PREVALENCE OF FUNCTIONAL DEPENDENCE AMONG ELDERLY PEOPLE IN TIRUVALLUR DISTRICT OF TAMILNADU

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DECLARATION

I, Dr.S.GAYATHRI, solemnly declare that this dissertation, entitled **"PREVALENCE OF FUNCTIONAL DEPENDENCE AMONG ELDERLY PEOPLE IN TIRUVALLUR DISTRICT OF TAMILNADU**", has been prepared by me, under the expert guidance and supervision of **Prof. Dr. K.MARY RAMOLA, M.D.,** Professor and HOD, Department of Community Medicine, Government Kilpauk Medical College Hospital, Chennai and submitted in partial fulfillment of the regulations for the award of the degree M.D.(Community Medicine) by The Tamil Nadu Dr. M.G.R. Medical University and the examination to be held in May 2020. This study was conducted at Tiruvallur district of Tamilnadu. I have not submitted this dissertation previously to any university for the award of any degree or diploma.

Place: Chennai **(Dr.S.GAYATHRI)**

Date

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PLAGIARISM CERTIFICATE

This is to certify that this dissertation work titled **"PREVALENCE OF FUNCTIONAL DEPENDENCE AMONG ELDERLY PEOPLE IN TIRUVALLUR DISTRICT OF TAMILNADU**" of the candidate **DR.S.GAYATHRI** with registration number **201725201** for the award of MD in the branch of **COMMUNITY MEDICINE.** I personally verified the urkund.com website for the purpose of plagiarism check. I found that uploaded thesis file contains from introduction to conclusion pages and result shows **4** percentage of plagiarism in the dissertation.

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https://www.researchgate.net/publication/331301308_A_cross_sectional_study_on_the_prevalence_and_risk_factors_of_fall_among_the_elderly_in_an_urban_slum_in_Chennai
https://www.researchgate.net/publication/6114832_Functional_dependence_and_chronic_disease_in_older_Mexicans
73e4d2e7-6abd-421f-889d-d76a5c1b09a1
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6767957/

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LIST OF ABBREVIATIONS

ADL	**Activities of Daily Living**
IADL	**Instrumental Activities of Daily Living**
CAD	**Coronary Heart Disease**
NPHCE	**National Programme for Health Care of Elderly**
PHC	**Primary Health Care**
HSC	**Health Sub Centre**
MRSI	**Market Research Society of India**
SES	**Socio Economic Status**
OAP	**Old Age Pension**
CI	**Confidence Interval**
UNFDA	**Union Nations Population Fund**

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1.INTRODUCTION

Ageing is a common and permanent process, which is affected by biological, psychological, social, and environmental factors. The proportion of elders above 60 years is growing more rapidly than other age group in almost every country. People are living longer mainly due to decrease in fertility rates and mortality rate accompanied by increased life expectancy. Such is the rate of the demographic transition that by 2050, the older generation (aged 60 years and above) will outnumber those under 15 years of age and even make up more than one-fifth of the global population[1]. These demographic changes are progressing faster in the developing countries especially in India, which will soon become home to the world's second-largest population of over -60s[1].

According to the data from World Population Prospects: the 2019 Revision, the number of older persons -those aged 65 years or above is expected to more than double by 2050 and to more than triple by 2100, rising from 962 million globally in 2017 to 2.1 billion in 2050 and 3.1 billion in 2100[2].

Globally, the 60-plus population constitutes about 11.5 percent of the total population of 7 billion[3]. In India, the government has adopted a 'National policy on older persons' which defined senior citizen or elderly as a person aged 60 years and above[4]. The elderly constitute the fastest growing age segment while the children and working age segments reduce gradually. The current life expectancy at birth in India is 69 years[5] and the old age dependency ratio is 14.9 and 13.6 for women and men respectively[6]. The

old-age dependency rate is more than double in 50 years. The elderly women were more dependent on children than elderly men because the life expectancy of women were higher and traditionally they were married to older men thus were widowed at a younger age making them more vulnerable to physical and verbal abuse.

With the surge of globalization and industrialization, there was migration of youth to the urban areas which led to the disintegration of age old joint family system, thereby forcing the elderly to continue to work for their daily living. They are affected by situations of social exclusion, lack of opportunities to participate in development activities, extremely limited access to health care, non-existence or minimal development of pension systems, scarcity in the social service networks etc. These socio-economic issues are further aggravated by the lack of social security and adequate health care, rehabilitative and recreational facilities. In developing countries like India, the situation is made worse by the fact that pension and social security is largely restricted to those in the public sector or in the organised sector of industry[7]. Low levels of awareness about the various pensions which can be used as a tool against destitution also put the elderly at a disadvantage[1]

The experience of ageing is different across various geographic and national environments. Much success has been achieved in the control of public health problems leading to increased life expectancy. But this has been led down by the inadequacy of health and administrative systems around the world in ensuring equitable distribution of felt needs of the greying population.

The remarkable improvements in life expectancy over the past century were part of a shift in the leading causes of disease and death. At the dawn of the 20th century, the major health threats were infectious and parasitic diseases that most often claimed the lives of infants and children. Currently, noncommunicable diseases that more commonly affect adults and older people impose the greatest burden on global health.

Due to ageing, countries faces demographic and epidemiological transition. This transition led to increase in chronic diseases, cognitive impairment, sensory decline, social isolation and accidents, all of which can results in functional dependence in the elderly. Functional status gradually decreases as age increases[8]. There is strong association between ageing and greater risks of functional dependence. The functional dependence is associated with a multidimensional factors. If these factors are detected early, functional dependence may decrease.

Functional capacity is defined as the potential of elderly people to act independently in their daily living[9]. Functional dependence can be defined as the difficulty or need help to carry out their daily activities. Functional dependence is assessed by studying two domain: basic activities of daily living, otherwise called self-care activities and instrumental activities of daily living, otherwise called activities for maintaining the environment. National long-term care survey reported that there are 1.5 million elderly need help in daily activities[10] and 3.0 million elderly need help in one or more activities of daily living (ADL)[11]

Ageing can be a positive experience only if it is accompanied by good health and social support. Keeping this in view, World Health Organization (WHO) adopted the concept of “Active Ageing” in 2002, aiming to extend healthy expectancy and quality of life as people age. Maintaining autonomy and independence were key goals of “active ageing”

Attention to functional capacity and degree of dependency of the elderly appears as one of the main purposes of public policy and health care for this population. Assessment of functional capacity is fundamental, in order to prevent dependence and maintenance of autonomy.

2.JUSTIFICATION FOR THE STUDY

The elderly constitute the fastest growing age segment while the children and working age segments reduce gradually.

Most of them will be living in developing countries which are often least prepared to meet the challenges of rapidly ageing societies. This great achievement by the improvement in global health care brings with its greater responsibility, to the government by putting pressure on finances and social support system and to the individuals as there will be an increase in the number of elderly dependent on the working age group (old age dependency ratio), which is expected to double between 2010 and 2050 in Asian countries[12].

The elderly face a greater amount of ailments when compared to other age groups, especially in developing countries. They are susceptible to the life style diseases and dependency as well as the emerging and re-emerging infectious diseases.

The mixed profile of communicable and non communicable diseases among the elderly population in developing countries places a huge burden on the existing health care delivery system. The exorbitant costs of health care services often result in impoverishment of the family rather than improvement of the health of the elderly[13].

The ageing process leads to decrease in body stamina, immunity and may affect their bodily functions, their activities and participation in society[14]. They became dependent on other people or equipment, for their basic activities of daily living.

Functional capacity and degree of dependency of the elderly are the important indicator of their health status.

Functional status decreases with ageing process, which in turn affect health status of the elderly. The health problems and the content of health care services are different for the geriatric population. In the context of the increasing proportion of geriatric population in India, it is essential to have an understanding of the pattern of functional capacity and related factors to provide appropriate services. The elderly person's functional dependence is an important public health issue. Studies that address this issue are essential because they can inform and guide public health policies for the elderly

The functional capacity among the rural elderly, the variety of available health services in the rural areas, and the factors affecting the functional status are all very different from the urban population. There is a need for disaggregated data on the health status of elderly in the rural areas of, Tamil Nadu, since the available review is lacking in details of functional dependence and the related socioeconomic factors of rural elderly. Many studies regarding functional dependency among older population have been conducted in developed countries. However, very little data regarding the above aspects are available from developing countries.

It is possible to get more precise information on the functional ability of elderly and associated factors by well planned research only. Knowledge about the prevalence of functional dependence among elderly is important as it decreases the quality of life, increases the pressure on health care, demands long term care and cost and policy development. Hence this study will evaluate the functional dependence among elderly and its relationship with the key socioeconomic factors in a rural area of Tamil Nadu.

3.OBJECTIVES

- To estimate the prevalence of Functional dependence in elderly people
- To identify the factors associated with functional dependence in elderly people

4.REVIEW OF LITERATURE

4.1 Ageing

"Ageing is definitely no longer a first world issue. What was a footnote in the 20th century is on its way to becoming a dominant theme in the 21st. (Kofi Annan, UN Secretary General)"

Ageing is a privilege and a societal achievement. It is also a challenge, which will have an impact on all aspects of 21st century society. It is a challenge that cannot be addressed by the public or private sectors in isolation: it requires joint approaches and strategies. The major health problems of older people are chronic non-communicable diseases and functional dependency. Any strategy designed to improve the health of older people requires a firm understanding of the factors (chronic diseases, functional dependency) that contribute to the development of these diseases.

4.2 The Biology Of Ageing

All living beings age and have a finite life span. Ageing process encompasses changes over multiple physiological systems. There must be a plausible molecular level change that would explain the finite lifespan of various tissues. Various theories which attempt to explain ageing and mortality exist in abundance but they have been largely developed from studies in cell or animal models[15]. The various biological theories that attempt to explain ageing include the following:

1. Evolutionary Senescence Theory of Ageing:

It is the most widely accepted overall theory of ageing. The theory mainly focuses on the failure of natural selection to affect late-life traits. Thus, genes with harmful late-life effects may be continuously passed from one generation to another. Hence this theory is called the mutation accumulation theory[15].

2. Cross-linking or glycation hypothesis of ageing:

This is based on the observation that as we age, the proteins, DNA, and other structural molecules of our body develop inappropriate cross-links to one another. These links decrease the elasticity of protein and inhibits the activity of proteases resulting in defective proteins. Cross-linking of the skin protein collagen (partly responsible for wrinkling and other age-related dermal changes), cross-linking of lens proteins (causing age-related cataract) and cross-linking of proteins in the walls of arteries or the filtering systems of the kidney responsible for a part of atherosclerosis and age-related decline in kidney function are examples supporting the role of Cross-linking theory in ageing.

3. Oxidative damage/ Free Radical Hypothesis of ageing:

This suggests that the free radicals that escape the action of antioxidants cause oxidative damage that accumulates over time resulting in damage to DNA, proteins, mitochondria and ultimately causing ageing and diseases like cancer, CAD and Alzheimer's disease.

4. Wear and tear theory:

The Wear and Tear theory, put forward by Dr.August Weismann, a German biologist, in 1882 notes that cells and tissues have vital parts that wear out from repeated use, killing them and resulting in ageing[16].

5. Rate of Living theory of ageing:

This theory proposes that energy consumption limits longevity. In other words, an organism's metabolic rate determines its lifespan. This idea was consistent with the discovery that reactive oxygen species (free radicals), a by-product of normal metabolism, can damage cells and contribute to aging.

6. Replicative Senescence hypothesis of ageing:

This is based on the fact that human cells have limited reproducing capacity. That is, they can undergo up to 40- 60 divisions (Hayflick Limit) but then can divide no more. This limit is because of the shortening of the chromosomal telomeres due to cell division or oxidative damage. When telomeres become short, they can break, occasionally prompting inappropriate responses from DNA repair mechanisms. This can cause chromosomal damage or cell death, both of which may contribute to age-related diseases and conditions.

7. Neuroendocrine hypothesis of ageing:

This theory is based on the fact that the Hypothalamo-Pituitary Axis which regulates the body's hormone production becomes less functional, and this can lead to high blood pressure, impaired sugar metabolism, and sleep abnormalities.

None of these theories have been definitely able to explain ageing phenotypes in humans on their own. They have to be operationalized into feasible assessments and research in humans as longitudinal studies, in order to test the hypothesis that some of these processes are correlated with physiologic ageing over chronological age.

4.3 Effects Of Ageing On Health

Geriatrics requires an insight into the multi-dimensional effects of disease manifestations, consequences and response to treatment. In younger adults, diseases tend to have more clear cut signs and symptoms with well-defined risk factors; however, the same disease in older people may have a less distinct pathophysiology and are often due to failed homeostatic mechanisms of the body[17].

Systemic consequences of aging usually affect four main domains:

1. Body Composition: Increased Waist Circumference, steady decline in Lean Body Mass, loss of muscle mass and quality and loss of bone strength

2. Balance between Energy Availability and Energy Demand: Sick older people often use up all available energy to perform basic activities of daily living; causing an imbalance between energy demand and supply- resulting in chronic fatigue and activity restriction.

3. Signalling Networks that maintain Homeostasis: Decreasing sex hormone levels like oestrogen, testosterone, etc, as well as increasing inflammatory mediators and antioxidants will cause a dysregulation of the signalling network that maintains the body's homeostatic networks.

4. Neurodegeneration: Age related brain atrophy after the age of 60 years results in associated decline in cognitive and motor function- varying from mild cognitive impairment without disability to severe impairment and impaired coordination. Age related changes occurring in the autonomic system affect the cardiovascular and splanchnic system.

All these systemic changes develop in parallel and some affect each other through several feedback loops. Higher fat mass, leading to metabolic syndrome, is often associated with low testosterone levels, higher sex hormone binding globulin levels and increased levels of pro inflammatory markers. These cause an altered signalling mechanism leading to neurodegeneration. Insulin resistance is also associated with impaired cognitive function.

The ageing process results in an increased susceptibility to diseases, comorbidity and polypharmacy, low resistance to stress, high rates of disability, confounding diagnosis and loss of personal autonomy. Many chronic diseases increase in prevalence with age; with a single person usually having multiple chronic diseases- that may be due to increased susceptibility to co-occurring problems. Functional problems that pose difficulties or require help in performing basic activities of daily living (ADLs) increase with age and are more common in women than in men. Chronic diseases and functional dependence lead to increased use of health care facilities and this in turn leads to increased health care expenditure. However, latest innovations in medical technology

and expensive medicines exert a greater influence on health care costs than population aging itself[17].

4.4 DEMOGRAPHY OF AGEING:

4.4.1 The world scenario:

The world population is greying and the longevity which has been hailed as the success of social and technological advancements is now being looked upon as a bane by many societies. Demographic transition is a process by which the mortality and subsequently, the fertility have both decreased. As a result of this, there is a relative shift of population from younger to older age groups[18].Over the last half a century, the fertility rate across the world has declined by almost half, from 5 to 2.4 children per woman[12].It is expected to reach the replacement level of 2.1 children per woman over the next decade. In most of the industrialized countries the fertility rate is already well below the replacement level. In developing countries, a wide range of disparity in fertility levels persist, ranging from 4.7 in the African region to 2.7 over the South central Asia, South America and Caribbean region. This regional disparity is expected to decline as the fertility rate is decreasing in developing countries and a marginal increase is anticipated in developed countries. As the fertility rate decreases, the increase in life expectancy is determined by a decrease in mortality rate.

Globally, Life expectancy at birth for the world's population reached 72 years in 2019. Life expectancy at birth has increased globally from 60.2 years to 72 years over the past 5 decades[19]. These figures show a decrease in mortality rate that is marked by a stark

regional disparity. By 2045-2050 the life expectancy at birth is expected to be 82 years in developed countries and 75 years in developing and least developed countries[18]. This means more people will survive to an older age. Under the existing mortality conditions, 3 of every 4 newborns will survive to an age of 60 years and 1 of every 4 newborns will survive to an age of 80 years. Thus, the combined effect of reduction in fertility and mortality rates worldwide has resulted in more people living to enter advanced stages of life.

Globally, the 60-plus population constitutes 11 percent of the total population. This proportion is expected to increase to about 22 percent by 2050[3]. This rise is unprecedented in world history, and most probably irreversible. Not only the world is greying but also the older population is living longer. The population of older people worldwide is growing at a rate double the total annual population growth[3]. The number of retired people is set to become more than that of number of young employable people in the labour market.

According to Organization for Economic Corporation and Development (OECD) the ratio of older people per working population will be double by 2050. While the rise in older population represents a major global success story in terms of better health care and increased accessibility, it brings greater responsibilities to the country, family and individual, putting a greater pressure on government social support and public finances. The old age dependency ratio is expected to double in Asian countries between 2010 and 2050, while in developed countries like United States it is expected to rise from

22 in 2010 to 35 in 2030[20]. Likewise, the inverse of dependency ratio, the support ratio is expected to drop over half by 2050, worldwide. It is projected to decline to 3.9 by 2050. To maintain the current standard of living and improve the prospects of elderly in developing countries, the society should assign an active and productive role for elderly. To improve the condition of elderly, we need to look at them less as a problem and more as a resource.

4.4.2 The Indian Scenario:

Population ageing is happening fastest in the developing countries. About two thirds of the world's older persons currently live in developing countries.

Census of India 2011 data reveals the total population of aged above 60 years amounts to 103.8 million people. Among the main drivers of ageing in India, Kerala has the highest proportion of elderly in the population (12.6%), while Goa (11.2%), Tamil Nadu (10.4%), Punjab (10.3%), Himachal Pradesh (10.2%) follow close behind with all these values scoring above the national average of 8.6% of elderly in total population in 2011[21].Old age Dependency Ratio (ODR) is rising due to higher Life Expectancy at birth - from 131 in 2001 to 142 in 2011. Kerala with an ODR of 196, Goa (168), Himachal Pradesh & Punjab (161) and Tamil Nadu (158) are the top states with an ODR above the national average[21].

4.5 Implications of ageing:

Elderly constitute an 'invisible' group for the government and institutions especially in developing countries. They are affected by situations of social exclusion, lack of opportunities to participate in development activities, extremely limited access to health care, non-existence or minimal development of pension systems, scarcity in the social service networks etc. The main problem associated with changing demographics is people are having fewer numbers of children, retiring earlier and living longer. The burden on the working class is therefore increasing. The smaller number of tax payers will not be able to handle a tax burden high enough to support the ageing population[22].The additional pressure on the health care sector, social security schemes and government will be high. That does not mean that our elderly should lose out on their rights. Over the last two decades India reaped huge benefits from globalization, industrialization and rapid economic growth. As a result, there was migration of people from rural areas to the urban areas. This led to a major change in the social structure in India.

The age old joint family system disintegrated and with it collapsed the safety net for the elderly. The experts opine that growth in elderly population make their condition pitiable because this causes heavy dependence on the limited resources of the family. With rising cost of parent care per child and the precarious financial situation in the country, most children will not have enough resources to take care of their parents. Where resources are not scarce, psychological barriers against caring for elderly have

emerged. Youth migrate to different places in search of employment and social security. This creates a situation wherein there will be tremendous pressure on elderly to look after themselves. The elderly require special care.

According to the principles of health economics, elderly requiring long term treatment should be managed at home for better resource utilization. However with increasing percentage of working women, the provision for care of elderly, at home, has come down over time. Housing shortages and reduction in space have eroded into the rights of elderly.

Recent studies show that about 35 percent of elderly in the urban areas and 32 percent in rural areas are living alone[23]. Since there is nobody to look after them, lack of security and financial constraints has to be taken care of by themselves. As a result, more and more elderly are looking for job opportunities, most of them settling into jobs at a lesser salary with insecure and unhealthy working conditions.

There is a difference between urban and rural elderly. The rural elderly constitute a much older population when compared to urban elderly, but the accessibility of health care is abysmally low. Even the female elderly population is more in rural than in urban areas. A large section of working rural elderly population is in the informal sector - 70 percent compared to 48 percent in urban areas[23].

Elderly women suffer more since they live longer than their spouses. Widows constitute a large proportion of the elderly, particularly in India because of the cultural pattern in which women generally get married to men who are older to them by 10 to 15

years. This tends to make things worse as they don't have anyone to take care of them after their husbands' death. Most of them will be abused physically, verbally and psychologically.

Living longer is both an achievement in itself and at the same time, a big public health challenge. Investing in health and promoting a healthy way of life throughout the society, is the only way to ensure that more people will reach old age in good health and with capability of contributing to the society.

4.6 Care Services for Older Persons in Our Country

Government has taken various policies in favour of older persons. Various health care services are made available for elderly. Non-Governmental organizations such as Help Age India, Association of care of the aged, Hyderabad, Age-Care India, New Delhi, Geriatric Society of India, Lady Harding Medical College, New Delhi and Association of Gerontology (India), S.V. University, Tirupathi are playing a significant role by providing the following services

- Geriatric Out Patient Care.
- Mobile Medicare Units - Health Care at their door step.
- Day Care Centres.
- Old age homes.

Available Social Security Systems for the elderly

Under standardized economic security policies, government is covering retirement benefits for those in the organized sector, some of them are,

(i) Old Age Pension for the General Public

- National Old Age Pension Scheme (NOAPS)
- Old Age Pension Scheme in different States
- Senior Citizens Saving Scheme

(ii) Social Security Scheme for Unorganized Sector

(iii) Annapurna

(iv) Post Retirement Benefits

(a) Pension

- Central Government Employees
- Employees permanently absorbed in Public
- Sector undertakings/autonomous bodies

(b) Family Pension

- Central Government Employees
- Employees permanently absorbed in Public Sector
- undertakings/autonomous bodies

(c) Gratuity

(d) Dearness Relief

(e) Central Government Employees Group Insurance Scheme

(f) General Provident Fund

4.7 Ageing: The health issues

Health status has an important effect on the quality of life of elderly. The major part of health status is perceived health, especially psychological well-being and functional status. Perceived health declines with age[24]. A proper knowledge about the morbidity profile of elderly is required to provide a proper health care delivery system for elderly.

Old age is not a disease in itself. Elderly are vulnerable to long term diseases of insidious onset such as diabetes, hypertension, cardiovascular and cerebrovascular diseases, malignancies, musculoskeletal disorders etc. They have multiple symptoms due to decline in various body functions[25]. In India, elderly faces the spectrum of dual medical problems; both communicable and non-communicable diseases. Decline in immunity and age related physiological changes make elderly vulnerable to communicable diseases. Chronic conditions like tuberculosis are more common among the elderly. Literature shows that among the age group 60 years and above, 10% suffer from physical disabilities and 10% of them are hospitalized at any given time, both proportions increasing with age[26]. In the population above 70 years of age around 50% suffer from more than one chronic condition[27]. It was found that most prevalent morbidity among elderly is anaemia followed by dental problems, hypertension, chronic obstructive pulmonary disease (COPD), cataract, and osteoarthritis. The morbidities were more common in rural areas except for hypertension, osteoarthritis, diabetes, obesity and psychosis which were more common in urban area[24].

According to government of India statistics, cardiovascular disorders account for one third of elderly mortality followed by respiratory disorders which account for 10% while infections including tuberculosis account for another 10%. Neoplasm account for 6% and accidents, poisoning, and violence constitute less than 4% of elderly mortality with more or less similar rates for nutritional, metabolic, gastrointestinal, and genito-urinary infections

4.8 Functional dependence

Knowledge about functional dependence is important in providing care for elderly because, they can have multiple diseases at the same time with varied impact on the day-to-day life. The importance of restricted activity was recognized more than 20 years ago in the U.S. Surgeon General's original Healthy People Report, which identified reduction of restricted activity as one of its major goals for older persons[28].The same report stressed on the gargantuan adverse effects of disability on individual well-being, the need for informal help, provision for healthcare, as well as long-term needs and costs. Long-term disabilities causing restricted mobility are common among older persons. Multiple risk factors, together with subsequent precipitants, greatly increase the likelihood of long-term mobility disability[29].After having a physical disability for a long time, the probability of attaining functional independence will be low and the need for both formal and informal care will be high. The National programme for Health care for the Elderly (NPHCE)[30] is a modest attempt by the Ministry of Health and Family welfare to address the functional dependencies by way of introducing a comprehensive health

care set by completely dedicated and tunes to the needs of the elderly. The main objective of NPHCE is to provide promotional, preventive, curative and rehabilitative services to the elderly through community based approach. Under this programme, domiciliary visits for attention and care to home bound elderly persons and provide training to the family care providers for caring disabled elderly. The range of services will include management of geriatric medical problems, day care services, rehabilitative unit and home based care. Rehabilitation services are therapeutic exercises, training in activities of daily life(ADL) & treatment through physiotherapy unit.

The knowledge about the prevalence of functional dependence is necessary for the policy development regarding elderly care. In contrast to the developed countries, most of the developing countries lack reliable data regarding the functional status of elderly which is necessary for public health policy formulation. Older people's ability to function independently is important, as physical disability and functional limitation have profound public health implications with increased utilization of health care and a need for supportive services and long-term care. A community based study among elderly in the rural area, Katz index and Lawton scale, showed that 21 percent of the respondents have dependency[31]. Disablement levels showed significant increase with age. Restriction of participation in activities of daily living was more influenced by increasing age and cognitive function than the current health status.

Disability is considered as the restriction or lack of ability to perform an activity in the manner or range which is considered normal for a human being[32].

Functional status is the ability of an individual to live independently and associate with their surroundings or carry out normal daily activities necessary to meet the basic needs, achieve the normal roles, and maintain health and well-being[33.] Reduced functional status itself can be the appearance of otherwise occult pathologies. Age is considered as a risk factor associated with dependency worldwide.

Prevalence of functional dependence increases with age. It is more common in age group more than 75 as compared to 60 years. Similarly, it is more common among female gender as life expectancy of women is longer than that of men. Dependency lowers the quality of life and demands resources for care and rehabilitation. Helping to combat dependency in elderly improves the quality of life. Prevention of dependency in the elderly is a matter of humanitarian and economic concern. Dependency prevention will lead to promotion of health and emergence of an economically and intellectually active older age group. Unfortunately, internationally comparable data on dependency is most often not available. Such data is important for planning, implementation, monitoring and evaluation of an inclusive healthcare delivery system.

4.9 Measurement of Functional dependence:

Differential approaches in the study of functional dependence, have resulted in contrasting dependency rates being reported, even within the same geographical territory. Developing countries generally tend to report higher rates of dependency. The different factors include high survival rate, increased life expectancy and increased awareness among the people regarding different treatment modalities available. Sample surveys tend

to report a higher rate, compared to census data. This is mainly because of the type of questions asked. For international comparison, census based data is needed, because in poorer countries the periodical census is the only way of collecting Information[34].

Different tools are available to measure functional dependence. Some of the commonly used tools include Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL). Activities of daily living is assessed by Katz index and Instrumental Activities of Daily living (IADL) is assessed by using Lawton scale. In the activities of daily living scale, the ability to do the basic activities independently, like bathing, dressing, feeding, toileting, transferring and continence are assessed. In Instrumental activities of Daily living, the ability to do instrumental activities like handling of money, doing household work, etc is also assessed.

4.9.1 Katz index scale

The Katz index of independence in Activities of Daily living, commonly referred to as the Katz ADL, is the most appropriate instrument to assess functional status as a measurement of the person's ability to perform activities of daily living independently.[35]

The Katz tool was originally developed in the late 1950s, it has been modified and simplified and different approaches to scoring have been used. The Katz ADL index is an ordinal index designed to assess the physical functioning using a dichotomous rating (dependent/independent) of six ADL.

This scale was chosen because it has been validated for elderly use. The Katz ADL index demonstrated good internal consistencies (Cronbach's alphas:0.84-0.94)[36].

4.9.2 Lawton Instrumental Activities of Daily Living scale (IADL)

Lawton Instrumental Activities of Daily Living scale (IADL) is an instrument developed to assess independent living skills[37]. IADL are defined as those activities whose accomplishment is necessary for continued independent residence in the community as they are more sensitive for subtle functional deficiencies than the ADLs.

There are eight domains of function assessed with the Lawton IADL scale. Women are scored on all areas of function, interestingly enough; historically men are assessed on five and exclude food preparation, housekeeping and laundering. A summary score ranges from 0 (low function, dependent) to 8 (high function, independent) for women, and 0 through 5 for men.

The validity of the Lawton IADL was tested by determining the correlation of the Lawton IADL with four scales that assessed domains of functional status, the Physical Classification (6-point rating of physical health), Mental Status Questionnaire (10-point test of orientation and memory), Behavior and Adjustment rating scales (4-6-point measure of intellectual, person, behavioral and social adjustment), and the PSMS[36].

A total of 180 research subjects participated in the study, they were applicants to the author's study; however, few received all five evaluations. All correlations were significant at the .01 or .05 level, indicating that the instrument had validity and that the degree to which the tool actually assesses what it is intended to assess is valid[36].

5.METHODOLOGY

The objective was to find out the prevalence and associated risk factors for functional dependence among elderly aged 60 years and above in the study area

Study Design:

Cross sectional study

Target population:

Rural population of Tamil Nadu.

Study population:

All elderly population aged 60 years and above, residing in Perumalpattu village, Tiruvallur district.

Study period:

Dec 2017- June 2018

Inclusion criteria:

All elderly people aged 60 years and above, who are residing in defined study area.

Exclusion criteria:

Elderly people who are visitors and not residing in defined study area.

Sample size:

It was decided to select 300 participants, when the expected prevalence of functional dependency among elderly people was 21.8%[31]. This would give results at confidence level (α level) of 5%, absolute allowable error of 5% and a 10% allowance for non-responders. Sample is $272(4pq/L^2)$]

Sampling Method :

A multi stage random sampling method was used to select the 300 Elderly people from the rural population of Tiruvallur district.

Tiruvallur district totally has 13 blocks namely Puzhal, Kadambathur, Tiruvelangadu, Thirutani, R.K.Pet, Pallipet, Poondi, Ikkadu, Ellapuram, Gummidipoondi, Minjur, Solavaram and Villivakkam.

Among the 13 blocks, Ikkadu block was randomly selected. Ikkadu block has four PHCs namely Velliyur PHC, Puliyur PHC, Perumalpattu PHC and Kalyanakuppam. Among 4 PHCs, Perumalpattu PHC was randomly selected. Perumalpattu PHC has 5 Health subcentre (HSC). Among 5 HSC, one health subcentre was selected which covers 5 village. Among them perumalpattu village is selected.

Ethics Approval

The study was approved by the Institutional Ethics Committee (IEC) of Government Kilpauk Medical College. (see Annexure I)

Data Collection:

Perumalpattu village has a total population of 7052 people. There are about 1754 houses in Perumalpattu village. The aged population (60+) in the village was nearly 550 as per the family register maintained which makes up 7.7% of total population of village which is nearly equal to national data of 8% of elderly population (Census India 2011). Participant who fulfilled inclusion criteria were included in the study. After obtaining permission from Deputy Director of health service and Medical

officer of primary health centre, the Principal investigator conducted house-to-house visit in the morning and in the evening time to enroll elderly people of the family till the desired sample size attained. To cover currently working elderly, investigator conducted house visit in the evening. If a household had more than one elder person one of them selected for the study by using lottery method. Participants were informed about the purpose of the study. After obtaining Written informed consent, pre tested semi-structured questionnaire is administered by investigator. The data collection was done by investigator. Data were collected at a rate of 7 participants per day for two month to cover sample population of 300.

Data Collection instrument

An interviewer administered semi structured questionnaire for data collection. The questionnaire had four parts as following:

Part 1: This part deals with socio demographic factors. This includes age, sex, education, marital status, occupation, source of income, Family arrangement etc.(see Annexure II)

Part 2: Functional dependency for basic activities of daily living (ADL) was assessed by Katz scale(see Annexure III)

Part 3: Functional dependency for instrumental activities of daily living (IADL) was assessed by Lawton scale (see Annexure IV)

Part 4: Socio economic status was assessed by MRSI scale(see Annexure V)

Katz index and Lawton scale is used for measuring activities of daily living and instrumental activities of daily living. It is the most appropriate instrument to assess functional status as a measurement of the client's ability to perform activities of daily living independently.

Katz ADL scale included the following activities: Bathing, dressing, eating, toileting and transferring from bed to chair The ADL was assessed using the Katz Index of Independence in ADL[36].The Index ranks adequacy of performance in the six functions of bathing, dressing, toileting, transferring, continence, and feeding.

A summary score ranges from 0 (low function, dependent) to 6 (high function, independent). The responses of items in the scales were dichotomized as 0-3 score-as dependent "unable to do the activity at all/need some help" and 4-6 as independent "able to do the activity without help".

The Lawton Instrumental ADL (IADL) (Lawton, 1969)[37] Scale assesses a person's ability to perform tasks such as using a telephone, doing laundry, and handling finances. Measuring eight domains, it can be administered in 10–15 min. The scale may provide an early warning of functional decline or signal the need for further assessment. These skills are considered more complex than the basic ADL as measured by the Katz Index of ADLs. There are eight domains of function measured with the Lawton IADL scale. Women are scored on all eight areas of function. To avoid systematic gender bias at the time the instrument was developed, specific items were omitted for men. The areas

of food preparation, housekeeping, and laundering are excluded for the men. Clients are scored according to their highest level of functioning in that category.

The Lawton IADL scale included the following activities: shopping, preparing or cooking food, using the telephone, washing clothes, housekeeping, transportation, taking medication, and managing finances. A summary score ranges from 0 (low function, dependent) to 8 (high function, independent) for women and 0 to 5 for men.

The responses of items in the scales were dichotomized as "unable to do the activity at all/need some help" and "able to do the activity without help". For women it is scored as 0-4 -dependent and 5-8 as independent. For men it is scored as 0-2 dependent and 3-5 independent.

While administering questionnaire, if participant does not perform routinely a particular activity like shopping/housekeeping/cooking, then the participants' response was considered based on whether he/she can perform that activity, if he/she was supposed to do it. The questionnaire was modified to suit the present study settings.

OPERATIONAL DEFINITION

1)Elderly:

Person who have attained the age of 60 and above are defined as elderly[38]. Age of the participants are confirmed with their medical records or ID card (Adhaar card/ Voter ID).

2) Marital status:

a) Married- Elderly people married and living with their spouse

b) Widowed- Elderly who lost their spouse

c) Divorced/separated/ Never married- elderly people who got separated from their spouse and living with/without children, Elderly who got divorce from their spouse and living with/without children , and Elderly who never got married are included in this category

3) Type of House:

1) Own house-When a person lives in a house which belongs to oneself or their spouse.

2) Rental house – When a person makes payment for living in a house which is owned by someone else.

3) Children House - When a person lives in a house which belongs to their children or his/her family member.

4) Family arrangement:

Nuclear family (with/without spouse)

Joint family (with/without spouse)

Three generation family (with/without spouse)

Supported by caretaker or relative (with/without spouse)

Contracted family

living alone

5) Occupation:

Retired- Elderly who got retired from their job and now getting pension

Employed – Elderly who are currently working like security, daily wage worker, running petti shop etc. other than agriculture work

Agricultural work – Elderly who are involved in agriculture work

Unemployed - Elderly currently not working excluding retired elderly

6) Source of Income:

Financial support for the elderly in any one or more of the following ways:-

- Through employment

-Agriculture land

-Retirement pension

-Rent from rented house/spouse's income

-Contribution from their children

7) **Tobacco usage:**

Any habitual use of the tobacco plant, leaf and its product, that is either snuffed, sucked or chewed.

Current tobacco usage: person who currently uses tobacco- for more than 2weeks

Former tobacco usage: person who has ever daily used tobacco and currently does not use tobacco-for last 3months.

Non Tobacco user : person who has never used tobacco

8)Smoking[39]:

Current smoker: person who has smoked 100 cigarettes in his or her lifetime and who currently smokes cigarettes.

Former smoker: person who has smoked at least 100 cigarettes in his or her lifetime but who had quit smoking for last 3 months.

Non smoker(Never) : person who has never smoked or who has smoked less than 100 cigarettes in his or her lifetime.

9) Alcohol usage: The definition recommended by Indian Heart Journal in 2006 will be followed:

Non alcoholic (Never): " who never consumed alcohol."

Past alcoholic (Former): "Who never consumed alcohol for past 12 months."

Current drinker: "Who consumed alcohol at least once in past 12 months."

10) Socio-economic status was assessed by MRSI scale(Marketing Research Society of India) scale . Information regarding income was un reliable and people hesitate to reveal the true income. Also monthly or annual income may not be truly reflect the family's economic standing, particularly in rural areas, Since the per capita monthly income or family income could not be confirmed from the population, we used a new system of socio economic status classification, called MRSI (Marketing Research Society of India) scale. This scale is commonly used in Marketing Research and is based on the educational status of the head of the family, but instead of income, the total number of durable Items was included . The occupation of the head of the family is also not taken

into account. Hence the MRSI scale avoids the practical problems of enquiring about the income.

11) Chronic illness:

Any disorder that persist over 3 month and affects physical, emotional, intellectual, vocational, social or spiritual functioning. It includes all the chronic diseases based on self reporting, medical records, and medications available with the individuals[24].

12)**Functional dependence** Individuals over 60 years whose illness, impairments or social problems have become disabling, reducing their ability to carry out independently the activities of daily life are classified as 'Functionally dependant'[40].

13)**Activities of daily living:** An individual's ordinary daily living activities like going and using the toilet, walking, climbing, eating etc.

14) **Instrumental activities of daily living:** Daily functional activities that require the use of an instrument like using a mobile phone, cleaning, managing one's own medication, preparing foods etc

STATISTICAL ANALYSIS:

The data collected was entered in MS Excel and analyzed using SPSS 22.0 version

1) Prevalence of functional dependence were presented as proportions with 95% CI.

2) Association of functional dependence and factors influencing it were established by comparing dependency across categories of studied factor by Chi-square test.

3) Interaction between the predictor variables and outcome variable were analyzed using multiple logistic regression.

6.RESULTS WITH DISCUSSION

The present study was undertaken in the rural population of Tiruvallur district. The study was conducted to find out the prevalence and risk factors of functional dependency among elderly people. The results of the study are presented and discussed here.

Socio demographic characteristics of the study population:

The socio demographic factors of age, gender, marital status, education, occupation, source of income, economic status, Addictive habits and family structure have been identified as important factors in explaining the variability of the prevalence rates of functional dependency

TABLE 1.1: DISTRIBUTION OF SOCIO DEMOGRAPHIC DATA IN STUDY POPULATION

Variables	**Frequency**	**Percentage**
Age group		
60-64 years	105	35%
65-69 years	80	26.7%
70-74 years	65	21.6%
>75 years	50	16.7%

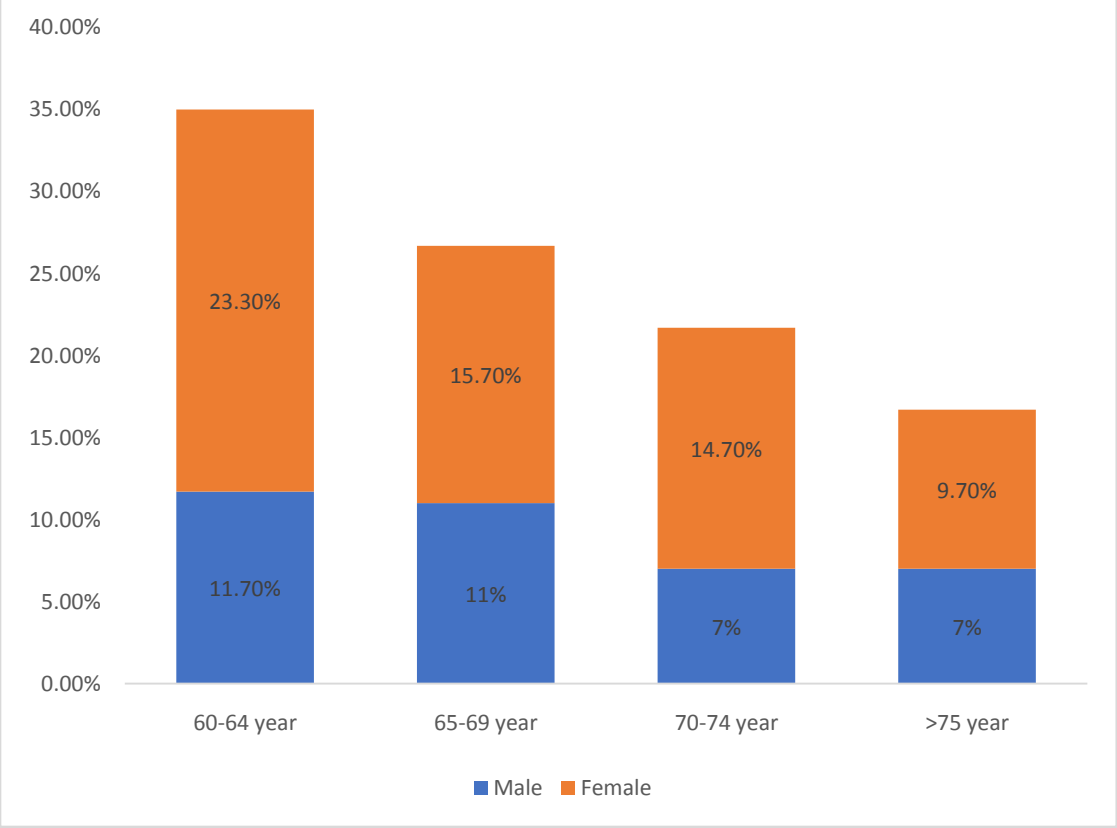
TABLE 1.2: DISTRIBUTION OF SOCIO DEMOGRAPHIC DATA IN STUDY POPULATION

Variables	Frequency	Percentage
Gender		
Female	190	63.3%
Male	110	36.7%
Marital status		
Married	163	54.3%
Widow/widower	125	41.7%
Others	12	4%
Occupation		
Agriculture	15	5%
Employed	59	19.7%
Retired	11	3.7%
Unemployed	215	71.6%
Education		
Illiterate	65	21.7%
Primary & above	235	78.3%
Total	300	100%

In this study, as shown in Table 1.1, the proportion in each 5 year category of age decreased with increasing age. Mean Age of the participants was 68.71(SD= 7.29). Mean age of male was 69.26(SD= 7.82) and mean age of women was 68.39 (SD= 6.96).

Around 83.3% of the total study population were in the 60-69 years age group. Only 16.7 percent were in the age group 75 and above. In this study population, 36.7 percent were males and 63.3 percent were females.

FIGURE 1: DISTRIBUTION OF AGE CATEGORY BY GENDER



Female gender was higher in all age category compared to male. Similar result reported by study done among rural population of elderly, found that female elderly was

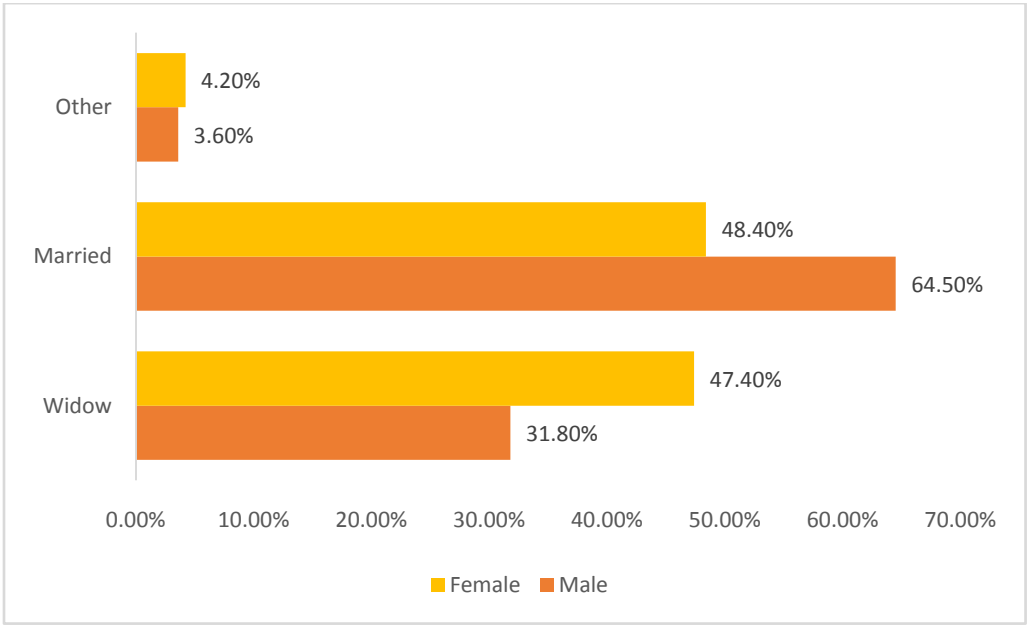
higher in all age category as compared to male elderly people[41].The number of female compared to the number of male was higher from 60 through 80 years as shown in Figure 1. The distribution of male in 70-74 year age category and >75 year age category are similar.

DISTRIBUTION OF MARITAL STATUS BY GENDER

54.3% were currently married. Almost 41.7% of the elderly lost their spouse. Only 4% were in other category, includes separated/divorced/Unmarried elderly people as shown in Table 1.2

There were 64.5% of Male were currently married as compared to 48.4% of currently married females. The proportion of those who have lost their spouse is much higher among women(47.5%) compared to men(31.8) as shown in Figure 2.

FIGURE 2: DISTRIBUTION OF MARITAL STATUS BY GENDER

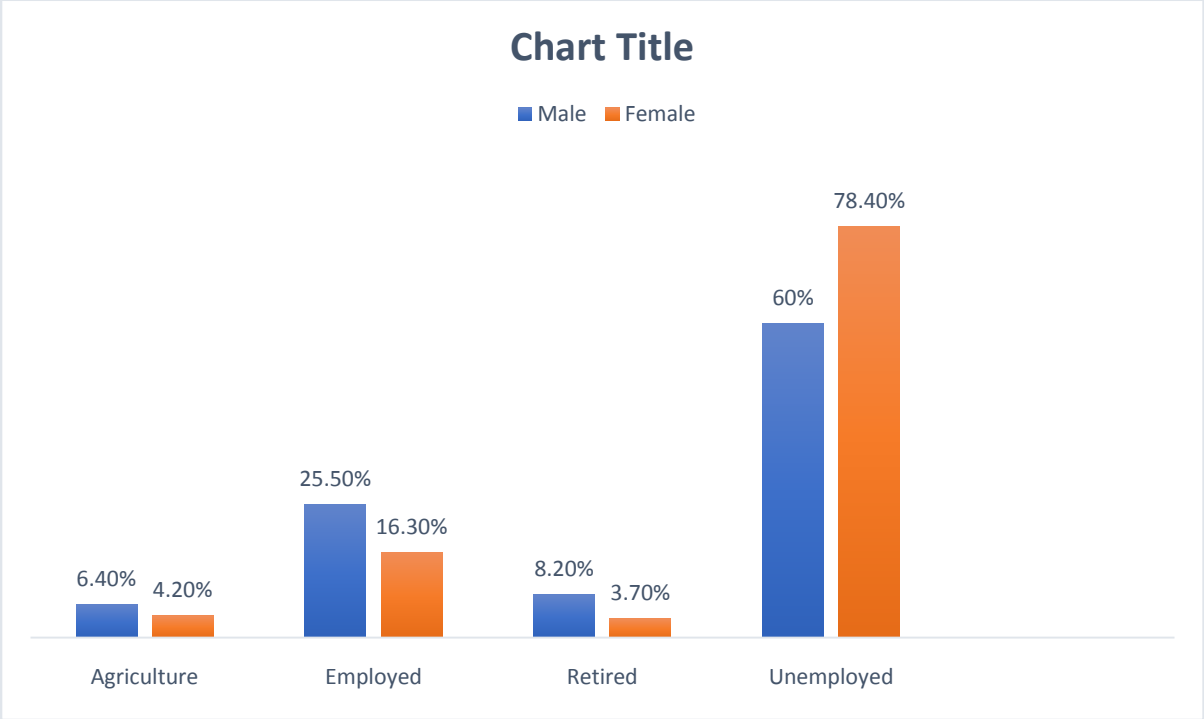


A study done in rural area of Delhi among 350 elderly people found there were 80.7% of currently married males compared to 57.6% of currently married females and 42.4% of females were widows compared to 18.7% males who were widowers[41]. Similar result was found in our study with higher proportion of widow in female.

DISTRIBUTION OF OCCUPATION BY GENDER

20% was employed and 71.6% was unemployed elderly. Though the study was done in rural area, only 5% elderly were involved in agriculture work as shown in Table 1.2

FIGURE 3: DISTRIBUTION OF OCCUPATION BY GENDER



As shown in Table 1.2, about 71.6% of the study population was unemployed, largely contributed by females. Nearly one fifth of the study population (20%), were currently working. Currently working includes security job, daily wage works, running petti shops etc. Nearly 4 percent were getting retirement pension. A small number of people (5%) were doing agriculture as shown in Table 1.2.

25.5% Male were currently working as compared to 16.3% of Female. About 78.4% female were unemployed as compared to 60% of male as shown in Figure 3. Majority of the people who were working belonged to the age group 60-69 years (79.7%) as compared to >75 year (20.3%)

EDUCATION STATUS:

78.3% of the elderly people belonging to primary schooling and above category. One fifth of elder (21.7%) were illiterates as shown in Table 1.2. Our study result is similar to Tamilnadu literacy rate of 80% as per Census India 2011. The study done among 730 elderly population in rural area of Haryana found, that 40% of elderly were illiterate and 60% were primary school and above category[42]. Our study literacy rate is higher compared to this study, may be due to lower literacy rate (75%) of Haryana (Census India 2011).

DISTRIBUTION OF THE STUDY POPULATION BY SOURCE OF INCOME

Distribution of the study population by source of income and distribution of source of income of the study population by gender is shown in Table 2

TABLE 2: DISTRIBUTION OF SOURCE OF INCOME BY GENDER

Study Variables	Frequency	Gender	
		Male n(%)	Female n(%)
Agriculture	15(5%)	7(6.4%)	8(4.2%)
Children	149(49.6%)	51(46.4%)	98(51.6%)
Occupation	59(19.7%)	28(25.5%)	31(16.3%)
Pension	11(3.7%)	9(8.2%)	2(1.1%)
Other	66(22%)	15(13.6%)	51(26.8%)

Majority of the study population (50%) were dependent on children for income. Female (51.6%) were more dependent on their children for income as compared to male (46.4%). 25.5% of Male were getting income by occupation as compared to 16% in female. Nearly 4% were getting retirement pension. 27% of female are getting income from others category. Other sources of income like spouse's pension, spouse's daily income, house rental

DISTRIBUTION OF STUDY POPULATION BY OLD AGE PENSION STATUS

52.7% elderly was benefitted by old age pension scheme and 47.3% was not benefitted by old age pension scheme (OAP).

TABLE 3: DISTRIBUTION OF OLD AGE PENSION STATUS BY OCCUPATION AND SOURCE OF INCOME

Study Variables	OAP Benefitted N(%)	OAP Not benefitted N(%)
Occupation		
Agriculture	**6(3.8%)**	**9(6.3%)**
Employed	**29(18.4%)**	**30(21.1%)**
Retired	**7(4.4%)**	**4(2.8%)**
Unemployed	**116(73.4%)**	**99(69.7%)**
Source of Income		
Agriculture	**6(3.8%)**	**9(6.3%)**
Children	**88(55.7%)**	**61(43%)**
Occupation	**29(18.4%)**	**30(21%)**
Pension	**7(4.4%)**	**4(2.8%)**
Other	**28(17.7%)**	**38(26.8%)**

55.7% of elderly dependent on children for the income, were benefitted by OAP. Majority of the people (73.4%) who were getting old age pension (OAP) were unemployed elderly people as shown in Table 3.

TABLE 4 DISTRIBUTION OF STUDY POPULATION BY SOCIO ECONOMIC STATUS

SES	Frequency	Percentage
Upper class	12	4%
Upper middle	14	4.7%
Lower middle	64	21.3%
Upper lower	200	66.7%
Lower	10	3.3%
Total	300	100%

Socioeconomic status (SES) is one of the most important social determinants of health and diseases. As per MRSI scale Almost 70% of the study population belonged to lower class.

The Community based study done among rural population of North India found that the majority of the participants belonged to socioeconomic Class IV (23.3%) and Class V (38.2%)[43].

Pitchai P et al done study among 2049 elderly in rural area of Maharastra, found that 26% of elderly belonging to upper lower class and 4% elderly belonging to lower class[44] .

TABLE 5 DISTRIBUTION OF THE STUDY POPULATION BY FAMILY ARRANGEMENT

Living with/arrangement	**N(%)**	**Gender**	
		Male	**Female**
Nuclear Family	159(53%)	66(60%)	93(48.9%)
Joint Family	50(16.7%)	19(17.3%)	31(16.3%)
Three generation family	17(5.6%)	9(8.2%)	8(4.2%)
Supported by Caretaker/ Relative	7(2.3%)	3(2.7%)	4(2.1%)
Contracted Family	38(12.7%)	9(8.2%)	29(15.3%)
Living Alone	29(9.7%)	4(3.6%)	25(13.2%)

More than half of the study population, 53% percent, was living in Nuclear family. 16.7% of the elderly belongs to joint family. In Tamilnadu, traditional family system of parents and children living together is appear to be most common type of living arrangement. Nearly 10% of elderly are living alone . The proportion of women who live alone is about 13.2% This result was comparable with India Ageing Report 2017, high percentage of elderly women live alone as compared to men[3]. As expected, more elderly who have lost their spouses live alone.

Survey by UNFDA on population Ageing in India found that 26% of elderly were living alone in Tamilnadu. The high level of elderly living alone (26.3%) is driven by the population of elderly women who live alone in the state -one in four elderly live alone as compared to 5% of men living alone[45].It implies that these women who are becoming increasingly vulnerable with advancing age, do not have support by family in terms of household chores and other daily activities

TABLE 6. DISTRIBUTION OF STUDY POPULATION BY TYPE OF HOUSE

House	**Frequency**	**Percentage**
Own house	140	46.7%
Children house	100	33.3%
Rental house	60	20%
Total	300	100%

46.7% of elderly live in their own house. 33.3% of elderly live in their children's house. Fifty percent of people who were living in their children's house were largely dependent on their children income.

TABLE 7: DISTRIBUTION OF THE STUDY POPULATION BY TOBACCO USE, ALCOHOL USE AND SMOKING STATUS

Study Variable	Frequency(n)	Percentage (%)
Tobacco usage		
Current	60	20%
Past	36	12%
Never	204	68%
Smoking status		
Current	31	10.3%
Past	74	24.7%
Never	195	65%
Alcohol usage		
Current	32	10.7%
Past	76	25.3%
Never	192	64%

As shown in Table 7, Nearly one fourth of men were alcoholic and smoker in past . Nearly 65% of elderly were non smoker and non alcoholic. About 10% of the elderly were current addictive to alcohol and smoking. 20% of the elderly were current tobacco user

TABLE 8: DISTRIBUTION OF THE STUDY POPULATION BY CO-MORBIDITY

Co-morbidity	Frequency	Percentage
Arthritis	175	58%
Hypertension	128	42.6%
Diabetes	88	29.3%
Respiratory Problem	79	26.3%
Ischaemic heart disease	56	18%
Visual impairment	50	16.1%
Tremors	49	16.3%
Hearing impairment	43	14.3%
Skin diseases	28	9%
Kidney problem	26	8.4%
Hemiparesis	5	1.6%
Others	18	6.3%

Nearly 91 percent of the study population suffered from one or more chronic diseases. About 48% of the elderly had one chronic disease, while 27% and 16% elderly had two and three or more chronic diseases respectively. Majority of them suffering from Arthritis (58%), hypertension (42.6%) and diabetes (29.3%). Distribution of

proportion of chronic diseases are higher in female (92%) as compared to male (89%). This difference was not significant ($p>0.05$)

Khan et al study found around two thirds (67.4%) of the participants suffered from one or more chronic diseases/ailments. About 32.3% of the participants had one chronic disease/ ailment, while 21.1% and 14% participants had two and three or more chronic diseases/ailments, respectively. The three most frequently reported chronic diseases were hypertension (46.0%), arthritis (31.7%), and cataract (30.4%). In our study proportion of chronic illness is higher when compared to this study[43].

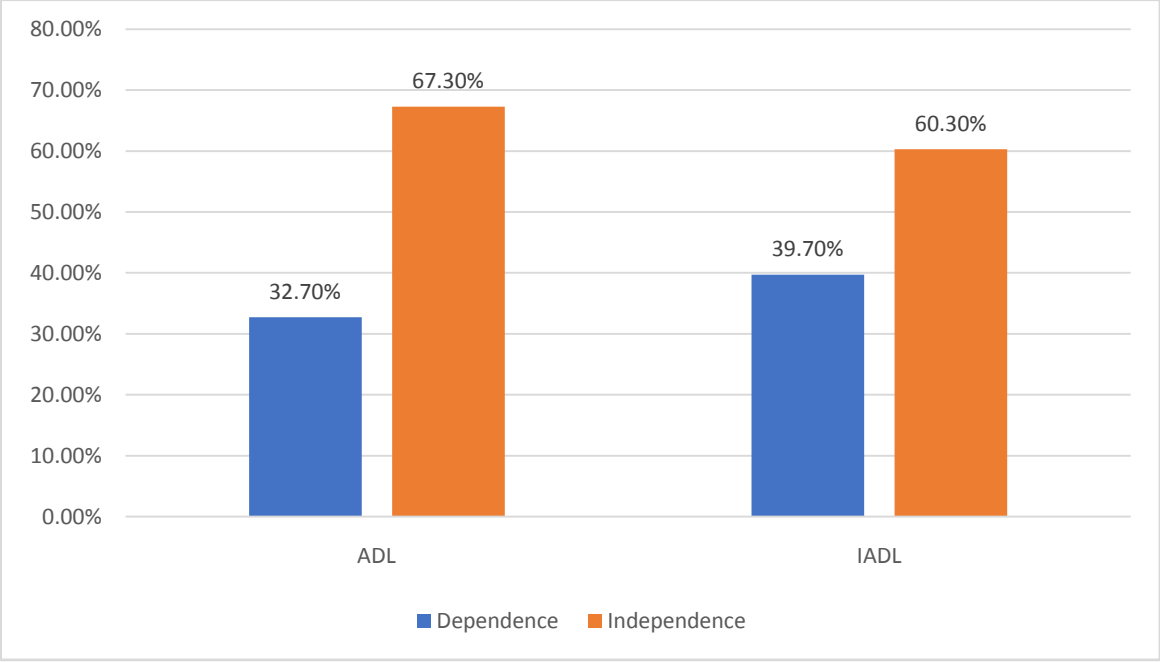
UNFDA survey found arthritis is the most commonly reported chronic diseases followed by hypertension and cataract[45]. Higher proportion of women (70%) reported chronic ailments as compared to men (65%). Our study results are similar to these study, majority of the study participants reported arthritis , which is more common among females(58%) as compared to males(53%).

PREVALENCE OF THE FUNCTIONAL DEPENDENCE

To evaluate the functional ability, two self-assessment scales Katz ADL scale and Lawton IADL scale were used. Distribution of functional dependence among the study population for basic activities of daily living (ADL) and instrumental activities of daily living (IADL) as shown in the Figure 4

The prevalence of functional dependence for basic activities of daily living among study population was 32.7% (95% CI 27.61-37.97) and for instrumental activities of daily living was 39.7% (95% CI 34.3-45.3) as shown in Figure 4.

FIGURE 4: PREVALENCE OF FUNCTIONAL DEPENDENCE FOR ADL AND IADL



This result is similar to Community based study done among elderly in rural population of Haryana, the prevalence of functional dependence was 37.5%[42].

The prevalence of functional dependence was 57.1% in the study done among elderly people in rural area of South India[31]**.** The difference in this result with the present study could be because of the better health care system in Tamilnadu and various welfare measures taken by the Government of Tamilnadu such as Indira Gandhi

National Old age pension scheme, which provide financial assistance to elderly people. Also successful implementation of various national programs for elderly people in the state.The community-based study from rural Ballabhgarh among elderly persons aged 60 years and above, the prevalence of functional disability was estimated to be 47.8%[46].

The community based cross sectional study among rural population of elderly in Delhi found prevalence of functional dependence was 23.1% . The difference in this result with the present study could be due to a difference in scale [41]

TABLE 9: CLASSIFICATION OF FUNCTIONAL DEPENDENCE FOR ADL USING KATZ SCALE

Study Variables	**No with dependence n(%)**	**Male n(%)**	**Female n(%)**	**p Value**
Bathing	80(26.6%)	22(7.3%)	58(19.3%)	**0.04**
Dressing	59(19.7%)	24(8%)	35(11.7%)	0.47
Toileting	139(46.3%)	40(13.3%)	99(33%)	**0.008**
Transferring	119(39.6%)	39(13%)	80(26.6%)	0.25
Continence	57(19%)	26(8.7%)	31(10.3%)	0.11
Feeding	16(5.3%)	3(1%)	13(4.3%)	0.12

Among the different components in Katz scale, maximum dependency was seen in going to toilet (46.3%) followed by dependency in Transferring (39.6%) (Moving in or out from bed/chair). Among different components in scale, Female are reported higher dependency when compared to male. Female (33%) were reported more dependency in going to toilet as compared to Male (13.3%). This difference were found to be statistically significant ($p < 0.005$).

Female (19.3%) were reported more dependence in bathing as compared to Male (7.3%). This difference was found to be statistically significant ($p < 0.05$)

UNFDA survey in Tamilnadu found nearly 80% elderly women were dependent as compared to men. Highest dependency for bathing ((26%), toileting (16%) followed by mobility (13%)[45]. Survey found higher proportion of dependency reported by elderly from rural than from urban areas. Our study results are similar to the survey report.

CLASSIFICATION OF FUNCTIONAL DEPENDENCE FOR INSTRUMENTAL BASED ACTIVITIES (IADL) USING LAWTON SCALE

In IADL , The percentage of dependence was higher in relation to telephone usage (62.3%) followed by transport (48%) and responsibility for own medicine (47.3%).

Women reported more dependence (40.6%) in telephone usage as compared to men (21.7%). This difference was not found to be statistically significant ($p > 0.05$) as shown in Table 10.

Higher proportion of women (33.7%) reported more dependency in transportation as compared to men (14.3%). This difference was found to be statistically significant ($p < 0.05$)

TABLE 10: CLASSIFICATION OF FUNCTIONAL DEPENDENCE FOR INSTRUMENTAL BASED ACTIVITIES (IADL) USING LAWTON SCALE

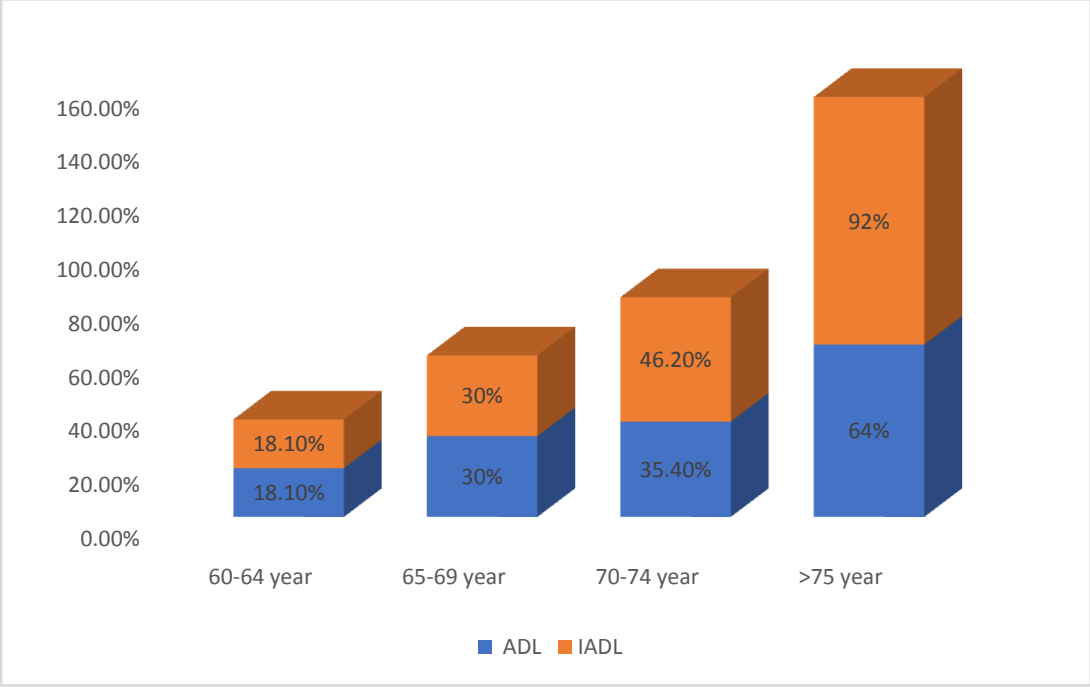
Activities	No. with dependence n(%)	Male n(%)	Female n(%)	p value
Ability to use Telephone	187(62.3%)	65(21.7%)	122(40.6%)	0.37
Shopping	93(31%)	30(10%)	63(21%)	0.28
Food preparation	47(15.6%)	NA	47(100%)	-
Housekeeping	71(23.6%)	NA	71(100%)	-
Laundry	77(25.6%)	NA	77(100%)	-
Mode of transportation	144(48%)	43(14.3%)	101(33.7%)	**0.01**
Responsibility for own medications	142(47.3%)	43(14.3%)	99(33%)	**0.03**
Ability to Handle Finances	48(16%)	22(7.3%)	26(8.7%)	0.15

Higher proportion of women reported more dependency in taking responsibility for own medicine as compared to men. This difference was found to be statistically significant ($p < 0.05$).

PREVALENCE OF THE FUNCTIONAL DEPENDENCE BY AGE AND SEX GROUP

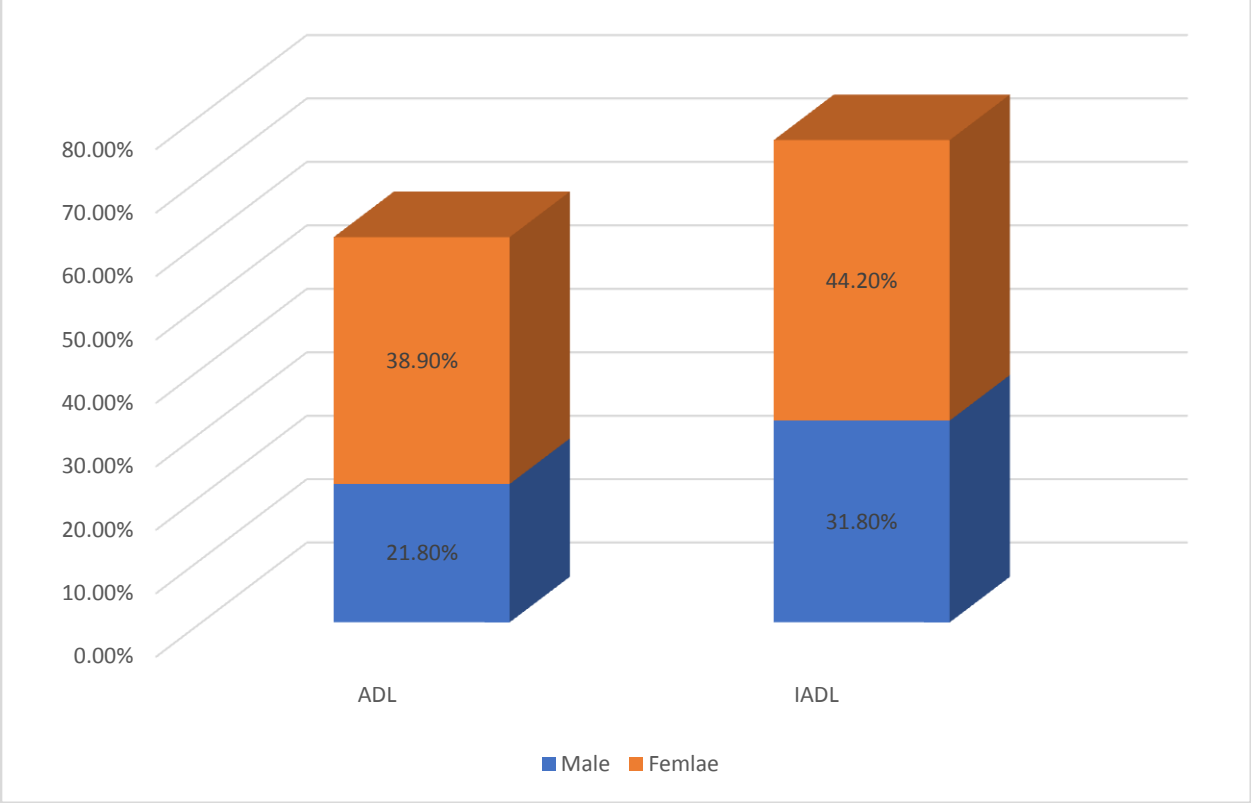
Distribution of functional dependence for basic activities of daily living (ADL) and Instrumental activities of daily living (IADL) among study population by age and sex group is as follows:

FIGURE 5 : PREVALENCE OF FUNCTIONAL DEPENDENCE BY AGE GROUP



In our study, the prevalence of functional dependence for ADL and IADL progressively increases with age, with highest proportion of functional dependency in advanced age. This result is comparable with other studies done in India. The prevalence of functional limitation progress with increasing age, as reported by study done in rural area of Delhi[41]

FIGURE 6: PREVALENCE OF FUNCTIONAL DEPENDENCE BY GENDER



The prevalence of functional dependence for ADL was more among women (38.9%) than among men (21.8%) . The prevalence of functional dependency for IADL was more among women (44.2%) as compared to men (31.8%). Similar finding

reported by a community based study done among 836 elderly people in rural area found that the prevalence of functional dependency 37.4% and the prevalence was more among women (38.8%) than men (35.9%)[42].

RISK FACTORS CONTRIBUTING TO FUNCTIONAL DEPENDENCE:

Risk factors contributing to functional dependence were analysed independently by finding the association. The risk factors which had statistically significant association in bivariate analysis in our study were subjected to Multivariate logistic regression to adjust all covariates. The risk factors such as Age, Sex, Education, Marital status, Occupation, Source of Income, Type of house, Socio-economic status, Family arrangement, Tobacco usage, Smoking, Alcohol intake, Chronic illness were subjected to bivariate analysis as shown in Table 11

TABLE 11: ASSOCIATION BETWEEN DIFFERENT VARIABLES AND FUNCTIONAL DEPENDENCE FOR ADL OF THE STUDY POPULATION

S.No	Study Variables(N)	Prevalence of Dependence n(%)	p value
1	**Age** 60-74 year(250) >75 year (50)	 66(26.4%) 32 (64%)	**<0.001**
2	**Gender** Female(190) Male (110)	 74(38.9%) 24(21.8%)	**<0.001**
3	**Education** Illiterate(65) Primary schooling & above(235)	 17(26.2%) 81(34.5%)	0.2
4	**Marital Status** Widow(125) Married (163) Other (12)	 54(43.2%) 43(26.4%) 1(8.3%)	**0.002**
5	**Socio economic score** Upper & Middle class(90) Lower class(210)	 31(34.4%) 67(31.9%)	0.62
6	**Occupation** Agriculture(15) Retired(11) Unemployed(215) Employed(59)	 6(40%) 4(36.4%) 71(33%) 17(28.8%)	0.96
7	**Source of Income** Agriculture(15) Children(149) Occupation(59) Pension (11) Other(66)	 6(40%) 52(34.9%) 17(28.8%) 4(36.4%) 19(29%)	0.63

8	**Type of House** Own house(140) Children house(100) Rental house(60)	 50(35.7%) 31(31%) 17(28.3%)	0.54
9	**Family Arrangement** Nuclear Family(159) Joint Family(50) Three generation family(17) Living with relatives(7) Contracted family(38) Living alone(29)	 56(35.2%) 20(40%) 2(11.8%) 1(14.3%) 12(31.6%) 7(24.1%)	0.2
10	**Tobacco usage** Current(60) Past(36) Never(204)	 9(15%) 14(38.9%) 75(37%)	**0.03**
11	**Smoking** Current(31) Past(74) Never(195)	 9(29%) 13(18%) 76(39%)	**<0.05**
12	**Alcohol** Current(32) Past(76) Never(192)	 4(12.5%) 20(26.3%) 74(38.5%)	**<0.05**
13	**Chronic illness** Present(273) Absent(27)	 94(34.4%) 4(15%)	**0.04**

(*Chi square - p value <0.05 is significant)

Functional dependence has been found to be significantly associated with various risk factors like advancing Age, Female gender ,marital status, smoking , tobacco use, alcohol and chronic illness in bivariate analysis as shown in Table 11.

PREVALENCE OF FUNCTIONAL DEPENDENCE FOR IADL ACROSS VARIOUS RISK FACTORS

Association between study variable and IADL was analysed by bivariate analysis

TABLE 12: ASSOCIATION BETWEEN DIFFERENT VARIABLES AND FUNCTIONAL DEPENDENCE FOR IADL OF THE STUDY POPULATION

S.No	Study Variables (N0	Prevalence of Dependence n(%)	p value
1	**Age** 60-74 year (250) >75 year (50)	 73(29.2%) 46(92%)	**<0.05**
2	**Gender** Female (190) Male (110)	 84(44.2%) 35(31.8%)	**0.02**
3	**Education** Illiterate (65) Primary schooling & above(235)	 26(40%) 93(39%)	0.7
4	**Marital Status** Widow (125) Married (163) Other (12)	 54(43%) 61(37.5%) 4(33.5%)	0.66
5	**Socio economic score** Upper & Middle class (90) Lower class (210)	 32(35.5%) 87(41.4%)	0.08

6	**Occupation**		
	Agriculture (15)	5(33%)	0.85
	Employed (59)	24(40.7%)	
	Retired (11)	4(36.3%)	
	Unemployed(215)	86(40%)	
7	**Source of Income**		
	Agriculture(15)	5(33%)	0.88
	Children (149)	58(39%)	
	Occupation (59)	24(40.7%)	
	Pension (11)	4(36.4%)	
	Other (66)	28(42.4%)	
8	**Family arrangement**		
	Nuclear Family(159)	70(44%)	0.067
	Joint Family(50)	25(50%)	
	Three generation family(17)	4(23.5%)	
	Living with relatives (7)	1(14.3%)	
	Contracted family(38)	11(28.9%)	
	Living alone(29)	8(27.6%)	
9	**Type of House**		
	Own house (140)	56(40%)	0.17
	Children house (100)	45(45%)	
	Rental house (60)	18(30%)	
10	**Tobacco usage**		
	Current (60)	18(30%)	0.2
	Past (36)	15(41.7%)	
	Never (204)	86(42.6%)	
11	**Smoking**		
	Current (31)	11(35.5%)	0.08
	Past (74)	22(29.7%)	
	Never (195)	86(44.1%)	
12	**Alcohol**		
	Current (32)	7(21.9%)	0.06
	Past (76)	28(36.8%)	
	Never (192)	84(43.8%)	
13	**Chronic illness**		
	Present (273)	115(42%)	**<0.05**
	Absent (27)	4(14.8%)	

(*Chi square - p value <0.05 is significant)

Table 12 shows there were significant association between Advancing age , Gender, chronic illness and functional dependence for IADL.

Our Study finding is similar to study done by Khan ZA[29] et al found that increasing Ageing, Female, Widow were significantly associated with prevalence of functional dependence. Also Study done by Gupta et al[8] in rural area of Haryana reported similar finding, advanced ageing, Female and chronic illness were associated with functional dependence.

MULTIVARIATE ANALYSIS OF FACTORS ASSOCIATED WITH FUNCTIONAL DEPENDENCY FOR ADL

The factors that had statistically significant association ($p<0.05$) in bivariate analysis were further subjected to multivariate analysis to find adjusted odds ratio and the findings are as given in Table 13

TABLE 13: MULTIVARIATE ANALYSIS OF FACTORS ASSOCIATED WITH FUNCTIONAL DEPENDENCY FOR ADL

S. No	Study Variables	Prevalence of Dependence n(%)	Unadjusted OR (95% CI)	p value	Adjusted OR(95% CI)	p value
1	**Age**					
	60-74 year	66 (26.4%)	Reference		Reference	
	>75 year	32 (64%)	4.95(2.60-9.42)	**<0.001**	4.85(2.41-9.77)	**<0.001**
2	**Gender**					
	Female	74(38.9%)	2.28(1.33-3.91)	**<0.002**	2.92(1.52-5.60)	**<0.001**
	Male	24(21.8%)	Reference		Reference	
3	**Marital Status**					
	Others	55(40.1%)	1.87(1.14-3)	**<0.001**	1.72(1.01-2.94)	**0.04**
	Married	43(26.4%)	Reference		Reference	
4	**Tobacco usage**					
	Tobacco user	23(24%)	0.54(0.31-0.93)	**<0.02**	0.67(0.43-0.98)	0.71
	Never	75(37%)	Reference			
5	**Smoking**					
	Smoker	22(21%)	0.41(0.23-0.72)	**<0.002**	0.30(0.19-0.62)	0.83
	Never	76(39%)	Reference			
6	**Alcohol**					
	Alcoholic	24(22.2%)	0.45(0.26-0.78)	**<0.001**	0.56(0.32-0.8)	0.12
	Never	74(38.5%)	Reference		Reference	
7	**Chronic illness**					
	Present	94(34.4%)	3(1.01-8.98)	**0.04**	2.25(0.69-7.33)	0.17
	Absent	4(15%)	Reference		Reference	

*p value < 0.05 is significant

Table 13 shows results of the multivariate analysis. It was found that Advanced age, Female gender, elderly living without spouse (Widow/unmarried/ separated) had

statistically significant association with functional dependence for activities of daily living (ADL). Chronic illness, Alcoholic, smoker and tobacco user associations became insignificant in multivariate analysis.

TABLE 14: MULTIVARIATE ANALYSIS OF FACTORS ASSOCIATED WITH FUNCTIONAL DEPENDENCY FOR IADL

S.No	Study Variables	Prevalence of Dependence n(%)	Unadjusted OR(95% CI)	p value	Adjusted OR(95% CI)	p value
1	**Age** 60-74 year >75 year	73(29%) 46(92%)	Reference 27.88(9.68-80)	**<0.001**	Reference 30.3(10.25-89.7)	**<0.05**
2	**Gender** Female Male	84(44.2%) 35(31.8%)	1.69(1.03-2.78) Reference	**0.03**	1.72(0.39-7.4)	0.46
3	**Chronic illness** Present Absent	115(42%) 4(14.8%)	4.18(1.4-12.43) Reference	**0.01**	4.07(1.36-12.1)	**0.01**

*p value < 0.05 is significant

As shown in Table 14, advanced age and presence of chronic illness had statistically significant association with functional dependence for Instrumental based activities of daily living (IADL).

Functional dependency and Age:

Table 13 & 14 shows the results of the multi variate analysis. Functional limitation are more common among elderly people which increases with advancing age. It was found that in the age category 75 years and above 64% had dependence for ADL, whereas in the category 60-74 year group only 26.4% had functional dependence. This difference was statistically significant (p =<0.001).

Also found , elderly >75 years 92% had dependence for IADL, whereas elderly in 60-74 year age category had 29% functional dependence. This difference was statistically significant (p =<0.001).

In our final Regression model, after adjusting for all other covariates, the risk of functional dependence for ADL were 4.85 times higher in elderly in age group 75 years and above as compared to elderly in 60-74 year age group. Also found ,the risk of functional dependence for IADL were 30.3 times higher in age group 75 years and above as compared to 60-74 year age group. It is statistically significant association (p <0.001)

Similar association was found in study among elderly people in rural area of Haryana showed there is a strong association of advancing age with functional dependency[31]. In their study they also found that people above 75 years of age were 5 times at higher risk of functional dependence as compared to people below 74 years of age.

In a study in rural Malaysia, among elderly people found that the risk of functional limitation increases significantly with increase in age and the risk is three times higher in individuals above 75 years[47]. Many studies related to dependence among the elderly have confirmed that increasing age tend to be associated with increased risk of dependence[48,49].

Gender and functional dependency:

In our study we explored the association of functional dependency with gender. Elderly female, had dependence 38.9% whereas only 21.8% of the elderly male had dependence. This difference was statistically significant ($p<0.002$). In our final Regression model, after adjusting for all other covariates that the risk of dependency for ADL was 2.92 times higher among elderly women when compared to elderly male as shown in Table 13. This difference was statistically significant ($p=<0.001$).

Longitudinal study among 754 elderly subjects found that functional limitation was significantly higher among female as compared to male($p<0.001$)[48]. Many population and clinic based cross sectional studies in India have reported an association between female gender and functional limitation for activities of daily living among the elderly[49,50].

As shown in Table 14, the odds of getting functional dependence for IADL was 1.72 times higher among elderly women as compared to elderly men. This difference was not statistically significant ($p>0.05$).

Similar finding in study done among elderly in South India, found that the gender is not significantly associated with functional dependence[31]. Our inability to find such an association may be linked to a generally lower prevalence of limitations in IADLs in our study population. It has been suggested that while ADLs may reflect pure dependency in performing a task by either men or women, limitations in instrumental activities of daily living may be influenced more by gender specific tasks.

Marital Status and Functional dependency:

In our study we explored the association of dependency with elderly people's marital status. Elderly (widow/unmarried/separated) in other category had 40.1% functional dependence for ADL whereas 26.4% married elderly had functional dependence. This difference was statistically significant (p=<0.001).

After our final regression model, We found that risk of dependency was 1.72 times higher among widower/Unmarried/separated when compared to married. As shown in Table 13, this difference was significant (p <0.05).

Kumar D et al study among 350 elderly showed there was a strong association of widow/unmarried and dependency[41]. In their study they found trend in prevalence of functional limitation to be higher (35.5%) among unmarried/widow/widower group as compared to currently married. This was statistically significant (p <0.05)

Smokeless Tobacco, Smoking, Alcohol use and functional dependency:

As shown in Table 13, non smokers, non alcoholics and non tobacco users had higher odds of functional dependency for ADL than those who were smoker, alcoholics and tobacco users respectively. After our final regression model, this difference became not statistically significant ($p>0.05$)

In the present study we found, the proportion of persons who are not addicted is higher in advanced age (>75 years) compared to those who are addicted. Non tobacco user elderly (64%) are higher in advanced age as compared to tobacco user elder(36%). Non alcoholic elder(58%) are higher in advanced age as compared to alcoholic elder(42%). Higher proportion of Non smoker (60%) in >75 year aged elderly as compared to smoker (40%).

In our study non addictive had higher risk for functional dependence than those elderly who were addictive. This may be due to survivor bias i.e People who are not addicted live longer till advanced age. As functional dependency increases with age, it may just be a reflection of this effect rather than addictive habits being protective for functional dependency.

Chronic Illness and functional dependency:

In our study we explored association between chronic illness and dependency. We found that elderly with chronic illness were 3 times at higher risk for functional dependency for ADL as compared to elderly without chronic illness. This difference was statistically significant ($p<0.05$).

On adjusting all covariates, we found , elderly with chronic illness were 2.25 times at higher risk for functional dependency for ADL as compared to elderly without chronic illness. This difference was found to be not significant ($p= 0.17$) when adjusted for other variables as shown in Table 13

As shown in Table 14, Elderly with chronic illness were 4.07 times at higher risk for functional dependency for IADL as compared to elderly without chronic illness. This difference was statistically significant ($p= 0.01$), when adjusted for other variables.

Veerappu et al[31] study among rural people found presence of chronic illness was 2.25 higher odds for functional dependence in ADL and were statistically significant ($p=0.001$). They also found that the presence of chronic illness was 4.07 times higher risk for functional dependence in IADL which was not statistically significant ($p=0.71$). In contrast to this, present study found association of chronic illness not significant for ADL. This may be due to difference in sample size and methodology used.

Community-based programs need to have strong components of prevention of dependency and adequate treatment of chronic conditions. Our study population are utilizing primary health canter for the treatment of chronic illness and minor aliments.

Management of chronic conditions, especially arthritis, hypertension and diabetes, should address the accompanying functional dependency as well at primary care level of services. The concerned health care providers need to recognize the functional dependency as a condition deserving of attention, as much as the primary chronic condition.

7.CONCLUSION

The prevalence of functional dependence for basic activities of daily living among study population was 32.7% (95% CI 27.61-37.97) and for instrumental activities of daily living was 39.7% (95% CI 34.3-45.3).

Among various risk factors studies, 7 factors for functional dependence for ADL and three factors for IADL were found significant in bivariate analysis. Advanced age, female gender, chronic illness, elder who are not living with spouse(widow/unmarried/separated), tobacco user, smoker and current alcoholic had significant associations for ADL functional dependency. Advanced age, female gender, and chronic illness were found significant risk factors for IADL functional dependency.

Subsequent multi variate analysis revealed that advanced age (OR 4.85, 95% CI 2.41-9.7), Female elder (OR 2.92, 95% CI 1.52-5.6), and being a widow [OR 1.72(1.01-2.94)] were the factors causing significant risk for dependence for ADL.

Advanced age (30.3, 95% CI 10.25-89.7) and chronic illness (4.07, 95% CI 1.36-12.1) were the factors causing significant risk for dependence for instrumental based activities of daily living (IADL) as shown by multi variate analysis.

8.SUMMARY

The main objective of this study was to find out the prevalence of functional dependence in a rural area of Tiruvallur district of Tamilnadu.

Methodology :

A cross sectional study was conducted in the Perumalpattu village, Tiruvallur district among 300 elderly people. After getting informed consent a pre validated questionnaire was used to collect socio demographic details of the study participants. Katz scale for basic activities of daily living (ADL) and Lawton scale for instrumental based activities of daily living (IADL) was used to estimate prevalence of functional dependence. Data collected was entered in MS Excel and analysed using SPSS version 22.

Results and Discussion:

The study showed the mean age of the population as 68.71± 7.29. Majority 105 (35%) of the study participants were in 60-64 year age category. Only 16.7% of the study participants was >75 years of age. The proportion of female (63%) is higher in the study than male. Around 70% of the study population belonged to the lower class.

Almost 54% of the elderly were married. Around 41 % were widow/widower. The proportion of those who have lost their spouse is much higher among women(47.5%) compared to men(31.8%). About 21.7% of the elderly were illiterate. 20% of the study population were currently working , among them majority were male.

In our study, nearly 50% of the elderly were dependent on their children for source of income. 53% of the study population belonged to nuclear family. Almost 10% of the study participants were smoker and alcoholic. About 20% of the study participants were tobacco user.

Around 91% of the study participants had one or more chronic illness. Majority of the study participants had Arthritis(58%) followed by Hypertension (42%).

In this study, the prevalence of functional dependence for activities of daily living (ADL) was 32.7% (95% CI 27.61-37.97) and the prevalence of functional dependence for instrumental activities of daily living (IADL) was 39.7% (95% CI 34.3-45.3)

The prevalence of functional dependence across various risk factors like socio demographic factors, Marital factors, Occupation , source of income , addictive habits, family arrangements, chronic illness were analysed. Among those factors, for ADL statistically significant association was found for Age ,gender, marital status,

Addictive habit, chronic illness ($p < 0.05$). Functional dependent for IADL had statistically significant association with age, gender and chronic illness. For these factors risk estimation was done. The unadjusted odds ratio showed significant value for these factors.

The adjusted odds ratio was calculated using multi variate analysis which identified 3 factors , advanced Age [AOR=4.85(2.41-9.77)], female Gender [AOR=2.92(1.52-5.60)] and widow/unmarried/separated [AOR=1.72(1.01-2.94)] as having significant risk for functional dependence for ADL

Multivariate analysis for functional dependence IADL found advanced age [A0R 30.3(10.25-89.7)], and presence of chronic illness[AOR 4.07(1.36-12.1)] as having significant risk.

Conclusion:

The present study conducted in rural area of Tiruvallur district. Of the 300 elderly people, the prevalence of functional dependence for basic activities of daily living among study population was 32.7% (95% CI 27.61-37.97) and for instrumental activities of daily living was 39.7% (95% CI 34.3-45.3). Advanced age, female gender and elderly living without spouse (widow/unmarried/separated) were significantly associated with functional dependence for ADL. Advanced age and chronic illness were significantly associated with functional dependence for IADL.

These finding demonstrate the importance of Comprehensive geriatric care should be incorporated into all levels of health care and particularly in primary health care. There is a need for a new policy initiative focusing on strengthening of Community Based Rehabilitation Services (Family oriented programs, day care centers), support for family caregivers and social support interventions.

9.LIMITATION OF THIS STUDY

In the present study functional status was assessed based on self-reported response. No caretaker or family members were cross checked for the participants' response. Therefore some of the response may be overestimated. Our study addresses only physical limitation as need of the elderly. It does not study the equally important limitations in emotional and social support needs.

The co-morbidity status of the elderly was assessed based on self-reported illness, and medical records. No clinical examination was done. Therefore some of the morbidities which could be identified by clinical examination might have been missed.

Present study being a cross-sectional design, does not provide information about the evolution of elderly functions which could help point to the real causes of functional dependency. Future studies should also investigate function and its associated factors over time, in order to verify the progression of the outcome in elderly people over the years.

10.RECOMMENDATION

- The high prevalence of functional dependence among the study population requires suitable interventions at the community level itself.
- Comprehensive geriatric care should be incorporated into all levels of health care and particularly in primary health care and to provide an easy access to promotive, preventive, curative and rehabilitative services to the elderly through a community-based primary health care approach. At the sub-center level, the package of services includes domiciliary visits by trained health workers for attention and care to elderly persons and provision of training to the family care providers in looking after the elderly persons.
- Since functional capacity is an essential component of elderly health, it should be incorporated into health care assessment routines, especially in the Family Health Strategy routine that plays an important role in homebound elderly assistance. The variety of specific instruments to assess functional capacity in elderly people should be provided at primary health care level. In addition to assessment, promotion of health measures should be taken in order to improve or strengthen functional capacity and consequently, quality of life.
- Health education needed for the early diagnosis and treatment of geriatric disorders should be given to the elderly and their care givers to avoid misperceptions about geriatric disorders and their signs and symptoms in the elderly.

- Since there is high morbidity load among the rural elderly, it is recommended that we need to provide them with elder-friendly primary geriatric care services.
- Since it is also clear that large number of needs of the dependency are unmet, there is a need for a new policy initiative focusing on strengthening of Community Based Rehabilitation Services (Family oriented programs, day care centers), support for family caregivers and social support interventions.

11.BIBLIOGRAPHY

1. Goman M, Zaidi A. Global Age Watch Index 2015: Index Report. London: Help Age International; 2015 November.
2. World Population Prospects - Population Division - United Nations [Internet]. Population.un.org. 2019 [cited 30 July 2019]. Available from: https://population.un.org/wpp/
3. *India Ageing Report- 2017 – PWi*. [online] Available at: https://prowellnessindia.com/tag/india-ageing-report-2017
4. Central Statistics Office Ministry of Statistics & Programme Implementation Government of India. Situation Analysis of the Elderly in India. New Delhi: CSO; 2011
5. Census of India Website : SRS Statistical Report [Internet]. Censusindia.gov.in. 2019. Available from: http://censusindia.gov.in/vital_statistics/SRS_Statistical_Report.html
6. Elderly in India [Internet]. Ministry of Statistics and Programme Implementation; 2016.Availablefrom:http://mospi.nic.in/sites/default/files/publication_reports/ElderlyinIndia_2016.pdf
7. Karthikeyan S, Pedhamkar BS, Jape MR. Social Security the Global Scenario. Indian J Occup Health 1999; 42:91-8.

8. Abdulraheem S, Oladipo R, Amodu MO. Prevalence and correlates of physical disability and functional limitation among elderly rural population in Nigeria. J Aging Res. 2011:1-13.
9. Carmona-Torres JM, Rodrıguez -Borrego MA, Laredo-Aguilera JA, Lopez-SotoPJ, Santacruz-Salas E, Cobo-Cuenca AI (2019) Disability for basic and instrumental activities of daily living in older individuals. PLoSONE14(7): e0220157.https://doi.org/10.1371/journal. pone.0220157
10. Bureau U. New Data from the 1984 Survey of Income and Program Participation [Internet]. Census.gov. 2019 [cited 23 October 2019]. Available from: https://www.census.gov/library/working-papers/1988/demo/SIPP-WP-64.html
11. The Activities of Daily Living, National Surveys and Long-Term Care Cost Estimates: Two Current Initiatives [Internet]. ASPE. 2019 [cited 22 October 2019]. Available from: https://aspe.hhs.gov/basic-report/activities-daily-living-national-surveys-and-long-term-care-cost-estimates-two-current-initiatives
12. PRB staff, "World Population Highlights: Key Findings From PRB's 2010 World Population Data Sheet," Population Bulletin 65, no. 2 (2010).
13. Limwattananon S, Tangcharoensathien V, Prakongsai P. Catastrophic and poverty impacts of heath payments: results from national household surveys in Thailand. Bull World Health Organ. 2007 Aug; 85(8): 600- 606.
14. NRHM. Health Care of Elderly. NRHM Newsletter. 2013;7(6):15.

15. American Federation for Aging Research (AFAR). Theories of Ageing: Infoaging Guide – Why Do We Age. New York: AFAR; 2006. P 2- 4.
16. Jin K. Modern Biological Theories of Ageing. Aging and Disease. 2010 October. 1(2); pg 72- 74.
17. Fauci AS, Kasper DL, Longo DL, Hauser SL, Jameson JL et al, editors. Harrison's Principles of Internal Medicine. 19th edition. New Delhi: McGraw Hill; 2015. Vol 1, p 70-84
18. United Nations Department of Economic and Social Affairs Population Division. World Population Ageing 2009. Newyork: United Nations; 2010. Chapter 1.
19. Life expectancy [Internet]. World Health Organization. 2019 [cited 23 October 2019]. Available from: https://www.who.int/gho/mortality_burden_disease/life_tables/situation_trends/en/
20. PRB staff, "World Population Highlights: Key Findings From PRB's 2010 World Population Data Sheet," Population Bulletin 65, no. 2 (2010).
21. Government of India. Age Data Highlights. Census of India 2011.Available from: http://www.censusindia.gov.in
22. The problem with getting old. Second world assembly on Ageing: 2002 April 5-9; Madrid, Spain. [Internet]. [cited 2019 Jul 21]. Available from: http://www.globalaging.org/waa2/articles/problemold.htm
23. Asha Krishnakumar. The old and the ignored. Frontline. 2004;21(19).

24. Kamlesh Joshi, Rajesh Kumar, Ajit Avasthi. Morbidity profile and its relationship with disability and psychological distress among elderly people in Northern India. IJE.Oxford journals.2003;32(6):978-87.

25. Rahul Prakash, S.K.Choudhary, Uday Shanker Singh. A Study of Morbidity pattern among Geriatric population in an Urban area of Udaipur Rajasthan.IJCM.2004;29(1):35-40.

26. Gopal K Ingle, Anitha Nath. Geriatric Health in India: Concerns and solutions. IJCM. 2008;33(4):214-18.

27. Reddy PH. The Health of the aged in India. Health Transit Rev.1996;6:23344.

28. Thomas M Gill, Mayur M Desai, Evelyne A Gahbauer, Theodore R Holford, Christianna S Williams. Restricted Activity among Community-Living Older Persons: Incidence, Precipitants and Health Care Utilisation. Ann Intern Med. 2001; 135(5):313 21.

29. Thomas M Gill, Evelyne A Gahbauer, Terrence E. Murphy, Ling Han, Heather G Allore. Risk Factors and Precipitants of Long - Term Disability in Community Mobility: A Cohort Study of Older Persons. Ann Intern Med. 2012;156(2):131-40.

30. National Programme for Health Care of the Elderly(NPHCE) | Ministry of Health and Family Welfare | GOI [Internet]. Mohfw.gov.in. 2019 [cited 23 October 2019]. Available from: https://mohfw.gov.in/major-programmes/other-national-health-programmes/ national- programme-health-care-elderlynphce

31. Veerapu N, PraveenKumar BA, Subramaniyan P, Arun G. Functional dependence among elderly people in a rural community of Andhra Pradesh, South India. Int J Community Med Public Health 2016;3:1835-40.

32. Gagandeep Kaur Walia. Disability Factsheets. South Asia Network for Chronic Disease. Available from: http://sancd.org/uploads/pdf/disability.pdf

33. P A, Naik P, R P. Functional assessment of elderly population: a community-based cross-sectional study. International Journal of Medical Science and Public Health. 2016;5(3):438.

34. Daniel Mont, Disability and Development Team. Measuring Disability Prevalence. Washington D C: HDNSP, The World Bank; 2007. SP Discussion Paper No.0706.

35. Katz S, Ford AB, Moskowitz RW, Jackson BA, Jaffe MW (1963). Studies of Illness in the Aged. The Index of ADL: A Standardized Measure of Biological and Psychosocial Function. JAMA 1963 Sep 21;185:914-9.

36. Fisher T. [Internet]. Dalspace.library.dal.ca. 2008 [cited 31 July 2019]. Available from:https://dalspace.library.dal.ca/bitstream/handle/10222/14829/FisherAppendix3.pdf sequence=4

37. Lawton, M.P., & Brody, E.M. (1969). Assessment of older people: Self-maintaining and instrumental activities of daily living. The Gerontologist, 9(3), 179-186.

38. Elderly people .National Human Rights Commission.Available from https://www.nhrc.nic.in

39. Smokingstatus-Availablefrom http://www.cdc.gov/nchs/nhis/tobacco/tobacco_glossary.htm#

40. The elderly and functional dependency :A policy statement; final report. Available at http://www.books.google.co.in

41. Devendra Kumar, Sanjeev Kumar Rasania, Ranjan Das. A Clinico -Social Study of Functional Disabilities. 2018: 10.232.74.27

42. Gupta P, Mani K, Rai SK, Nongkynrih B, Gupta SK. Functional disability among elderly persons in a rural area of Haryana. Indian J Public Health 2014;58:11-6.

43. Khan ZA, Singh C, Khan T. Correlates of physical disability in the elderly population of Rural North India (Haryana). J Fam Community Med 2018;25:199-204

44. Pitchai P, Dedhia HB, Bhandari N, Krishnan D, D'Souza NR, Bellara JM. Prevalence, risk factors, circumstances for falls and level of functional independence among geriatric population - A descriptive study. Indian J Public Health 2019;63:21-6.

45. The status of elderly in Tamil Nadu [Internet]. Isec.ac.in. 2019 [cited 21 October 2019]. Available from: http://www.isec.ac.in/Tamil%20Nadu.pdf

46. Goswami A. Health status of the aged in a rural community. PhD Thesis. New Delhi: Centre for Community Medicine, All India Institute of Medical Sciences; 2002

47. Hairi et al. Prevalence and correlates of physical disability and functional limitation among community dwelling older people in rural Malaysia, a middle income country. BMC Public Health 2010 10:492.

48. Thomas M Gill ,Mayur M Desai, Evelyne A Gahbauer, Theodore R Holford, Christianna S Williams. Restricted Activity among Community-Living Older Persons: Incidence, Precipitants and Health Care Utilisation. Ann Intern Med. 2001; 135(5):313-21.

49. Krishnamachari Srinivasan, Mario Vaz, Tinku Thomas. Prevalence of health related disability among community dwelling urban elderly from middle socio economic strata in Bangaluru, India. Indian J Med Res. 2010;131:515-21

50. Rautio N, Heikkinen E, Heikkinen RL. The association of socio-economic factors with physical and mental capacity in elderly men and women. Arch Gerontol Geriatr 2001; 33 : 163-78.

51. Beland F, Zunzunegui MV. Predictors of functional status in older people living at home. Age Ageing 1999; 28 : 153-9.

52. Sengupta M, Agree EM. Gender and disability among older adults in North and South India: differences associated with coresidence and marriage. J Cross Cult Gerontol 2002; 17 : 313-36.

53. Soneja S, Nagarkar KM, Dey AB, Khetrapal K, Kumar V. Socio-economic status and its relationship to parameters of social morbidity among elderly patients seeking outpatient medical care. In: Kumar V, editor. Aging: Indian perspective and global scenario. New Delhi: All India Institute of Medical Sciences; 1996. p. 137-9.

54. LaCroix A, Guralnik J, Berkman L, Wallace R, Satterfield S. Maintaining Mobility in Late Life. II. Smoking, Alcohol Consumption, Physical Activity, and Body Mass Index. American Journal of Epidemiology. 1993;137(8):858-869.

55. Sudrashan BP,Chethan TK.Morbidity pattern among elderly population in the rural area of Pondicherry.Int J Community Med Public Health 2016;3:414-8.

56. Rahul Prakash, S.K.Choudhary, Uday Shanker Singh. A Study of Morbidity pattern among Geriatric population in an Urban area of Udaipur Rajasthan.IJCM.2004;29(1):35-40.

57. Gopal K Ingle, Anitha Nath. Geriatric Health in India: Concerns and solutions. IJCM. 2008;33(4):214-18.

58. Reddy PH. The Health of the aged in India. Health Transit Rev.1996;6:233-44.

59. Shah B, Prabhakar AK. Chronic morbidity profile among elderly. Indian J Med Res. 1997;106:265-72.

60. Linda P. Fried, Richard A Kronmal, Anne B. Newman, Diane E. Bild, Maurice B.Mittlemark, Joseph F. Polak, et al. Risk factors for 5 year Mortality in Older Adults The cardiovascular health study. JAMA. 1998; 279(8):585-92

61. Center for Disease Control. Public Health and Aging: Trends in Aging- United States and Worldwide. MMWR Weekly. 2003 February 14; 52 (06): 101-6.

62. Nwani PO, Isah AO. Chronic Diseases and Multimorbidity among elderly patients admitted in the medical wards of a Nigerian Tertiary Hospital. Journal of Clinical Gerontology and Geriatrics (2016).Available from: http://dx.doi.org/10.1016/j.jcgg.201510.001

63. Woo et al. Morbidity and related factors among elderly people in South Korea: Results from the Ansan Geriatric (AGE) cohort study. BMC Public Health 2007 January; 7: 10-19.

64. Khanam MA, Streatfield PK, Qiu C, Cornelius C, Wahlin A. Prevalence and patterns of Multimorbidity among Elderly people in rural Bangladesh: A Cross sectional study. J Health Popul Nutr. 2011 August; 29 (4): 404-414.

65. Purty AJ, Bazroy J, Kar M, Vasudevan K, Veliath A, Panda P. Morbidity Pattern among the elderly population in the rural area of Tamil Nadu, India. Turk J Med Sci 2006; 36:45-50.

66. Raju SS. Studies on Ageing in India: A Review, BKPAI Working Paper No. 2. New Delhi: United Nations Population Fund (UNFPA); 2011

67. Ingle GK, Nath A. Geriatric health in India: Concerns and Solutions. Indian J of Community Med. 2008; 33:214-8.

68. Sokolovsky J. Living Arrangement of Older Persons and family Support in less developed Countries. New York: Population Bulletin of United Nations, Special Issue; 2001

69. Help Age India. Elder Abuse In India 2013. New Delhi: 2013. American Psychological Association. Fact Sheet: Age and Socioeconomic Status.[updated in 2016; cited on 2016 January11] Available from: http://www.apa.org/pi/ses/resources/publications /age.aspx

70. Bassuk SS, Berkman LF, Amick BC. Socioeconomic status and mortality among the Elderly: Findings from four US communities. Am J of Epidemiol.2002 March 15; 155(6):520-33.

71. Jerliu N, Toci E, Burazeri G, Ramadani N, and Brand H. Socioeconomic conditions of elderly people in Kosovo: A Cross sectional study. BMC Public Health. 2012; 12: 512.

72. Monteverde M, Noroha K, Palloni A. Effect of early conditions on disability among the Elderly in Latin America and the Caribbean. Popul study (Camb).2009 march; 63(1):21-35.

73. .Chen CX, Feng LN, Li SX. The correlation between socioeconomic status and Health Self Management in the elderly. International J of Nursing Sciences. 2014 December; Vol 1 (4): 410-415.

74. White CM, St John PD, Cheverie MR et al. The role of income and occupation in the association of education with healthy aging: results from a population-based, prospective cohort study. BMC Pubic Health, 2015; Vol 15:1181.

75. Andrew G, Clark MJ. The International Year of Older Persons: Putting Ageing and Research onto the Political Agenda. J Gerontol B Psychol Sci Soc Sci. 1999, Vol 54B (1): p 7-10.

76. WHO. Active Ageing makes the Difference. Geneva: WHO; 1999.

77. EuroHealthNet. Healthy ageing. [updated on 2016 March; Available from: http://www.healthyageing.eu

78. Press Information Bureau. Review of National Policy for Older Persons. New Delhi; Ministry of Social Justice and Empowerment, Government of India. 2014

79. Ministry of Health and Family Welfare. National Program for Health Care of the Elderly (NPHCE): Operational Guidelines 2011. New Delhi: Director General of Health Services, Government of India; 2011.

80. Epoch Elder Care. Assisted Living. Available from: http://www.epocheldercare.com/# assistedliving

81. Special services to the elderly from OPDs to their homes. Mathrubhoomi (Malayalam Daily; Trivandrum edition) 2016 August 1: 7

82. TN State Planning commission. Workshop on Welfare of Senior Citizens-Geriatric care Report. 2013 July 24.

ANNEXURE I

INSTITUTIONAL ETHICAL COMMITTEE CERTIFICATE

INSTITUTIONAL ETHICS COMMITTEE
GOVT. KILPAUK MEDICAL COLLEGE,
CHENNAI-10
Protocol ID. No. 16/2018 Meeting held on 08.01.2018

The Institutional Ethical Committee of Govt. Kilpauk Medical College, Chennai reviewed and discussed the application for approval "PREVALENCE OF FUNCTIONAL DEPENDENCE AMONG ELDERLY PEOPLE IN TIRUVALLUR DISTRICT OF TAMIL NADU" submitted by Dr.S.GAYATHRI, P.G.Student – M.D Community medicine, Department of Community medicine, Govt. Kilpauk Medical College, Chennai-10.

The Proposal is **APPROVED.**

The Institutional Ethical Committee expects to be informed about the progress of the study any Adverse Drug Reaction Occurring in the Course of the study any change in the protocol and patient information /informed consent and asks to be provided a copy of the final report.

8.1.18

DEAN
Govt. Kilpauk Medical College,
Chennai-10.

8.1.18

ME 1 Sec> Ethical Committee

ANNEXURE II

QUESTIONNAIRE

S.NO:

1. Name:

2. Age :

3.Sex

4. Occupation: 1. 2. 3. 4.

5. Educational Qualification: 1. 2. 3. 4.

6. Socioeconomic status: 1. 2. 3. 4. 5.

7.Marital status: 1. 2. 3.

8.House : 1. 2. 3.

9.Family arrangement: 1. 2. 3. 4. 5. 6.

10.Source of Income: 1. 2. 3. 4. 5.

11.Old age pension scheme :

Benefitted Not benefitted

12.Tobacco usage: 1. 2. 3.

13.Smoking: 1. 2. 3.

14. Alcohol usage 1. 2. 3.

15.chronic illness Present Absent

16. If present, Chronic illness: …….

ANNEXURE III

Katz Index of Independence in Activities of Daily Living		
Activities Points (1 or 0)	**Independence** (1 Point) **NO** supervision, direction or personal assistance.	**Dependence** (0 Points) **WITH** supervision, direction, personal assistance or total care.
BATHING Points: _____	**(1 POINT)** Bathes self completely or needs help in bathing only a single part of the body such as the back, genital area or disabled extremity.	**(0 POINTS)** Need help with bathing more than one part of the body, getting in or out of the tub or shower. Requires total bathing
DRESSING Points: _____	**(1 POINT)** Get clothes from closets and drawers and puts on clothes and outer garments complete with fasteners. May have help tying shoes.	**(0 POINTS)** Needs help with dressing self or needs to be completely dressed.
TOILETING Points: _____	**(1 POINT)** Goes to toilet, gets on and off, arranges clothes, cleans genital area without help.	**(0 POINTS)** Needs help transferring to the toilet, cleaning self or uses bedpan or commode.
TRANSFERRING Points: _____	**(1 POINT)** Moves in and out of bed or chair unassisted. Mechanical transfer aids are acceptable	**(0 POINTS)** Needs help in moving from bed to chair or requires a complete transfer.
CONTINENCE Points: _____	**(1 POINT)** Exercises complete self control over urination and defecation.	**(0 POINTS)** Is partially or totally incontinent of bowel or bladder
FEEDING Points: _____	**(1 POINT)** Gets food from plate into mouth without help. Preparation of food may be done by another person.	**(0 POINTS)** Needs partial or total help with feeding or requires parenteral feeding.
TOTAL POINTS: _____	**SCORING:** 6 = High (*patient independent*) 0 = Low (*patient very dependent*	

ANNEXURE IV

Lawton Instrumental Activities of Daily living

A. Ability to Use Telephone		**E. Laundry**	
1. Operates telephone on own initiative-looks up and dials numbers, etc.	1	1. Does personal laundry completely	1
		2. Launders small items-rinses stockings, etc.	1
2. Dials a few well-known numbers	1	3. All laundry must be done by others	0
3. Answers telephone but does not dial	1		
4. Does not use telephone at all	0		
B. Shopping		**F. Mode of Transportation**	
1. Takes care of all shopping needs independently	1	1. Travels independently on public transportation or drives own car	1
2. Shops independently for small purchases	0	2. Arranges own travel via taxi, but does not otherwise use public transportation	1
3. Needs to be accompanied on any shopping trip	0	3. Travels on public transportation when accompanied by another	1
4. Completely unable to shop	0	4. Travel limited to taxi or automobile with assistance of another	0
		5. Does not travel at all	0
C. Food Preparation		**G. Responsibility for Own Medications**	
1. Plans, prepares and serves adequate meals independently	1	1. Is responsible for taking medication in correct dosages at correct time	1
2. Prepares adequate meals if supplied with ingredients	0	2. Takes responsibility if medication is prepared in advance in separate dosage	0
3. Heats, serves and prepares meals, or prepares meals, or prepares meals but does not maintain adequate diet	0	3. Is not capable of dispensing own medication	0
4. Needs to have meals prepared and served	0		
D. Housekeeping		**H. Ability to Handle Finances**	
1. Maintains house alone or with occasional assistance (e.g. "heavy work domestic help")	1	1. Manages financial matters independently (budgets, writes checks, pays rent, bills, goes to bank), collects and keeps track of income	1
2. Performs light daily tasks such as dish washing, bed making	1	2. Manages day-to-day purchases, but needs help with banking, major purchases, etc.	1
3. Performs light daily tasks but cannot maintain acceptable level of cleanliness	1	3. Incapable of handling money	0
4. Needs help with all home maintenance tasks	1		
5. Does not participate in any housekeeping tasks	0		
Score		**Score**	

ANNEXURE V

MRSI SOCIOECONOMIC SCALE

Market Research Society of India Scale:

The New SEC system used to classify Households in india, based on two variables.

1) Education of the chief earner

2) Number of consumer Durables (from a predefined list)- owned by the family. The list has 11 items ranging from “electrical connection” and “agricultural land” to cars and air conditioners

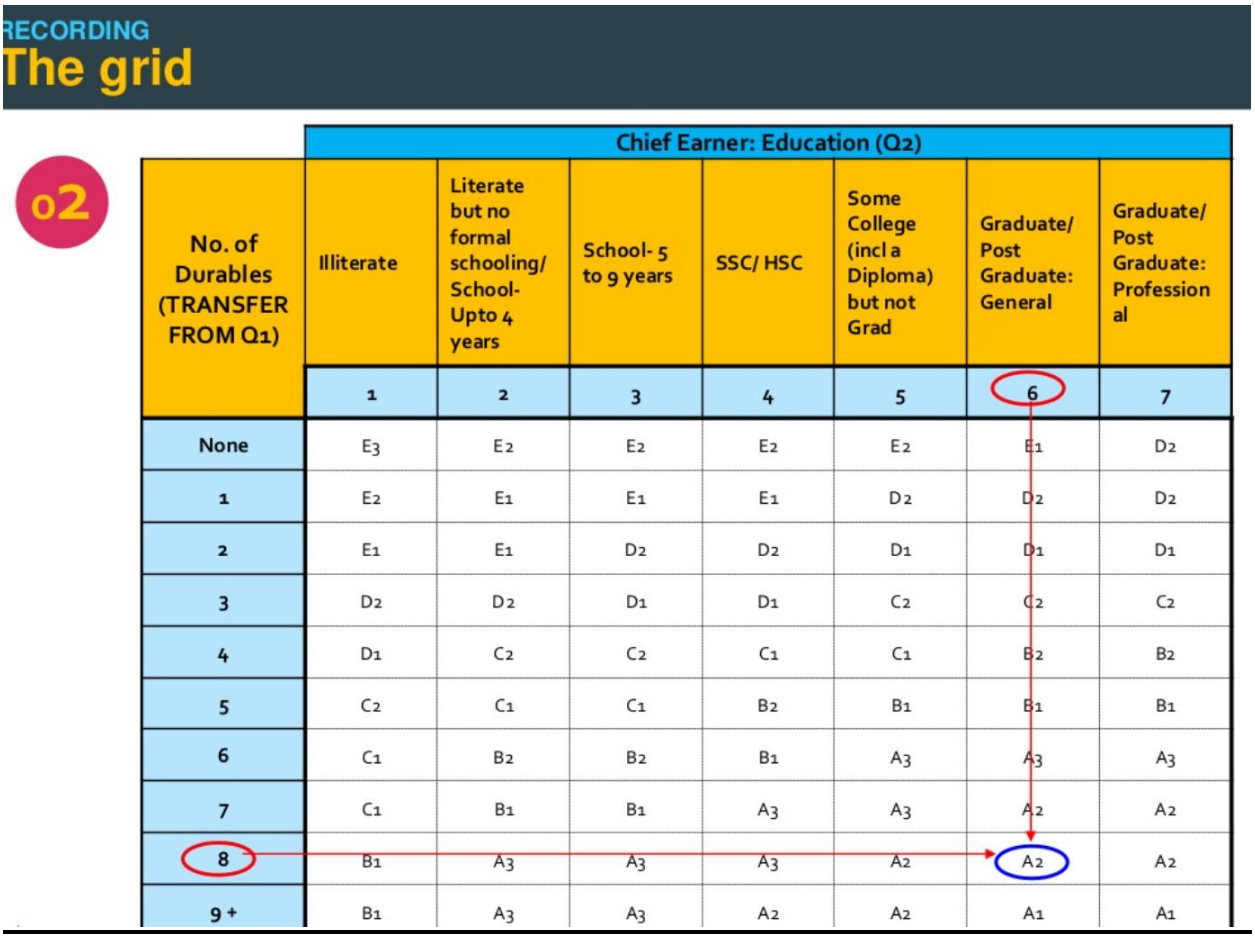
There are twelve grades in the SEC system , ranging from A1 to E3.

Source: Imbrint.com/research/The-New-SEC-system-3rdMay2011.pdf

THE NEW MRSI SOCIOECONOMIC SCALE

	Items owned / have access at home	Circle	Tick
	Electricity Connection	01	√
	Ceiling Fan	02	√
	LPG Stove	03	√
	Two Wheeler	04	√
	Colour TV	05	√
1a	Refrigerator	06	√
	Washing Machine	07	
	Personal Computer/ Laptop	08	
	Car/Jeep/Van	09	√
	Air Conditioner	10	
1b	Agricultural Land	11	√
	NUMBER OF STANDARD 11 OWNED		8

THE NEW MRSI SOCIOECONOMIC SCALE



No. of Durables (TRANSFER FROM Q1)	Chief Earner: Education (Q2)						
	Illiterate	Literate but no formal schooling/ School- Upto 4 years	School- 5 to 9 years	SSC/ HSC	Some College (incl a Diploma) but not Grad	Graduate/ Post Graduate: General	Graduate/ Post Graduate: Professional
	1	2	3	4	5	6	7
None	E_3	E_2	E_2	E_2	E_2	E_1	D_2
1	E_2	E_1	E_1	E_1	D_2	D_2	D_2
2	E_1	E_1	D_2	D_2	D_1	D_1	D_1
3	D_2	D_2	D_1	D_1	C_2	C_2	C_2
4	D_1	C_2	C_2	C_1	C_1	B_2	B_2
5	C_2	C_1	C_1	B_2	B_1	B_1	B_1
6	C_1	B_2	B_2	B_1	A_3	A_3	A_3
7	C_1	B_1	B_1	A_3	A_3	A_2	A_2
8	B_1	A_3	A_3	A_3	A_2	A_2	A_2
9 +	B_1	A_3	A_3	A_2	A_2	A_1	A_1

ANNEXURE VI

INFORMATION TO PARTICIPANTS

Investigator : Dr.GAYATHRI.S

Name of the Participant:

Title : **The Prevalence Of functional dependency among elderly people in Tiruvallur district of Tamilnadu**

You are invited to take part in this research study. We have got approval from the IEC. You will be asked to fill up a Questionnaire, and We would be asking you questions regarding Your Past and Personal History, so that appropriate preventive measures could be planned .

Date: Signature of the Investigator:

Place: Signature /thumb impression of the participant:

PARTICIPANT CONSENT FORM

Study detail :

Study centre :

Patients Name :

Patients Age :

Identification Number :

Patient may check (✓) these boxes

I confirm that I have understood the purpose of procedure for the above study. I have the opportunity to ask question and all my questions and doubts have been answered to my complete satisfaction. ☐

I understand that my participation in the study is voluntary and that I am free to withdraw at any time without giving reason, without my legal rights being affected. ☐

I understand that the ethical committee and the regulatory authorities will not need my permission to look at my health records ☐

However, I understand that my identity will not be revealed in any information released to third parties or published, unless as required under the law. I agree not to restrict the use of any data or results that arise from this study. ☐

I agree to take part in the above study and to comply with the instructions given during the study and faithfully cooperate with the study team and to immediately inform the study staff if I suffer from any deterioration in my health or well-being or any unexpected or unusual symptoms. ☐

I hereby consent to participate in this study.

Signature/thumb impression: Signature of investigator:

Patients Name and Address: Study investigator's Name:

ANNEXURE VII

KEY TO MASTER CHART

Items	Description of coded items
Age	1=60-64 years, 2= 65-69 years, 3 = 70-74 years, 4=>75 years
Gender	1-Male, 2- Female
Marital status	0- Widow, 1-Married, 2- Others(Separated/ Unmarried)
Education	0- Illiterate, 1- Primary schooling, 2- Secondary schooling, 3- Higher schooling & above
Occupation	0- Agriculture, 1- Employed, 2- Retired, 3- Unemployed
Source of Income	0- Agriculture, 1-Children, 2- Occupation, 3- Pension, 4-Other
Old Age Pension	0- Not Benefitted, 1- Benefitted
SES	1- Upper, 2- Upper Middle, 3- Lower Middle 4-Upper lower, 5- Lower
Type of House	0- Own, 1-Child, 2-Rental
Living Arrangement	1- Nuclear family, 2- Joint Family, 3- Three generation family, 4-living with Relative, 5-Contracted Family 6- Living alone

Tobacco user	1- Current, 2- Past, 3- Never
Smoking status	1- Current, 2- Past, 3- Never
Alcoholic status	1- Current, 2- Past, 3- Never
Chronic illness	0 -Absent 1- Present
ADL	0- Dependent 1- Independent
IADL	0- Dependent 1- Independent

ANNEXURE-VIII

MASTER CHART

S.No	Age	AGE1	gender	education	marital	occup	income	OAP	SES	living	House	tobacco	smoking	alcohol	chronic ill	Arthritis	HT	DM	resp. dis	heart dis	visu imp	hearing im	tremor	skin dis	kidney dis	hemip	others	bathing	dressing	toilet	transfer	continence	feed	ADL	ADL_code	tele use	laundry	shopping	transport	food prep	own_med	housekeep	money	IADL	IADL_code
1	62	1	2	1	1	3	1	1	1	1	0	3	3	3	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	4	1	1	1	0	1	1	0	1	1	6	1
2	78	4	2	0	0	3	1	1	5	2	2	3	3	3	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	1	0	1	2	0
3	63	1	1	1	0	3	1	0	4	2	0	1	3	3	1	1	1	1	0	0	1	1	1	0	0	0	1	1	0	0	1	1	1	4	1	1	1	0	0	1	0	1	1	5	1
4	67	2	2	2	1	0	0	0	4	2	2	3	3	3	1	1	0	1	0	0	1	0	0	0	0	0	0	1	1	0	0	1	1	4	1	1	1	0	0	1	0	1	1	5	1
5	72	3	2	0	1	3	1	0	5	3	0	3	3	3	1	0	1	1	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	4	1	1	0	1	0	1	1	1	1	5	1
6	81	4	2	3	1	3	4	0	5	1	0	3	3	3	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3	0
7	80	4	2	3	0	3	1	1	5	1	0	3	3	3	1	1	1	0	0	0	1	0	0	1	0	0	1	1	0	1	0	0	1	3	0	1	0	0	0	1	0	1	1	4	0
8	61	1	2	3	0	3	1	0	4	1	0	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	5	1	1	1	1	1	1	0	1	0	6	1
9	66	2	2	2	1	3	1	1	5	5	2	3	3	3	1	1	1	1	0	0	0	0	1	0	1	0	0	1	0	0	1	1	1	4	1	0	1	1	0	1	0	1	1	5	1
10	67	2	2	2	0	3	4	0	4	5	2	3	3	3	1	1	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1	1	1	4	1	0	1	0	0	1	1	1	1	5	1
11	68	2	2	2	0	0	0	1	1	2	1	3	3	3	1	1	1	0	1	1	0	0	1	0	0	0	0	1	0	0	1	1	1	4	1	0	1	0	0	1	1	1	1	5	1
12	66	2	2	2	0	3	1	1	4	6	1	3	3	3	1	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	0	1	1	5	1	0	1	0	0	1	1	1	1	5	1
13	83	4	2	1	1	3	1	1	4	2	1	3	3	3	1	0	1	1	1	0	1	0	1	0	0	0	0	0	1	0	0	1	1	3	0	0	0	1	1	1	1	0	0	4	0
14	63	1	2	1	1	3	1	1	4	2	0	3	3	3	1	0	1	0	1	0	0	0	0	1	0	0	0	1	1	0	1	1	1	5	1	0	1	1	1	1	0	1	0	5	1
15	60	1	2	1	0	3	4	0	4	6	2	3	3	3	1	1	0	1	1	0	0	0	0	0	0	0	0	1	1	0	1	1	1	5	1	1	1	1	1	1	0	1	1	7	1
16	71	3	2	0	1	3	1	0	3	2	0	3	3	3	1	0	0	1	1	0	1	0	0	0	0	0	0	1	1	0	1	1	1	5	1	1	1	1	1	1	1	1	0	7	1
17	61	1	2	3	1	3	1	1	3	1	0	3	3	3	1	0	0	1	0	0	0	0	1	1	0	0	0	0	1	1	0	1	1	4	1	0	1	1	1	1	0	1	1	6	1
18	62	1	2	1	0	3	1	1	3	6	0	3	3	3	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	1	4	1	0	1	1	1	1	0	1	0	5	1
19	73	3	2	0	1	3	1	1	3	1	1	3	3	3	1	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	4	1	0	1	1	1	1	0	1	0	5	1
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21	70	3	2	0	1	3	4	1	3	5	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	5	1	1	1	1	1	1	1	1	1	8	1
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275	62	1	1	1	1	2	3	1	3	1	1	1	2	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1	1	1	5	1	1	NA	0	1	NA	0	NA	1	3	1
276	71	3	2	0	0	3	1	1	4	1	2	3	3	3	1	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	0	1	0	1	3	0
277	63	1	2	1	0	3	1	0	4	3	0	3	3	3	1	1	1	1	0	1	1	1	1	0	1	0	0	1	0	1	1	1	1	5	1	1	1	0	0	1	0	1	1	5	1
278	67	2	1	0	1	0	0	0	4	1	2	1	2	2	1	1	0	1	0	0	1	0	0	0	0	0	0	1	1	1	0	1	1	5	1	1	NA	0	1	NA	0	NA	1	3	1
279	68	2	1	0	1	2	3	0	5	1	0	1	2	2	1	0	1	1	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	4	1	1	NA	1	1	NA	1	NA	1	5	1
280	73	3	2	0	1	3	1	1	3	2	0	3	3	3	1	1	1	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
281	79	4	2	3	0	3	1	1	3	1	1	3	3	3	1	1	1	0	0	1	1	0	0	1	0	0	0	1	0	1	0	0	1	3	0	1	0	0	0	0	0	0	1	2	0
282	66	2	1	0	0	1	2	1	4	1	1	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	NA	1	1	NA	1	NA	0	4	1
283	68	2	1	0	1	1	2	1	4	1	2	1	2	2	1	1	1	1	0	0	0	0	1	0	0	0	0	1	0	1	1	1	1	5	1	0	NA	1	1	NA	1	NA	1	4	1
284	62	2	1	0	1	1	2	0	4	1	2	1	2	2	1	1	1	0	0	0	0	0	1	0	1	1	0	1	0	1	1	1	1	5	1	0	NA	0	0	NA	0	NA	0	0	0
285	61	1	2	1	0	0	0	0	3	6	0	3	3	3	1	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	1	1	1	4	1	0	1	0	0	1	0	0	1	3	0
286	62	1	2	1	0	3	1	1	4	6	0	3	3	3	1	1	1	1	0	0	1	1	1	0	0	0	0	1	1	0	0	1	1	4	1	0	1	0	0	1	1	1	1	5	1
287	64	1	2	1	1	3	1	1	4	1	1	3	3	3	1	0	1	1	0	0	1	0	1	0	0	0	0	0	1	0	0	1	1	3	0	1	0	1	0	0	1	0	1	4	0
288	61	1	2	1	1	3	1	1	4	2	1	3	3	3	1	0	1	0	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	6	1	1	0	0	0	0	0	1	0	2	0
289	60	1	2	1	2	1	2	1	4	6	2	3	3	3	1	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	1	1	1	1	0	1	1	7	1
290	66	2	1	0	1	2	3	1	3	1	0	1	2	2	1	0	0	1	0	1	1	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	NA	1	1	NA	1	NA	0	3	1
291	64	1	2	1	1	3	4	0	3	1	0	3	3	3	1	0	0	1	0	0	0	0	1	1	0	1	0	0	1	1	0	1	1	4	1	1	0	1	0	0	0	0	1	2	0
292	63	1	1	1	1	1	2	1	3	2	1	1	2	2	1	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	1	1	5	1	0	NA	1	1	NA	0	NA	0	2	0
293	72	3	1	0	1	3	1	0	3	2	1	1	2	2	1	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0	0	1	1	4	1	1	NA	1	1	NA	0	NA	0	3	1

294	63	1	2	3	1	3	1	1	3	1	1	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	1	1	1	1	1	1	1	8	1
295	70	3	1	0	1	3	1	1	3	1	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	NA	1	1	NA	1	NA	1	5	1
296	71	3	1	0	1	3	4	0	3	3	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	6	1	1	NA	1	1	NA	0	NA	1	4	1
297	60	1	2	1	0	1	2	1	4	6	2	3	3	3	1	0	1	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	6	1	0	1	1	1	1	1	1	1	7	1
298	61	1	2	1	0	3	1	1	4	6	0	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3	0	0	1	0	0	1	1	1	1	5	0
299	62	1	2	1	0	3	4	0	4	6	0	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	4	1	0	1	1	0	0	1	1	1	5	0
300	63	1	2	1	1	3	1	1	4	1	1	3	3	3	1	0	1	0	0	0	0	0	0	1	0	0	0	1	1	1	1	1	1	6	1	1	1	1	0	1	0	1	0	5	0

ANNEXURE IX

TAMIL CONSENT FORM

சுய ஒப்புதல் படிவம்

ஆய்வு செய்யப்படும் தலைப்பு :

பங்கு பெறுபவரின் பெயர்:

பங்கு பெறுபவரின் வயது:

பங்கு பெறுபவரின் எண் :

பங்கு பெறுபவர் இதனை (√) குறிக்கவும்

மேலே குறிப்பட்டுள்ள மருத்துவ ஆய்வின் விவரங்கள் எனக்கு விளக்கப்பட்டது. என்னுடைய சந்தேகங்களை கேட்கவும், அதற்கான விளக்கங்களை பெறவும் வாய்ப்பளிக்கப்பட்டுள்ளது என அறிந்து கொண்டேன். ☐

நான் இவ்வாய்வில் தன்னிசையாக தான் பங்கேற்கிறேன். எந்த காரணத்தினாலோ எந்த சட்டசிக்கலுக்கும் உட்படாமல் நான் இவ்வாய்வில் இருந்து விலகி கொள்ளலாம் என்றும் அறிந்து கொண்டேன். ☐

இந்த ஆய்வு சம்பந்தமாகவோ , இதை சார்ந்து மேலும் ஆய்வு மேற்கொள்ளும் போதும் இந்த ஆய்வில் பங்கு பெறும் மருத்துவர் என்னுடைய மருத்துவ அறிக்கைகளை பார்ப்பதற்கு என் அனுமதி தேவையில்லை என அறிந்து கொள்கிறேன். ☐

இந்த ஆய்வின் மூலம் கிடைக்கும் தகவலையோ , முடிவையோ பயன்படுத்திக் கொள்ள மறுக்கமாட்டேன். ☐

இந்த ஆய்வில் பங்கு கொள்ள ஒப்புக் கொள்கிறேன். இந்த ஆய்வை மேற்கொள்ளும் மருத்துவ அணிக்கு உண்மையுடன் இருப்பேன் என்றும் உறுதியளிக்கிறேன். ☐

பங்கேற்பவரின் கையொப்பம் : _____ இடம் _____ தேதி _____

பங்கேற்பவரின் பெயர் மற்றும் விலாசம்:

சாட்சியாளரின் கையொப்பம் : _____ இடம் _____ தேதி _____

சாட்சியாளரின் பெயர் மற்றும் விலாசம்:

ஆய்வாளரின் கையொப்பம் : _____ இடம் _____ தேதி _____

ஆய்வாளரின் பெயர் : _____