.

### Social independence

As people grow old, maintaining social independence becomes a crucial factor. Social independence means the ability of elders to engage in meaningful relationships, participate in community activities, and make decisions about their social interactions without excessive reliance on their family members. To analyse social independence three factors were analysed, participation in social, political, cultural and religious activities, membership in various clubs, hobby groups, cultural centres and access to social media.

More than half of the response are socially independent 52.56 %. Major constraints towards Social independents are family restrictions (21.6%), bad health Conditions (49.56%) and lack of interest (28.84).

Table 2: Mean and F value of social independence index

Demographic factors		Mean	F value	Significance
Sex	Male	57.84	12.68	0.002
	Female	35.44		
Age	60-70	62.34	55.07	0.000
	70-80	52.31		
	80-90	31.11		
Educational Qualification	No formal education	47.16	0.39	0.855
	Primary	47.26		
	Secondary	46.78		
	Pre-degree	40.73		
	Graduate	39.09		
Marital Status	Postgraduate	51.24	0.742	0.529
	Married	56.63		
	Not Married	48.43		
Previously employed	Widow/Widower	28.21	0.433	0.765
	Government Sector	43.43		
	Private Sector	51.36		
	Self employed	41.46		

Presently employed	Abroad	46.62	54.06	0.003
	Business	48.46		
	Not employed	46.62		
	Yes	61.14		
	No	42.21		
Income	Below 25000	47.44	1.151	0.304
	25000-50000	37.64		
	50000-75000	44.13		
	above 75000	48.44		

Field Survey

As per table 2, Social independence is statistically different for different age groups. Value is highest for the age group 60-70 (62.34) followed by 70-80 (52.31) and 80-90 (31.11). Sex does have an impact on social independence. Social independence is high for presently employed response (61.14) than not presently employed (42.21). Income does have a positive impact on social independence. As per the information gathered educational qualification, previous employment status, marital status does not have any impact on social independence since P value is not statistically significant at 5% significance level.

### Psychological independence

The ability of an older adult to keep control over their ideas, feelings, and decision-making is known as psychological independence. Individuals' feeling of control and self-worth may be affected by conditions when they grow old, such as retirement, changes in their health, loneliness etc. Psychological independence was analyzed using the dimensions like extension of decision making in the family, control over own time and activities, and personal freedom and autonomy. 66.11 % of the response are psychologically independent.

Table 3: Mean value and F value of psychological independence

Demographic factors		Mean	F value	Significance
Sex	Male	42.44	1.09	0.369
	Female	46.44		
Age	60-70	53.4	8.66	0.023
	70-80	47.67		
	80-90	41.44		
Educational Qualification	No formal education	38.65	12.02	0.034
	Primary	32.42		
	Secondary	40.62		
	Pre-degree	45.73		
	Graduate	58.42		
Marital Status	Post-Graduate	56.78	0.498	0.684
	Married	45.21		
	Not Married			
	Widow/Widower			

Previously employed	Government Sector	25.52	3.289	0.008
	Private Sector	33.81		
	Self employed	37.27		
	Abroad	38.46		
	Business	43.73		
Presently employed	Not employed	29.43	45.44	0.009
	Yes	58.39		
	No	39.46		
Income	Below 25000	26.6	14.55	0.039
	25000-50000	46.4		
	50000-75000	41.87		
	above 75000	57.88		

Field Survey

Age, educational qualification, previously employed sectors, present employment status and income influences psychological independence. Psychological independence comparatively high for the age group 60-70 (53.4), followed by 70-80 (47.67) and (40.44) for the age group 80-90. It is high for graduates (58.42) followed by Postgraduate (56.78), pre-degree (45.73) secondary (40.62). There is a huge difference between those who are presently employed (58.39) and that of not employed 29.43. Psychological independence is high for those who have income more than one lakh and lowest for the income group 25000-50000.

### Physical independence

A crucial aspect of good aging is physical independence, which allows the elders to do their everyday tasks without depending on others. Maintaining strength, mobility, and capacity to do their daily activities as grow old is essential for maintaining one's dignity, quality of life, and general well-being. For measuring physical independence level of dependency in doing daily activities, dependency in movements, current health status was analysed. 73% of the respondents are living with their children, 22% are with their spouse and 5% are living alone. 64.61 % of the respondents are physically independent.

Table 4: Mean and F value of Physical independence

Demographic factors		Mean	F value	Significance
Sex	Male	58.08	8.316	0.031
	Female	50.2		
Age	60-70	68.4	2.169	0.004
	70-80	52.1		
	80-90	42.4		
Marital Status	Married	42.76	0.796	0.499
	Not Married	32.25		
	Widow/Widower	47.63		
Educational Qualification	No formal education	42.34	0.573	0.554
	Primary	46.78		



	Secondary	45.66		
	Pre-degree	52.45		
	Bachelor	52.3		
	Master	50.4		
	Government Sector	32.59		
Previously employed	Private Sector	52.52	3.722	0.004
	Self employed	41.68		
	Abroad	64.38		
	Business	65.7		
	Not employed	43.27		
Presently employed	Yes	48.44	0.003	0.994
	No	48.74		
Income	Below 25000	45.1	12.278	0.003
	25000-50000	42.59		
	50000-75000	51.24		
	above 75000	52.27		

Field survey

### Field survey

Sex and age have an impact on physical condition of the elderly population. Physical independence is high for male category (58.08) than the female category (50.2). It is also different for different age groups. (68.4) for the age group 60-70, (52.1) for the age group 70-80, (42.1) for the age group 80-90. Physical independent is significantly high for those who are previously in business (65.7), abroad (64.38), private sector (52.52). Income has a positive impact on physical condition. Physical condition is not related to marital status. Education qualification and present status of employment.

### Functional independence

Functional independence is measured by taking the average of psychological, financial, physical, and social independent index. The following regression analysis shows its effects on functional independence.

Table 5: Regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.121	.227		.535	.594
	Psychological independence	.214	.004	.311	54.586	.000
	Financial independence	.202	.003	.351	60.366	.000
	Social independence	.203	.003	.378	72.492	.000
	Physical independence	.189	.003	.333	58.513	.000

Dependent Variable: Functional independence

Independence in elderly population is positively affected by their psychological condition, their participation in social activities, their physical independence, and financial conditions. The social independence index ( $\beta = .378$ ,  $t = 72.49$ ) has the highest impact on functional independence followed by financial independence ( $\beta = .351$ ,  $t = 60.366$ ), the physical independence ( $\beta = .333$ ,  $t = 58.513$ ) and psychological independence ( $\beta = .311$ ,  $t = 54.586$ ).

## Conclusion

The findings indicate that most of the respondents are financially, socially, and physically independent. This is significantly influenced by factors such as education qualification, financial status, family support, employment status age, and gender. Majority of them can manage their daily activities independently and are able to take decision independently. Despite their independence, many face challenges that may affect their quality of life. Sizeable portion still relies on their children for financial a support. Financial insecurity, lack of gainful employment, lack of digital awareness, social exclusion and isolation, inaccessibility of healthcare service, physical health problems are the major challenges they face.

To enhance their well-being, interventions such as financial planning programs, stronger social support systems, and policies promoting elderly independence should be considered. Government should make government and private health institutions elderly friendly and must make health services more accessible to elderly especially door help care. Universal coverage of Old Age Pension and enumeration of eligible persons for pension should be taken care of. Addressing these issues can help sustainable and dignified living condition. The states and the community now have a significant task in addressing the problems of the elderly. The suffering that the elderly endure today can be ended by policy changes combined with societal awareness. The only way to solve the problem is to treat the elderly with dignity and respect. The situation can be made simpler by giving the rights of the elderly legal protection.

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