

**A STUDY ON LIFESTYLE FACTORS AND ITS DETERMINANTS AND
THEIR IMPACT ON THE QUALITY OF LIFE AMONG GERIATRIC
PEOPLE, IN TIRUPUR DISTRICT**

Dissertation submitted to

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COMMUNITY MEDICINE

REGISTRATION NO:201725351



THE TAMIL NADU Dr. M.G.R MEDICAL UNIVERSITY,

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MAY - 2020

CERTIFICATE OF THE GUIDE

This is to certify that the dissertation titled “**A STUDY ON LIFESTYLE FACTORS AND ITS DETERMINANTS AND THEIR IMPACT ON THE QUALITY OF LIFE AMONG GERIATRIC PEOPLE, IN TIRUPUR DISTRICT**” is a bonafide work carried out by **DR.B.NARMATHA DEVI** , Post Graduate student in the Department of Community Medicine, Government Stanley Medical College, Chennai – 01, under my supervision and guidance towards partial fulfilment of the requirements for the degree of M.D. Branch XV Community Medicine and is being submitted to The Tamil Nadu Dr.M.G.R. Medical University, Chennai.

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ABBREVIATIONS

| | | |
|-----|---|------------------------------|
| WHO | - | World Health Organizations |
| UN | - | United Nations |
| SES | - | Socio Economic Status |
| MNA | - | Mini Nutrition Assessment |
| QOL | - | Quality of Life |
| ADL | - | Activities of Daily Living |
| NGO | - | Non-Government Organizations |
| PHC | - | Primary Health Centre |
| NCD | - | Non Communicable diseases |
| HSC | - | Health Sub Centre |
| VHN | - | Village Health Nurse |

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**A STUDY ON LIFESTYLE FACTORS AND ITS DETERMINANTS AND THEIR
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1.INTRODUCTION:

“Ageing is not lost youth but a new stage of opportunity and strength”

-Betty Friedan

Population ageing having started in the last century in the developed countries, has encompassed developing countries too. It has profound social, economic and political implications in the development of the country¹. Once ageing was thought by some as standalone or afterthought, today we understand that it is a drastic transformation and has profound consequences for every aspect of individual, community, national and international level. Ageing is a process which is genetically determined and environmentally modulated². It is a normal process which is inevitable and biological with a universal phenomenon³. Ageing can be defined as a progressive and generalized impairment of function which results in loss of adaptive response to stress and accelerates the risk of age associated disease⁴. The UN agreed cut off age for the older or elderly is 60+⁵. Due to increase in mortality and decrease in fertility, there is a decrease in working age population and increase in older age people leading to a dependency ratio of 14.2% which ultimately leads to ‘demographic burden’. The increase in life expectancy at birth and improvement in survival lead to longevity of the old people⁶.

In the history, for the first time in 2018, persons aged 65 and above

outnumbered the under-five aged children at global level. One in 11 people will be over age of 65 in 2019(9%) according to the World Population Prospects. Persons aged 80years and above will be tripled from 143 million in 2019 to 426 million in 2050⁷. In 2050 80% of older people will be living in low and middle income countries. In south East Asia region(SEAR) groups the proportion of geriatric population is increased to 8% in 2010 which will get around to 12% in the year 2025.The women will outnumber men in the proportion⁵. India is also facing the demographic transition phase. It is projected that in India the population aged 60 and above will be nearly 20% in 2050.The health and social systems face a major challenge to meet this demographic drift. As there is diversity in the age group and not all the old man are similar a comprehensive health response should be made available to meet the needs.

Lifestyle is defined as an individual's set of habits, customs and choices which he or she does throughout his or her life like Smoking, Alcohol consumption, physical activity,exercise,diet and sleep problems⁸.Lifestyle could be favourable to one's health like diet, exercise and physical activity or determinants to one's health like alcohol intake, smoking, sedentary and junk foods intake..In a study conducted in Shimla it was stated that 28% were smokers and 12% were consuming alcohol currently .Only 40% were doing regular physical activity and it was found that taking milk products regularly,fruits and vegetables regularly is associated with the functional status of the geriatric people.It was also stated that through adopting good lifestyle it will help the old persons by preventing their functional decline⁹.Enemona Emmanuel Adanji et al stated in her study conducted in the India that tobacco consumption increases the risk twice for Chronic lung disease¹⁰.Wu et al in his study stated that using tobacco daily and consuming high alcohol, doing low level of exercise and taking inadequate vegetables and fruits intake are the common risk factors for developing chronic

diseases¹¹.

Quality of Life is defined as “individual’s perception of life in the context of culture and the value system in which he or she lives and in relation to his or her goals, expectations, standards and concerns”¹². Quality of life is also affected by poor economic conditions, cultural, educational and health care conditions and inadequate social interactions¹³⁻¹⁵. Quality of life is influenced by sociodemographic factors like age, education, marital status and family structure. In the study conducted by S.E Thadathil stated that the Economic factors had a strong association with all the domains. It is also said that physical domain and social domain score depicts the improved health system of the area¹⁵. In a study conducted by Fiona Y.Wong it was stated that older people have a low QOL for the physical and psychological domain. There is a moderate satisfaction with neighbourhood on Psychological domain is mainly due to the non-smoking status of the residents¹⁶.

Monica Machon et al stated in her study that women have poor health and have more than 3 chronic conditions and taking more than 3 drugs which is prescribed. Individuals who are not doing any physical activity and having a poor sleep and having a bad diet pattern have reported to have a poor HROL¹⁷. Thara Govindaraju et al in the study stated that healthy diet patterns significantly associated with better self-rated QOL in or more domains and self-rated health. Adherence to healthy diet pattern found to be significantly associated with improvement in one or more domains¹⁸. The impact of lifestyle factors on quality of life in geriatric is least explored Nation wide. There is paucity of data in this public health problem in Tamil Nadu and hence this study was designed to explore the role of lifestyle factors on the quality of life of geriatric population in a rural area in Tirupur district of Tamil Nadu.

2.OBJECTIVES:

1. To assess the lifestyle factors among the geriatric population
- 2.To identify the influence of lifestyle factors on the quality of life among the geriatric population

3.

JUSTIFICATION:

1. Population ageing has social, economical and political implications in developed and developing countries in which healthy ageing is an important phenomenon.

2. Quality of life in the geriatric population (more than 60years) has an important influence on ageing. Various studies nation wide have focussed on the quality of life among the geriatric but there is a comparative dearth of literature on influence of Lifestyle factors on QOL.

3. Lifestyle factors like adequate fruit consumption, vegetable consumption, meat consumption, maintaining ideal body weight, having good quality sleep etc have an impact not only on good health but also on quality of life in geriatric population which is least explored

4. Behavioural change is the key component which can promote an active and healthy ageing among the geriatric people and lifestyle is one of the major component of behavioural change.

Hence this study is contemplated to focus on Lifestyle factors and its influence on the quality of life among the geriatric population in rural area.

4.REVIEW OF LITERATURE:

The phenomenon of population ageing is an important concern for the policy makers throughout the world, for both developing and developed countries for the past two decades. It was said that the percentage of aged more than 60 years were increasing up whereas the ratio of people in the working age i.e 15-59 years to those of the retired age is shrinking¹⁹ .It leads to serious socioeconomic crisis which is a matter of great concern. In developing countries like India it pose pressures on various socioeconomic fronts which includes outlays, pension, healthcare expenditure, fiscal discipline, savings etc. This growing population ageing affects the long term growth and development of some country²⁰.Thus the growing population is both a medical and sociological problem.

4.1 Ageing:

It is defined as a decline of adaptation as age increases and a time progressive decline of Hamilton forces of natural selection.It is a normal ,biological, inevitable and universal phenomena. As age increases there are certain structural and functional changes which take place in all parts of our body²³.For some it means as power, authority, wisdom and respect whereas some consider it as a state of loss of charm, physical strength leading to dependency. Ageing causes a physiological and psychological change which has an impact on their income, lesser activities and consequential loss of status in both family and society²⁴.

4.1.1 Ageing Globally:

Most international locations around the world are experiencing a fast amplify in the share of their populations who are over the age of 65, due to the fact people are living

longer and due to the fact many couples are choosing to have smaller families than their dad and mom had. The world's population ageing reflects incredible social, economic, and medical development over the closing 100 years, but it raises main challenges for governments in almost all areas, most especially related to health, pension, and employment policies.

4.1.2 Ageing in India:

Our country is in Rapid transition phase of population. Life expectancy has been seen increasing from 1950 in India and for men life expectancy at 60 has increased to 16.3 years and for women it has increased to 17.2 years²⁴.

4.2 Population pyramid:

Population pyramid illustrates the age and sex structure of a country's population and it provides the insights about political and social instability and economic development. The population is distributed along the horizontal axis, with males on the left and females on the right. The male and female populations are broken down into 5 year age groups represented on horizontal bars along the vertical axis, with the youngest age groups at the bottom and the oldest at the apex. The shape of the pyramid will gradually evolve over the time based on fertility and mortality and international migration trends etc. There is a change in age structure which was wide at bottom narrowing steeply over age some time age but by 2001 it started shrinking at low ages with the bulge moving upwards which suggests that there is a fall in fertility. As a consequence of the demographic transition the age structure undergoes a major shift from young to old ages and old age 60 years and above would be more than double.

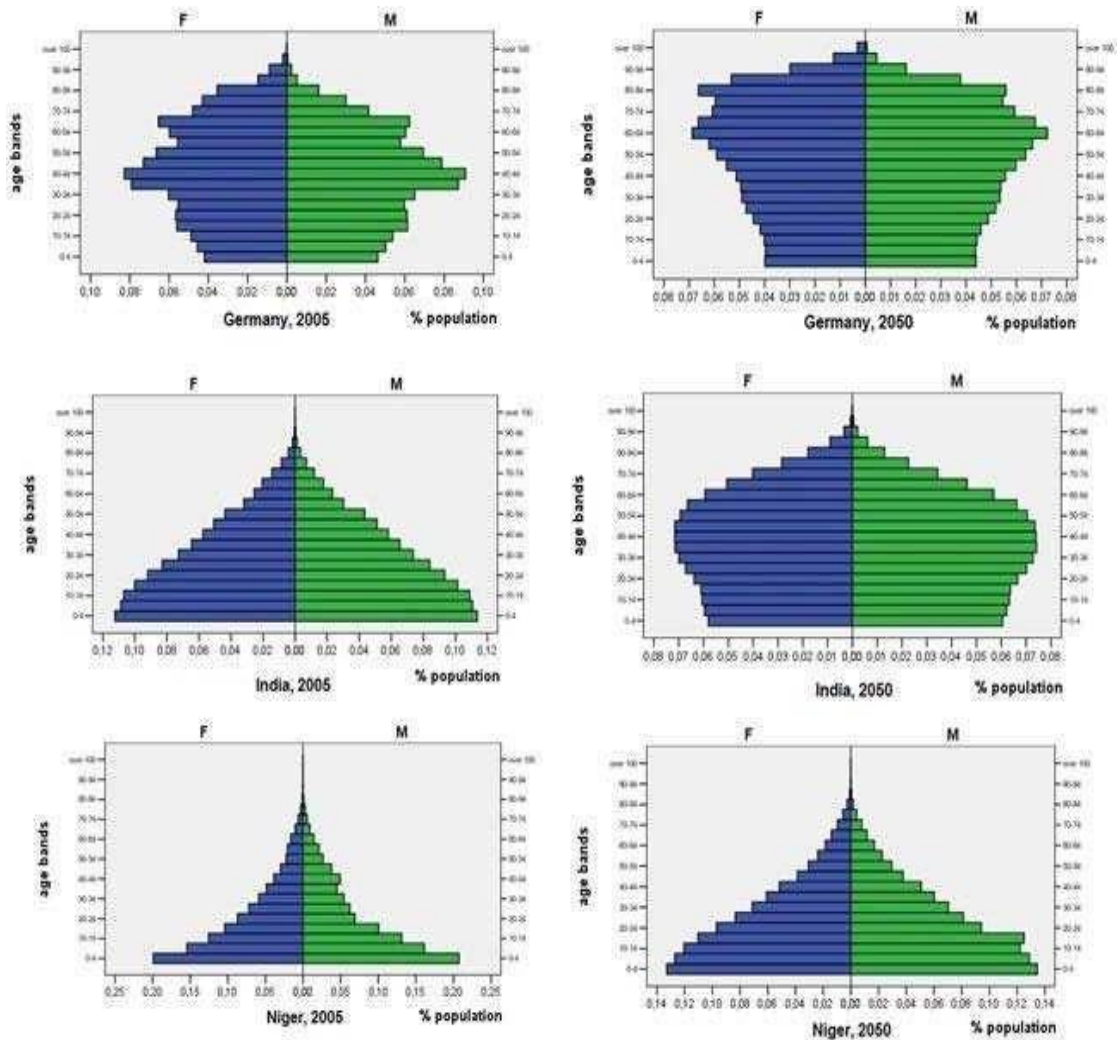


Figure 1:Population pyramid of Germany, India and Niger, Comparison between 2005 and 2050 .Source²⁵

Increasing in longevity and decline in fertility are the main reasons for this drastic change in population pyramid. This leads to health, social and economic changes which are great challenges for the country to meet as of now and in future²⁶.

4.2.1 Dependency Ratio:

Dependency ratio is a measure of the number of dependents aged zero to 14 and over the age of 65, compared with the total population aged 15-64.It gives an insight into

the number of people of nonworking age, compared with the number of those of working age. The old age dependency ratio is the ratio of population aged 65+ years per 100 population 20-64 years has increases substantially .The old age dependency ratio has been increased from 10.9% in 1961 to 14.2% as of 2011 census for India .For the females and males the value of ratio was 14.9% and 13.6% in 2011²⁶.

4.3 Problems faced by country due to ageing:

1. Challenges of Non-Communicable diseases
2. Risk factors fuelling NCDs
3. Population ageing and gender issues
4. Changing pattern of income security and safety net
5. Geriatric diseases and disabilities in India

4.3.1 Challenges of non-communicable diseases:

As the structure of the population pyramid changes the health profile also changes. Non communicable diseases like Cancers, Cardiovascular diseases, Respiratory diseases, Diabetes and Eye problem will increase as the age increases. Our country now faces a “triple burden of disease”, which comprise of infectious and chronic conditions and violence and injury. NCDs have over take the infectious, nutritional, maternal and perinatal conditions which were increasing cause of death both in percentage and numbers.

It surpassed in annual DALYs .In 2014 the annual DALYs for NCD is 253,629 whereas for infectious, nutritional, maternal and perinatal conditions it is 221, 81824.

In 2014 World Economic Forum report predicted that there may be loss of \$4.3

trillion due to loss in productivity and health expenditure between 2012 and 2030. Cardiovascular disease alone account more in India compared to other countries.

4.3.2 Risk factors fuelling NCDs:

There are four major chronic disease risk factors which include tobacco use, obesity, physical inactivity and alcohol consumption where the first three are main risk factors in geriatric population.

4.3.3 Population ageing and gender issues:

Life expectancy gender gap is increased in India which was doubled in 2010-2015 and predicted to reach 2 years in 2050-2055. The life expectancy sex gap age 60, -1.4. The projected life expectancy sex gap, age 80 -0.9. Difference in years between male and female life expectancy at age 60 according to 2011 data is that Male 17.2 and Female 18.9 and the difference is -1.7. One of the main reason for women outnumbered men in older population is due to changes in the trend across different states and so the prevalence of widowhood will be more²⁶.

4.3.4 Changing pattern of Income security and safety net:

United Nations Population Fund (UNFPA) survey which was done in some states of India states that every fifth of 60+ person lived alone or along with their husband separately. Workforce of 60+ in rural is total 47.1% and urban 28.5% whereas for 70+ for rural is 33.5% and urban area is 19.8% which further decreases as the age advances.

4.3.5 Geriatric diseases and disabilities in India:

The first common cause of death is Cardiovascular .11 million elderly were blind people and 80% due to Cataract.60% have Hearing impairment,9 million have Hypertension,5 million have Diabetes and 0.35 million have Cancer.

4.4 Lifestyle factors in adults:

Adoption of the healthy living habits at the early period leads to Healthy lifestyles. Health related behaviour influence the disease risks related to lifestyle in later part of life as in in turn influence quality of life and subsequent eating habits in adults. Young adults are the future decision makers in the communities, organizations and countries. So it is the major research platform focussed globally to promote healthy lifestyles among adolescents.

- Evangeline Mary et al in her study conducted among the college students of Chennai stated that 78% of adults have unhealthy lifestyle habits and all of them possess at least one risk factor. The risk factors awareness was less among the non-professional college students but their behavioural habits were significantly more compared to professional college students. Boys have better habits than girls which is significant and the overweight students have unhealthy lifestyle habits which is also found to be significant²⁷.
- Fiona Y. Wong et al in the study conducted among the residents of Hong Kong stated that 10.5% smoke everyday and about 18.3% consumes 2-4 times of alcohol per month and 13.2% had the recommended intake of at least 2 servings of fruit and 3 servings of the vegetables in a day. Non-smoking significantly associated with the psychological domain of the QOL compared to those who smoke occasionally. Most of them were categorized into the moderate physical activity

level (62.9%) and others were reported as having low activity level 13.3%. Among the QOL seen in their physical domain has the highest mean score of 70.83 ± 12.69 whereas the environmental domain has the lowest score of 61.98 ± 13.76 ¹⁶.

4.5 Lifestyle factors:

Lifestyle factors are set of habits, customs and habits which the individual experience throughout his or her lifetime. They are diet, physical activity, good quality sleep maintain ideal body mass index, smoking, ingestion of alcoholic beverages and others²⁹.

- A study which was conducted in abroad took the population with common lifestyle characteristics to explain the longevity which includes abstain from smoking, constantly doing moderate physical activity and social engagement and people having diet rich in vegetables, fruits and whole grains.
- WHO states that the root cause of the Non Communicable diseases is Lifestyle factors. Non-communicable diseases in mainly due to dietary and lifestyle factors like food, nutrients, energy intake ,physical activity, obesity ,smoking ,alcohol consumption and behavioural factors like sleep and stress and cultural factors⁸. WHO states that lifestyle factors are correlated to an individual health and quality of life around 60%. Many people follow unhealthy lifestyle which in turn leads to illness, disability and even death. Unhealthy lifestyle causes metabolic diseases , skeletal and joint problems, Cardiovascular diseases, hypertension, overweight and so on. Besides, the lives of citizens face with new challenges.
- Sci-chen Zhang et al in the study conducted in the northeast part of china stated that lower socioeconomic status have a poorest score for QOL. Unhealthy lifestyle

like sitting time has serious affect in their physical health which in turn leads to diseases. It is stated that physical activity strongly associated with the health score which is self-rated. Doing exercises regularly will protects against the poor mobility and poor health and hazards of death. Those who go for daily activity centre has relatively a better lifestyle and QOL compared to those who not²⁹.

4.5.1 Nutritional status.

Malnutrition is an great challenge which is important in the geriatric population. It is a continuum results due to inadequate food intake, changes in biochemical indices and body composition. It generally associated with impaired general physical condition, activity and also the mortality rate increases³¹.Malnutrition is predictor for morbidity and mortality. In India the magnitude of malnutrition is underreported. A study was conducted in rural area of the west Bengal and it was stated that 60.4% were at the risk of developing malnutrition. Factors like old age, low socioeconomic status, primary education, decline in food intake and reduced consumption of meals were said to be independently associated.

- Kritika et al stated in her study done in the field practice area of rural health training centre (RHTC) Dehradun 20.83% were malnourished and 43.7% were at risk of malnutrition.. Under nutrition was present in those who are not working, illiterate and as age advances. Lower socioeconomic class were more prone for malnutrition³⁰.

4.5.2 Sleep:

As ageing increases the REM sleep declines which is present in the typical sleep to 10 minutes per decade, fragmentation of sleep will increase to 30 minutes per decade. Good quality of sleep is also associated with better quality of life among the geriatric people. It is important to understand which lifestyle components can influence quality of sleep. Insomnia is the most common problem in the elderly and it accounts for 30% of sleep disorder. It affects their physical functioning and their cognitive functioning and therefor affect their day time functions which indirectly affects their emotional domain , social domain and physical domain.

- According to a study conducted in Melmaruvathur it was stated that 16.67% (5) have mild insomnia and 66.66% have moderate insomnia (20) and 16.67%(5)had severe insomnia. It was stated that effective sleep strategies improved the sleep status of the geriatric people³¹.
- In a study carried out by MorenoVencino et al.22, it was observed that central obesity is associated with poorer sleep quality in geriatric women, which also had an influence on the poor quality of life of this public³².

4.5.3 Functional status:

The functional capacity of the geriatric people has also been strongly related to a better perception of quality of life³⁸, as functional limitations among the geriatric interfere with their mobility, social conviviality and autonomy influencing the perception of Quality of Life of these individuals. Functional status like eating ,bathing, using toilet etc were the important problem for the aged people.

- In a study done in west Bengal in both rural urban area oldest old people were assessed for their activities of daily living. It is stated that among the study population 23.4% are independent , 30.8% were slight dependent and 45.8% were severely dependent .Compared to rural, the elders living in urban were more dependent 53.2% for their daily activity. Compared to urban,rural geriatric people were more active 27.6%³⁵.
- According to a study conducted in china to assess the activities of daily living through survey data they divided the factors of ADL into five aspects, demographic variable, living habits, social activities, diseases and psychological status. Tingting Wu et al stated in his study done in china that 65.7% were Severely dependent and he found that alcohol consumption ,physical activity, not following good diet habit, social activities were associated³⁶.

4.5.4 BMI:

In India obesity occurs mainly due to increase in intake of fat content food and sedentary lifestyle³⁰.In the year 2016 it was found that the overweight adults increased to 1.9 billion and among them 600 million were obese³⁷.Abnormal body mass index have a negative effect on health related quality of life. It leads to burden both in economic ad social aspects. The obese group had lower quality of life in physical domain, social domain, physical health, bodily pain etc. Due to excess of body fat it interferes with activities of daily living ,so they depends on others for aiding them with their daily activities³³.

- Hua You stated in the study conducted among geriatric people in Jiangsu, china that no one were in normal weight,8.3% were underweight,23.1% were overweight and 2.6% Were obese. In both sexes underweight are likely to have low HRQOL. Overweight

women have a low Eq-5d index and overweight men has a low Eq-5d VAS index.

Body composition also contributes to the quality of life.

- Gouveia et al. stated in the study that, the BMI results of the sample have a negative correlation with health related quality of life³³. It is important that exercise and eating with lifestyle factors such as sleep also influences the quality of life .

4.5.5 Physical activity:

Many studies stated that physical inactivity is the risk factor in determining the geriatric people health. Regular physical activity leads to healthy ageing. As ageing increases the physiological capacity declines which in turn affects the person ability to perform tasks which affects their quality of life. Sedentary behaviour increases the risk of mortality and has detrimental effects on the health.

- In a study done in Brazil they found that physical activity increases their quality of life. Ratana Somrongthong et al in his study stated that factors like socioeconomic and socio demographic were significantly associated with the activities of daily living³⁸. W. Jack Rejeski et al stated in the literature review that physical activity has an impact on the psychological well-being of the geriatric people³⁹.

4.5.6 Smoking:

According to WHO SAGE Survey it is stated that in low and middle income countries including India, daily smoking adults more than 50 years were high as 46.7%.5 million deaths occurs in a year and if this trend continues then 8 million deaths will occur by 2030 due to smoking. It a global and public concern in health. It depends on the amount of tobacco smoked per day and duration.It is the leading risk factor for many diseases like Ischemic heart disease, Cerebrovascular disease, tracheal cancer, bronchial cancer, Lung cancer, COPD, lower respiratory infections etc.

- According to a study conducted in Kancheepuram⁴⁰ it was stated mean age of males to start smoking were 19.9 ± 6.32 .9.3% were reported as ex-smokers and 37.6% were current smokers. Among them 35.8% were daily smokers.44.1% of males will smoke less than 10 cigarettes per day whereas 30.7% will smoke 10-19 cigarettes per day. Females were having a habit of smokeless tobacco and it was reported to be 15.1%.

4.5.7 Alcohol:

- Gopal Das Mohan Das chikkerahally et al in his study done in Karnataka in inpatients de-addiction program stated that 66% of the affected males were from urban and the mean score for physical domain is 9.4 ± 1.73 and for psychological domain is 10.3 ± 3.7 .Social domain is 10.3 ± 2.7 and the environment domain 12.1 ± 1.9 . Physical domain has the poor score and the person in complicated withdrawal group and alcohol induced psychotic group has poor QOL in physical and psychological domains⁴¹.

- Kaur P Rao et al stated in his study conducted in the rural area of Tamil Nadu that 69.8% of males and 1.3% of females have ever used alcohol in their lifetime. Among them 64.2% in males and <1% in females are using alcohol currently also. 29.2% will consume alcohol at least once in a week and 33.2% will consume less than once a week⁴⁰.

4.5.8 Stress:

It is the most common mental health problem which in turn affects their quality of life. 15% of the older people suffering from mental disorders and stress is the main problem which affects 10-15% of the elder population. It is expected that this will double in the next decade. In some study it was stated that two thirds of the people who have stress or experience have a six times risk of developing depression within a month.

- In a study conducted in Kancheepuram old age home stated that 18% have high stress score and 60% have moderate stress score. Sex and living with their spouse are found to be significantly associated with the stress scores⁴⁰.

4.6 Quality of life:

At global level QOL was considered as an main area which reflects the health status and wellbeing of the geriatric people⁴². Ageing and their related diseases also have an impact on their Quality of life⁴³.

- According to a study conducted among elderly by Sowmya et al showed that the mean QOL score was 47.59±14.56 and the highest score was found for social domain(56.6) and the lowest for physical domain(11.84)²². In a study conducted in

Puducherry in an urban area, the overall mean score was reported as 49.74(10.21).Factors like illiteracy, nuclear family, not receiving pension, living alone were significantly associated with low score.

- Rajasri et al in the study conducted in the thiruvananthapuram, kerala among geriatric women stated that only 2.5%(0.07-4.84) have very good quality of life,38.8%(31.2-46.4)have a very good QOL and 43.1% have poor QOL(35.4-50.8).About 15.6%(9.98-21.22)have very poor QOL. It was least in the psychological domain and high in the Social and environmental domain. Those who are more than 70 years, doesn't possess any property, neglected by their family members and no visits either by friends or relatives have shown significant association with the poor QOL⁴².

4.7 Morbidity:

Nearly half of the geriatric people (50%) have chronic diseases and 5% among them suffers from immobility.Females were the most vulnerable group in the geriatric population.The major challenge faced in our country is due to this epidemiological transition of both communicable and non-communicable diseases,and this causes a double burden to our country.

- Anil Jacob Purty et al stated in his study that among the geriatric people 48.1% have one ailment while 24.1% have more than two ailments.Females have a higher risk of morbidity compared to males.They stated that there is a high prevalence of Diabetes Mellitus ,Hypertension,Cataract,Arthritis and anemia⁵⁸.
- Md Asadullah et al stated in his study done in inmates oldage homes ,that the males were having more diabetes 47.8% and hypertension 43.5% compared to

females who have 43.3% diabetes and 34.3% were hypertension. Respiratory diseases and skin diseases were predominant in females⁴⁴. In a study conducted in old age home Chennai stated that hypertension was 39.5%, Skin problem the second common 25.5% and remaining were the hearing problem and respiratory problem.

4.8 Government initiatives for this special group⁴⁵:

Government has started to take many initiatives for this special group.

4.8.1. Integrated Programme for senior citizens (IPSrC):

Previously this scheme was known as IPOP Integrated Programme for Older Persons. Under this scheme grants-in aid will be provided for running and maintaining senior citizens homes like old age homes, Continuous care homes and mobile medical care units etc to the agency implementing like State Government, Union Territories, Panjayati raj and NGOs

4.8.2. Rashtriya Vayoshri Yojana:

The scheme launched in 1st April 2017. In this scheme the main objective of the scheme is to give assisting devices to the geriatric person's living BPL and those who have disabilities or infirmities which make them not to do their near normal bodily functions. This scheme is funded by senior citizens welfare fund. The assisting devices given are walking sticks, elbow crutchers, walkers or crutchers, Tripod or Quadpod, Spectacles, Hearing aids, Artificial dentures, Wheel chairs.

4.8.3. Senior Citizens Welfare Fund:

This Welfare fund was started in the budgeting year 2015-16. It is mainly formed to be utilised for schemes which help in promoting and maintaining the Healthcare and Nutrition of the Senior citizens, welfare of widows, schemes related to short stay homes, old age homes and Day care centres for taking care of the geriatric population and schemes giving financial security to the geriatric people.

4.8.4 National Council for Older Persons:

It is renamed as National Council for Senior Citizens (NCSrC) in 2012. Its main function is to advise Central and State Government regarding issues related to welfare of senior citizens and to improve their quality of life.

4.8.5 Vayoshreshtha Samman:

According to this scheme the eminent senior citizens and the institutions which render their service for the older people were given awards during the IDOP- International Day of Older Persons and now this is upgraded to National award. Along with on the IDOP Health Camps, Walkathons were also conducted.

4.8.6 Indira Gandhi National old age pension scheme (IGNOAPS):

Under this pension scheme persons who are 60 and above and were BPL are eligible for this scheme and they are given an assistance of Rs 200 per month and Rs 500 was given for those who are above 80 years. This money may vary from state to state. For eg for Andhra Pradesh they are giving RS 200 and For Delhi and Tamil Nadu they are giving an assistance of Rs 800 as Top up money in addition to the IGNOAPS. Currently in Tamil Nadu around 2497438 were benefited in the year 2015- 2016 .

4.8.7 TamilNadu Old age Pension Scheme(OAP)

For TamilNadu they are giving an assistance of Rs 1000. Those persons who were above 65 years were eligible for pension whereas 60 years in case of destitute who are incapacitated to earn money due to their blindness, insanity, leprosy, paralysis or loss of limb and widows. According to the data of 2015-2016 the beneficiaries were 772831.

4.8.8 Indira Gandhi National Widow Pension Scheme(IGNWPS):

This scheme was implemented in the year 2009 and a pension amount of Rs 200 is given to widows per month whose age group is between 40-64 and who are all below poverty line (BPL)

4.8.9 Annapurana scheme:

According to this scheme 10 Kg of rice will be given for the destitute senior citizen for free of cost among the National Old Age Pension beneficiaries. And separate colour ration cards with the 'ANNAPURNA' identification mark is printed in the card of beneficiaries. The number of beneficiaries in this scheme is 928333 according to 2014-2015 data. They are also provided with free saree and dothi and it is given for Deepavali and Pongal.

Another scheme of hot meal in noon meal centre is implemented where beneficiaries who take food from the noon meal centre were given 2 Kg of rice every month who do not take food from the noon meal centre were given 4 Kg of rice every month.

4.8.10 Rashtriya Swasthya Bima Yojana:

It was implemented in the year 2008 where this health insurance coverage aims to cover all the BPL families including older persons. The beneficiary will get a hospitalization coverage for Rs 30000 for the common diseases which requires hospitalisation

4.8.11 TamilNadu Chief Minister Health insurance scheme:

According to this scheme the Senior citizens can be added by their eligible member of the family so that the scheme will be covered for them.

4.8.12 Antyodaya Anna Yojana (AAY):

Under this scheme the Rice and Wheat are given for subsidised rate for the families headed by widows or disabled persons or terminally ill persons or senior citizens who has no means of maintenance and societal support.

4.8.13 Pradhan Mantri Vaya Vandana Yojana (PMVVY):

Under this scheme elderly persons above 60 years of age and above are protected against their future fall in their interest income due to unstability of market and also to provide social security to them. The minimum purchase price under this scheme was 1.5 lakhs for a family for minimum pension of 1000 Rs per month and the maximum purchasing price has been extended from 7.5 Lakhs to 15 Lakhs per person of Senior Citizen with maximum pension of Rs 5000.

4.8.14 National Programme for Health Care for the elderly:

This program was implemented in the year 2010-2011. It mainly deals comprehensive health care at primary level for the ageing population and to promote the concept of active and healthy ageing. It also promotes strengthening the elderly care at district

level, tertiary care level, Primary health centre and subcentres and facilitate district hospitals with 10 bed for the older population.

4.8.15 Concessions in Travel:

By AIR:

Air India offers a discount of 50% of Basic fare for economy classes on any sector in India to any senior citizen of Indian Nationality for those who were above 65 years of age. To avail this they have to show valid identity card with date of birth.

- Jet airways provides a concession on air fare for senior citizens for both economy class and Premiere class. To avail this they have to fill a prescribed form and submit age proof.

By Train:

- Males who's minimum age is 60 and females with minimum age 58 are given concession in all groups of train. For male 40% and Females 50% concession
- For senior citizens there is a provision to allot Lower berths, 6 lower berth per coach in sleeper class and quota of 3 lower berths in AC 3 tier and AC 2 tier
- Accomodation is also there in suburban sections for senior citizens during specified hours
- Wheel chair provisions were also there in the railway stations
- Free of cost battery operated vehicles for disables and older persons are there
- Separate counters are there for various PRS Passengers Reservation System for disabled person, Senior Citizens etc

By road :

The concession given in the road differs from states to states. For example in Delhi Senior citizens were given All Route GLS pass for Rs 50. They have to provide Certificate for Age proof and proof for residence and attested passform from the Gazetted officer. In TamilNadu Transport corporation buses two seats in front is given exclusively for old and handicapped people.

4.8.16 Helpage India:

It is a lead by NGO whose primary focus is on elderly under “Age Care Programme”. It provides free toll free helpline, health services and physiotherapy services and run fitness and wellness centre.

4.9 Lifestyle factors and its influence on quality of life:

It is found that modifiable lifestyle factors have an impact on quality of life.

- Xiaona Zhang et al in his study done to assess the relative contribution of lifestyle factors on Quality of life stated that physical HRQOL was positively associated with higher education, travel, entertainment and negatively with female sex, sleep disorders etc. Mental HQORL was associated with advancing age, Higher education, leisure time activities etc positively and negatively with seldom eatin fruit, meals, sleep disorders and not or seldomly doing physical activity. Similar positive and negative factors associated with the geriatric HRQOL .
- Monica Machon et al stated in the study conducted Gipuzkoa, Spain that women have poor health and have more than 3 chronic conditions and taking more than 3

drugs which is prescribed. Individuals who are not doing any physical activity and having a poor sleep and having a bad diet pattern have reported to have a poor HRQL. Those individuals who are in high socioeconomic class and literate have a good HRQL. The number of chronic diseases were strongly associated with the poor HRQL. Individuals who do not engage in cognitatively stimulating activity or social group activities have a poor HRQL compared to those actively take part in it.

| Journals | Country and sample | Method | Lifestyle components used in the study |
|----------------------------|---|------------------------------------|---|
| Guedes et al (2012) | Brazil 1204 elderly men and women aged over 60 | Quantitative cross sectional study | Physical activity |
| Footit and Anderson (2012) | Australia 328 elderly men and women aged over 60 | Quantitative cross sectional study | Diet, Physical activity, Smoking, Alcohol consumption, Health promotion |
| Silva et al (2012) | Brazil 50 elderly men and women aged over 60 | Quantitative cross sectional study | Level of physical activity |

| | | | |
|--------------------------|---|--|---|
| Atkins et al (2013) | Australia 626 elderly men and women aged over 60 | Quantitative cross sectional study | Level of physical activity Open air activities Social relationship Consumption of alcohol Time seated |
| Freitas et al (2014) | Brazil 60 elderly men and women aged over 60 (30 physically active and 30 physically inactive) | Quantitative cross sectional study | Physical activity |
| Meneguci et al (2015) | Brazil 3206 elderly men and women aged between 65 and 74 years | Quantitative cross sectional study | Time seated |
| Harada et al (2015) | Japan 1351 elderly men and women aged | Quantitative cross sectional study | Physical activity |

| | | | |
|---------------------------------------|---|--|---|
| | between 65 and 74 years | | |
| Aguero et al Leiva et al (2015) | Chile 271 elderly men and women aged between 80 and 90 | Quantitative cross sectional study | Dietary habits |
| Pan et al (2016) | China 5557 elderly persons aged over 60 | Quantitative cross sectional study | Tea drinking Diet Smoking Alcohol consumption Open air activities |
| Naughton et al (2016) | USA 26299 women aged 80 or over | Quantitative longitudinal study | Physical activity Body composition Smoking |
| Marques et al (2016) | Brazil 1131 elderly men and women aged over 60 | Quantitative cross sectional study | Employment Internet use Physical activity Religiosity Participation in religious groups or lifestyle |

| | | | |
|-----------------------------|--|--|---|
| Dohrn et al (2016) | Sweden 96 elderly men and women aged between 66 and 86 years with osteoporosis | Quantitative cross sectional study | Physical activity Gait speed Duration of sedentarism |
| Chatziralli et al (2016) | Greece 114 elderly men and women aged between 65 and 75 years diagnosed with muscular degeneration | Quantitative cross sectional study | Smoking Alcohol consumption Physical exercises Walking |
| Cerin et al (2016) | China 900 elderly men and women aged over 65 years | Quantitative longitudinal study | Physical activity Neighbourhood environment Social relations |
| Camelo et al (2016) | Brazil 366 elderly | Quantitative cross sectional | Social aspects of Diet Level of Physical activity |

| | | | |
|----------------------------|--|------------------------------------|---|
| | men and women aged between 60 and 94 years | study | Smoking |
| Moreno-Vencino et al(2017) | Spain 463 elderly women aged between 66 and 91 years | Quantitative cross sectional study | Body composition |
| Gouveia et al(2017) | Portugal 802 elderly men and women distributed in two groups(60-69 and 70-79) | Quantitative cross sectional study | Physical activity Body composition |
| Machon et al(2017) | Spain 800 elderly persons aged over 65 | Quantitative cross sectional study | Smoking Social conviviality Physical activity Nutritional risk |
| Bayan-Bravo et al (2017) | Spain 1323 elderly | Quantitative cross sectional | Smoking Alcohol |

| | | | |
|--------------------------------|--|---|---|
| | men and women aged over 60 | study Quantitative cross sectional study | Physical activity Diet Body composition |
| Zaragoza marti et al (2018) | Spain 351 elderly men and women aged over 60 | Quantitative cross sectional study | Smoking Alcohol Body composition Physical activity Diet |

From the above review of literature it is stated that factors like sex,age,education ,ethnicity,physical capacity,diseases,economic states also in addition to lifestyle factors have influence on the quality of life of the geriatric people.Good quality of sleep is also associated with the better quality of life.Functional status of the geriatric people associated with the psychological distress and has shown poor quality of life.Higher number of diseases has a worse effect on the Quality of life.Also living pattern like living alone,divorced and widow have an lower average quality of life.Geriatric people who have a family income below the minimum wage also has a very bad quality of life.It was stated that smoking and alcohol were the reason for many diseases like chronic diseases whereas as social relationships and family relationships are very important for their emotional and mental health which in turn contributes to QOL.Body mass index is also seen in many studies showed that it is not only age specific modification but also predispose to many chronic diseases.Diet is considered to be a main component and it had a protective effect on the chronic diseases and care should be taken that specific nutrition related to aging is their in their intake.Physical activity was strongly associated compared to the inactive geriatric people.

Social interaction has also been stated to be related to the good quality of life. In the study it is stated that physical activity, body composition, alcohol use, tobacco use and diet are the factors which mostly influence the quality of life.

- WHO defined “active ageing” as a process of optimizing opportunities for health, participation and security in order to enhance the quality of life of the people. The term active not only means their ability to participate physically active in the labour force but also continuing their participation in social, economic, cultural, spiritual and civic affairs. Interdependence and Intergenerational solidarity are the two main tenets of the active ageing. There are six determinants in the active ageing. They are Health and social determinants, Behavioural determinants, Personal determinants, Physical environment, Social determinants, social determinants and Economic determinants. Adoption of healthy lifestyle is the important component in the Behavioural determinant.
- It is stated in the Active ageing by WHO that engaging in appropriate physical activity, eating healthy food, not smoking and not using alcohol and using medication wisely in older age will prevent disease and decline in their functions so that we can extend longevity and can enhance one’s quality of life. So this study has contemplated to assess the lifestyle factors and their influence on the quality of life of the geriatric people in the rural area, Tirupur district.

5 .Materials and Methods:

5.1 Study Design:

Community based Cross sectional Study

5.2 Study Area and Population:

Male and Female of age 60 years and above residing in Alangiyam Health subcentre ,under the Government Primary Health centre Alangiyam, in Dharapuram Block of Tirupur District, in Tamilnadu

5.3 Study Period:

August 2018 to July 2019

5.4.1 Inclusion Criteria:

Those persons who are 60 years of age and above residing in the study area

People who are willing to participate in the study.

5.4.2 Exclusion Criteria:

People who were Terminally ill and hospitalized and

those who were not willing to participate in the study

5.5 Sample size:

Aprajita Dasgupta reported in their study “Quality of life of elderly people in rural area of West Bengal:A Community based study²¹ that the participants who have poor Quality of life were 54.1% .Based on this,the sample size was calculated for this study.

Sample size $n = Z_{1-\alpha/2}^2 pq / d^2$

Where,

$Z_{1-\alpha/2} = 1.96$ at 95% confidence interval

$p = 54.1$

$Q = 100 - p = 45.9$

$d =$ Allowable error of relative precision of 10% (10% of prevalence $54.1 = 5.41$)

substituting the above values in the formula,

$$N = (1.96)^2 (1.96) \times 54.1 \times 45.9 / 5.4^2 = 327 \text{ households}$$

Allowing a non response rate of 10%

Final sample size attained was

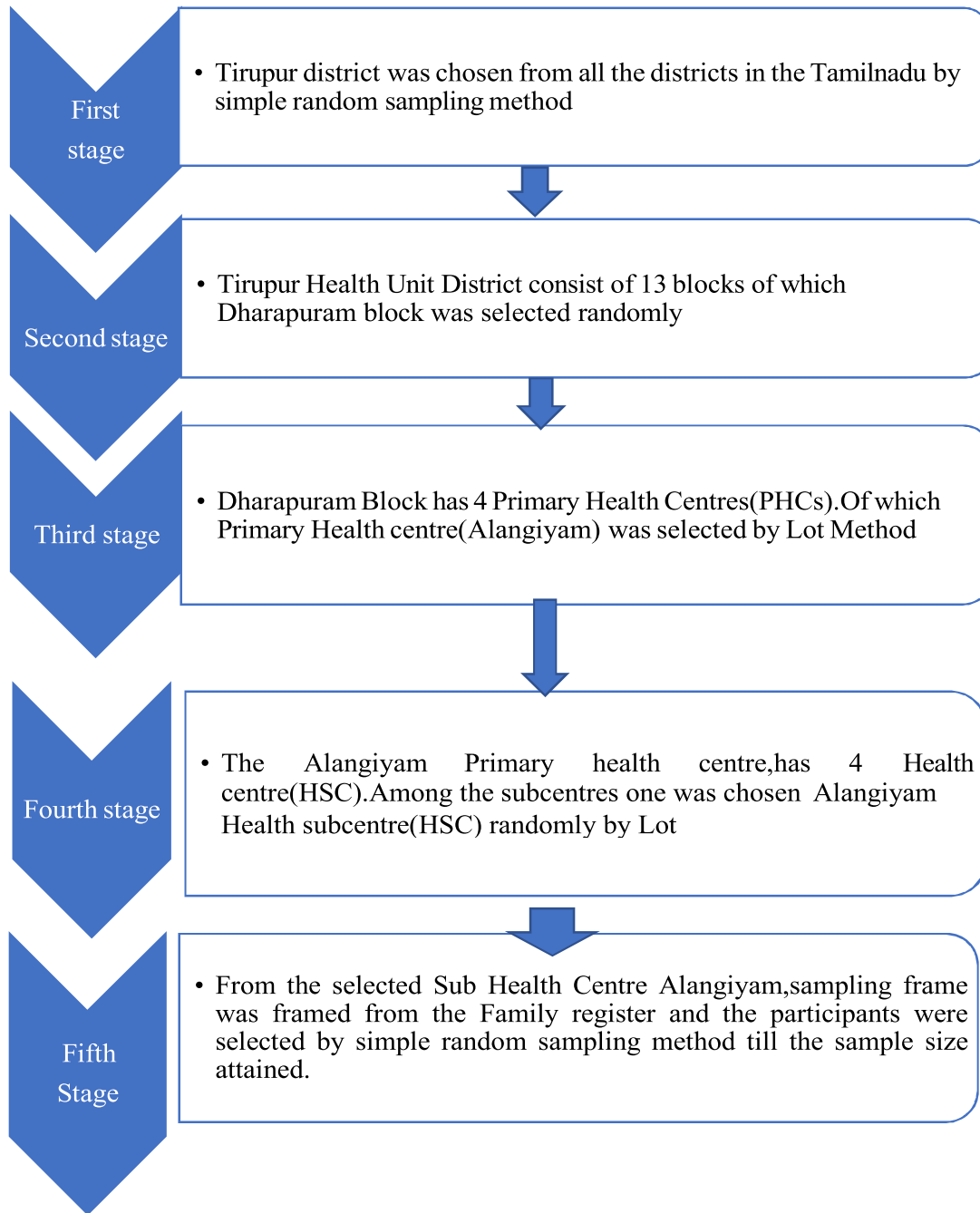
$$327 + 33 = 360$$

Therefore 360 is the minimum sample size required for the study assuming 80% as the power of study.

5.6 Sampling Method:

In this study Multistage random sampling technique was applied.

- a) Tirupur district was chosen from all the districts in Tamil Nadu by simple random sampling method
- b) Among the 13 blocks in Tirupur, Dharapuram block was selected randomly
- c) Dharapuram Area catering a population of 93643 and it has 4 Primary Health Centres
- d) Among the 4 Primary Health Centres(Annexure) ,Alangiyam Primary Health Centre were selected by Lot Method
- c) The Alangiyam Primary Health Centre caters a population of 23226,with 4 Health Sub centres(HSC)
- d) Among the Health sub centres,Alangiyam Health sub centre(HSC) with population 5944 was chosen randomly by lot method.
- e) From the selected subcenter,the line listing of the geriatric people was obtained from the family register for the study period. The participants were selected by simple random sampling till the sample size obtained .



5.7 Data Collection Tool:

A semistructured pretest Questionnaire in the regional language (Tamil) was used as data collection tool, which consists of 4 parts namely

- 1) Section 1- Socio demographic profile of the geriatric people
- 2) Section 2- Nutrition Assessment (MNS SF Scale)
- 3) Section 3- Activities of daily living (Barthel scale)
- 4) Section 4- Assessing the Quality of Life (WHO BREF Scale)

The questionnaire is given in Annexure 3 in this book. The scales are given in Annexure in this book.

5.8 Data Collection Method:

- a. Data collection was done in the study area after obtaining permission from the Dean, Government Stanley Medical College, Chennai and the Head of the Department, Department of Community Medicine and approval from the Institute Ethical Committee (Annexure-9) and The Deputy Director of Health Services, of Tirupur district.
- b. Prior to the data collection, 15 days of pilot study was conducted in 50 geriatric people in the Alangiyam area, and after interviewing them necessary modifications were made for the main study.

5.9 Services Rendered:

Geriatric people who had minor health ailments were examined and given available medication. They were asked to go to the PHC if the symptoms did not subside in two to three days.

Health education regarding Non Communicable Diseases, danger signs of undiagnosed and uncontrolled Diabetes and Hypertension was given.

People who were unaware about the benefit schemes such as Old age Pension, Health insurance schemes and Ration shop benefits were told about the available schemes and the benefits.

People who were alone were informed about the nearby government oldage homes and whom to contact and how to join in it.

5.10 Variables of interest and Operational Definitions:

5.10.1 Geriatric people:

Persons who are 60 and above are known as geriatric people in developing countries

5.10.2 Lifestyle Factors:

It is defined as modifiable habits and ways of life that greatly influence overall health and wellbeing. They are of two types. Positive or Favorable lifestyle factors and negative or unfavorable lifestyle factors

5.10.3 Positive lifestyle factors:

Positive lifestyle factors that promote health like Diet, good sleep, regular physical activity and maintaining ideal body weight

5.10.4 Adequate diet:

It is defined as a person who consumes adequate amount of fruits , vegetables and meat in addition to their normal diet were considered adequate

5.10.5 Adequate Fruit intake:

A person who consumes minimum 3-5 portions of fruits or 400 gms of fruits per day were considered as adequate fruit intake ⁴⁶.

5.10.6 Adequate vegetable intake:

A person who consume minimum 3-5 portions of vegetables or 400 grams of vegetables per day were considered as Adequate vegetable intake⁴⁶

5.10.7 Meat consumption:

A person who consumed 100-200 grams of meat per week or 3 eggs per week were considered as adequate meat intake⁴⁶

5.10.8 Good quality sleep:

A good sleep is defined when a person falling asleep in 30 minutes or less and not waking up more than once in the night ⁴⁷.

5.10.9 Ideal body weight

It is defined as a weight that is believed to be maximally healthful for a person, based on height but can be modified by factors like gender, age and build.

5.10.10 Physical activity:

Defined as any bodily movement produced by skeletal muscles that requires energy expenditure like working, carrying out household chores, travelling and engaging in recreational pursuits. It should be done at least 150 minutes of moderate intensity physical activity or at least vigorous 75 minutes of physical activity or combination throughout week. Those with poor mobility at least three times a week they should perform physical activity ⁴⁸.

5.10.11 Sedentary:

A sedentary person is one who spends mostly sitting or lying down with little or no physical activity.

5.10.12 Negative lifestyle factors:

Negative lifestyle factors that decline health like Tobacco usage, Smoking, Alcohol consumption, Stress etc.

5.10.13 Nonsmoker:

An adult who has never smoked in his or her lifetime⁴⁹

5.10.14 Exsmoker:

An adult who has smoked at least 100 cigarettes in his or her lifetime but had quit smoking 28 days prior to the time of interview⁴⁹

5.10.15 Current smoker:

An adult who has smoked 100 cigarettes in his or her lifetime and who currently smokes Cigarettes⁴⁹

5.10.16 Nonalcoholic:

An adult who has not drunked in his or her lifetime

5.10.17 Exdrinker:

Atleast 12 drinks in any one year in lifetime and no drinks in past year⁴⁹.

5.10.18 Current drinker:

More than 3 drinks but not more than 14 drinks per week for men and more than 3 drinks but not more than 7 per week for women on average over past year⁴⁹.

5.10.19 Stress:

It is defined as a state of psychological and physiological imbalance resulting from the disparity between the situational demand and the individual's ability and motivation to meet those needs⁵⁰

5.10.20 Quality of Life:

It is subjective and multi dimension concept which defines the standard of living of a person depending on the four domains,their physical domain , their psychological domain, their environmental domain and their social domain⁵¹.It is assessed by WHO BREFF Scale and explained in annexure

5.10.21 Activities of daily living:

It is defined as a person's ability to perform his daily self-care activities like bathing,brushing,grooming,toileting etc. It is assessed by Barthel scale which is explained in annexures

5.10.22 Disability:

Disability is defined as impairment which is physically or mentally present and has an affect on day to day normal activities⁵².

5.10.23 Nutritional status:

It is defined as key factor for health and well being of a individual³⁴.It is requirement of a person convinced by diet for his or her optimal function of his or her body.

5.10.24 Malnutrition:Malnutrition is defined as nutrition which is too little leading to deficiency or too excess leading to overconsumption ³⁴.

5.10.25 Socioeconomic status:

The socioeconomic status was classified based on the Modified B.G Prasad Scale classification 2018(Annexure)

5.11 Statistical Analysis:

- After data is collected it will be entered in Microsoft Excel.The data will be exported to Statistical Package for Social Sciences software version 16 for analysis.

- Descriptive statistics such as Mean, Standard deviation, Median, Interquartile range will be calculated as appropriate for continuous variables
- Categorical data will be presented in the form of proportions and Chi Square test and logistic regression will be used as test of significance
- A p value of less than 0.05 has been considered to be statistically significant

6. RESULTS AND ANALYSIS

This cross sectional was conducted among 360 geriatric subjects, residing in Alangiyam area, in Tirupur district of Tamil Nadu. The study was done to assess their lifestyle factors and its influence on the quality of life among the elderly population

The Results are discussed under the following subheadings:

- 6.1 Sociodemographic characteristics of study participants
- 6.2 Family details of study participants
- 6.3 Comorbidities of the study participants
- 6.4 Functional status of study participants
- 6.5 Lifestyle factors of the study participants
- 6.6 Quality of life among the study participants
- 6.7 Association between sociodemographic variables and Quality of life
- 6.8 Association between Lifestyle factors and Quality of life

6.1 Sociodemographic characteristics of study participants:

6.1.1 Age wise distribution of the study participants:

The mean (SD) age of the study participants were 66.4 ± 6.3 years with the maximum age of 90 years and minimum age of 60 years.

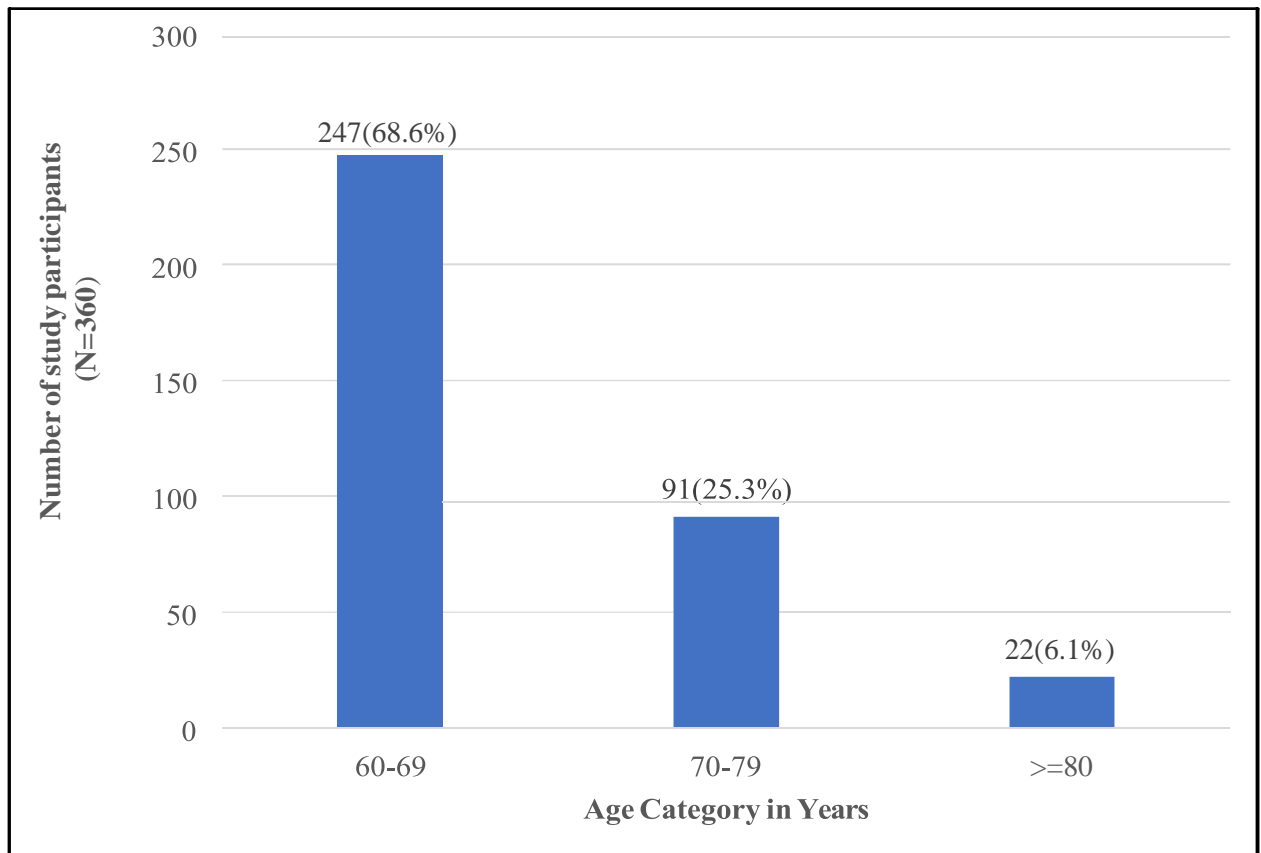


Figure 2: Age wise distribution of study participants(N=360)

6.1.2 Sex distribution of the study participants:

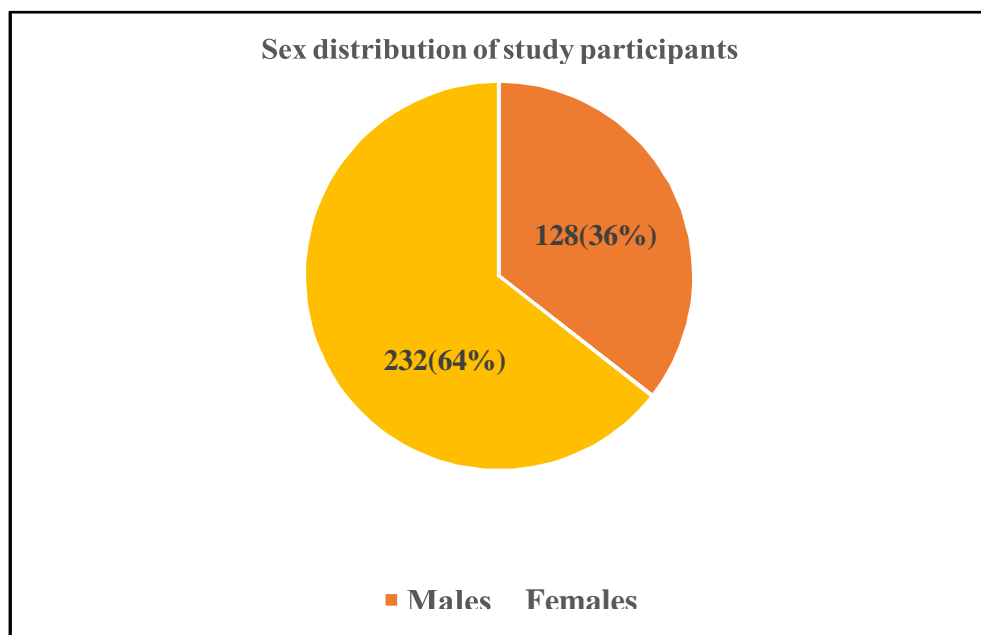


Figure 3: Sex distribution of the study participants(N=360)

Among the 360 study participants majority (64%) of them were females.

6.1.3 Marital status of the study participants:

Table 1: Marital status of the study participants(N=360)

| Marital status | No of Participants(n) | Percentage (%) |
|----------------|-----------------------|----------------|
| Married | 179 | 49.7 |
| Widow/Widower | 180 | 50.0 |
| Divorced | 1 | .3 |
| TOTAL | 360 | 100 |

Among the study participants 49% (179) were living with their husbands, 50% (180)

were widow/widower and one was divorcee.

6.1.4 Religion of the study participants(N=360)

Table 2: Religion of the study participants(N=360)

| Marital status | No of Participants (n) | Percentage (%) |
|-----------------------|-----------------------------------|---------------------------|
| Hindu | 320 | 88.9 |
| Christian | 2 | 0.6 |
| Muslim | 38 | 10.5 |
| TOTAL | 360 | 100 |

Among the study participants majority ,320 were Hindus,2 were Christian and remaining were Muslims.

6.1.5 Education status of the study participants(N=360)

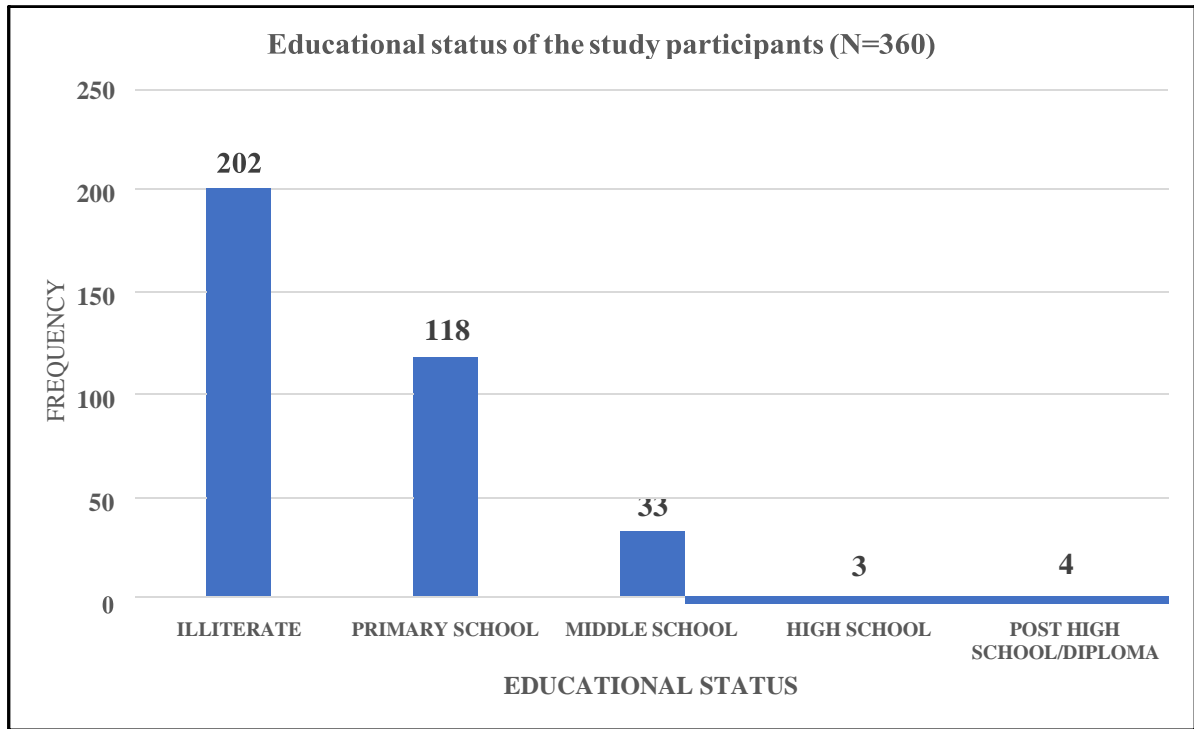


Figure 4: Education status of the study participants

In this study 158 (43.9%) were literate ,and majority 202 (56.1%) were Illiterate.

Among the literate 74.6% (118) were having primary school education and only 2.5%

(4) have completed their Higher secondary education.

6.1.6 Occupation of the study participants

Table3:Occupation of the study participants(N=360)

| Occupation of the elders | Number of participants (N=360) | Percentage (%) |
|--------------------------|--------------------------------|----------------|
| Retired and Dependent | 190 | 52.8 |
| Currently working | 170 | 47.2 |
| TOTAL | 360 | 100 |

Out of 360 study participants, 47.2% (170) were currently working for their living.

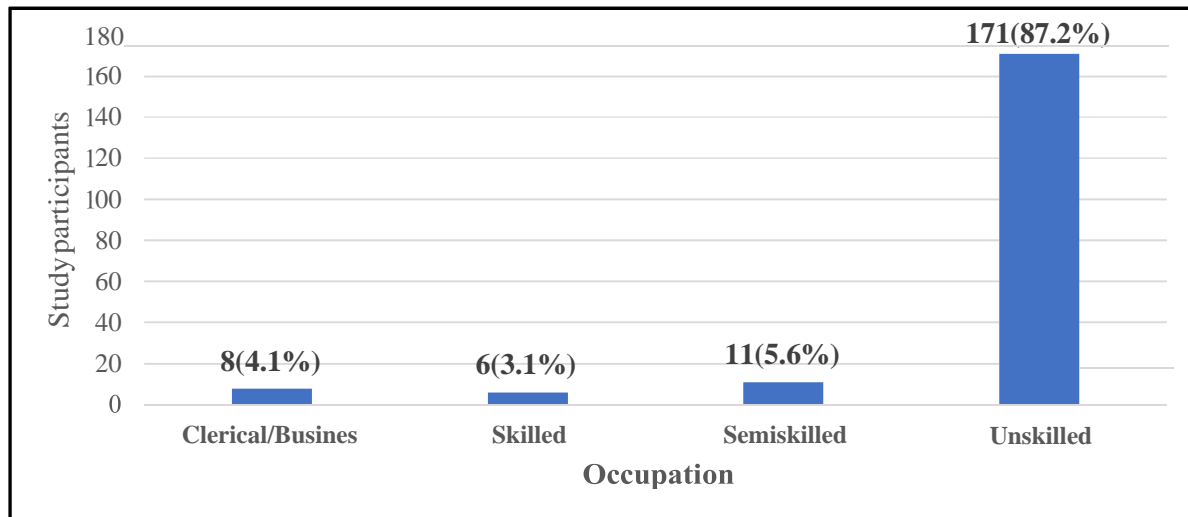


Figure 5: Occupation of the working participants:(N=360)

Among them majority 171(47.5%) were Unskilled worker,11(3.1%) were Semiskilled worker,6(1.7%) were Skilled worker.Very few 8(2.2%) were in Clerical or Business

6.1.7 Socioeconomic status of the elderly population(N=360)

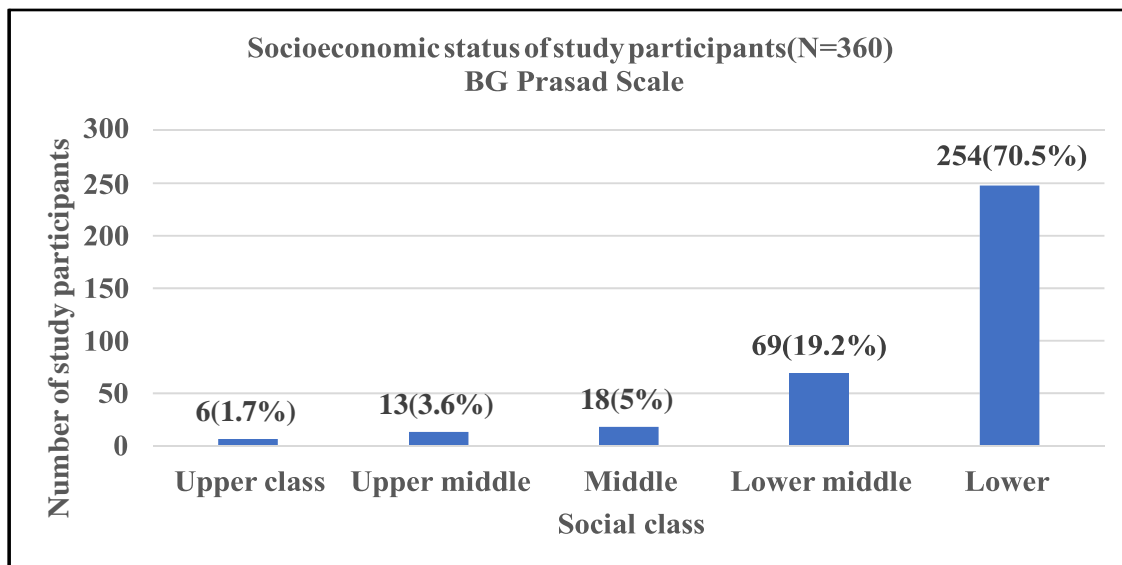


Figure 6: Bar graph showing the distribution of Socioeconomic class of study participants

From the above Bar graph it was found the majority of the study participants i.e, more than 68 % belong to Lower class,19.2% belong to Lower middle class,5% belong to upper class.Only 3.6% and 1.7% belongs to Upper middle and Upper Class according to BG Prasad Scale-2018(annexure-4).

6.2 Type of family of the study participants(N=360)

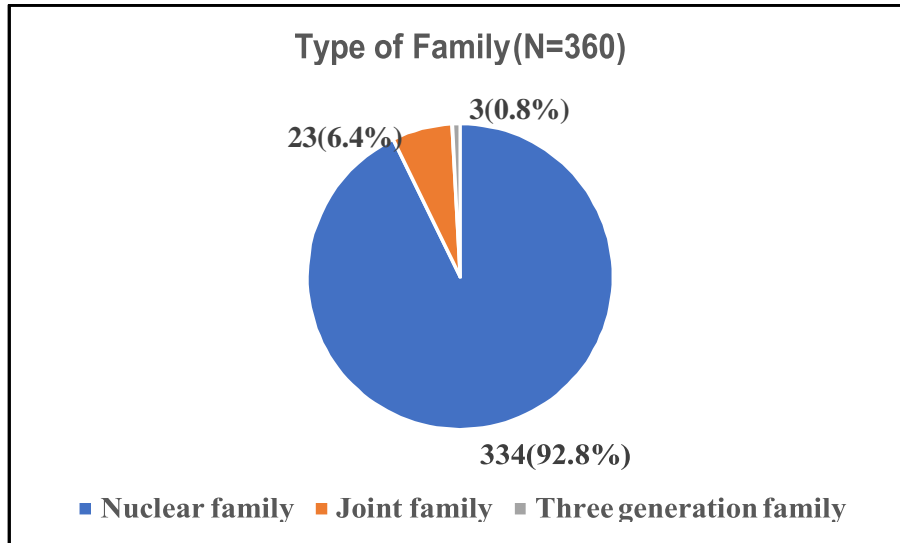


Figure 7:Distribution of the type of family(N=360)

Nearly 92% were Nuclear Family, Whereas 6.4% were Joint family and negligible percent(0.9%) were Three generation family.

6.2.1 Cohabitation of the study participants:

Table 4:Cohabitation of the study participants(N=360)

| Cohabitation | Frequency (N=360) | Percentages (%) |
|--------------------|-------------------|-----------------|
| Alone | 125 | 34.7 |
| With spouse | 105 | 29.2 |
| With children | 112 | 31.1 |
| With Grandchildren | 4 | 1.1 |
| With Relative | 11 | 3.1 |
| With Non relative | 3 | 0.8 |
| TOTAL | 360 | 100 |

From the above table, it was known that around 34.7%(124) of the study participants were alone, 31.3%(112) were residing with their children, 29.2%(105) were residing with their spouse, 0.3%(1) residing with their relative like brother, sister, sister's son and 0.8%(3) are staying with the non relative people.

6.2 .2 Source of income of the study participants:

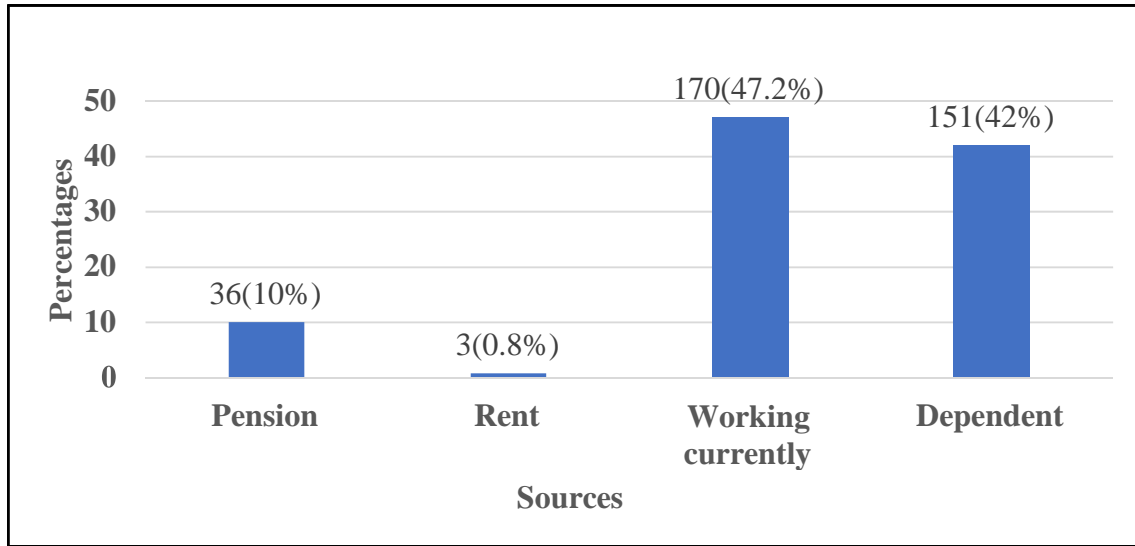


Figure 8:Source of income of the study participants

In the 360 study participants, majority 170(47.2%) were working for their sources of income and 151(41.9%) were dependent. Only 36(10%) were receiving pension and for the rest of the people the source of income was rental income. Among the dependent study participants 124(34.4%) were dependent on their wife, 44(12.2%) and 38(10.6%) dependent on their daughters, 12(3.3%) dependent on their husbands. The rest were dependent on their grandson, sister, brother, sister's son, relative etc.

6.3 Comorbidities of the study participants:

Table 5: Comorbidities of the study participants(N=360)

| Comorbidities | | Frequency(N=360) | Percentage (%) |
|-------------------------------------|-----|------------------|----------------|
| Vision impairment | Yes | 280 | 77.8 |
| | No | 80 | 22.2 |
| Hearing impairment | Yes | 144 | 40 |
| | No | 216 | 60 |
| Edentulous | Yes | 99 | 27.5 |
| | No | 261 | 72.5 |
| Diabetes | Yes | 98 | 27.2 |
| | No | 262 | 72.8 |
| Hypertension | Yes | 135 | 37.5 |
| | No | 225 | 62.5 |
| Musculoskeletal Problem | Yes | 55 | 15.3 |
| | No | 305 | 84.7 |
| Chronic obstructive lung disease | Yes | 17 | 4.7 |
| | No | 343 | 95.3 |
| Asthma | Yes | 55 | 15.3 |
| | No | 305 | 84.7 |
| Coronary Artery Disease | Yes | 16 | 4.4 |
| | No | 344 | 95.6 |

| | | | |
|-------------------------|-----|-----|------|
| Cerebrovascular disease | Yes | 13 | 3.6 |
| | No | 347 | 96.4 |
| Chronic kidney disease | Yes | 4 | 1.1 |
| | No | 356 | 98.9 |
| Cancer | Yes | 2 | .6 |
| | No | 358 | 99.4 |

.Among the study participants 360,77.8% have reported of vision problem,40% have reported of hearing problem,27.5% have reported of loss of teeth.27.2% have Diabetes and 37.5% have Hypertension.15.3% have reported of Musculoskeletal problem,4.7% reported of Chronic obstructive lung disease,15.3% have Asthma,4.4% have Coronary Artery disease.3.6% have reported of Cerebrovascular disease,1.1% have chronic kidney disease and 0.6% have reported of Breast carcinoma. Among the study participants 117 had more than two comorbidity.

6.4 Functional status of the study participants:

Functional status of the study participants were assessed using Barthel scoring of ADL

Table:6 Barthel grade for activities of daily living of study participants

| Barthel scoring of ADL | Frequency | Percentage |
|--------------------------------|------------------|-------------------|
| 0-20 (Total dependency) | 0 | 0 |
| 21-60 (Severe dependency) | 1 | 0.3 |
| 61-90 (Moderate dependency) | 3 | 0.9 |
| 91-99 (Slight dependency) | 4 | 1.1 |
| 100 (Independent) | 352 | 97.7 |
| TOTAL | 360 | 100 |

In my study majority 97.7%(352) were independent and 1.1%(4) were slightly dependent and 0.9%(3)were moderately dependent and the remaining 0.3(1)were severely dependent.

6.5 Lifestyle factors:

Lifestyle factors focussed in this study are as follows:

Positive Lifestyle factors

1.Dietary habits and nutritional status

2.Physical activity

3.Quality of sleep

Negative Lifestyle factors

1.Tobacco use

2.Smoking habit

3.Alcohol intake

4.Stress

6.5.1 Positive Lifestyle factors

A)Dietary habits:

Table 7:Consumption of Fruits,Vegetables and Meat of the study participants

In this dietary habits like Fruit consumption,Vegetable consumption,Meat consumption were studied.The result of which as follows:

| S.No | Parameters | Frequency (N) | Percentage (%) |
|------|----------------------------|---------------|----------------|
| 1 | Fruit Consumption | | |
| | No | 229 | 63.6 |
| | Regular | 45 | 12.5 |
| | Occasional | 46 | 12.8 |
| | Seldom | 40 | 11.1 |
| 2 | Vegetable Consumption | | |
| | No | 1 | 0.3 |
| | Regular | 99 | 27.5 |
| | Occasional | 182 | 50.5 |
| | Seldom | 78 | 21.7 |
| 3 | Non-vegetarian consumption | | |
| | No | 57 | 15.8 |
| | Regular | 69 | 19.2 |
| | Occasional | 180 | 50 |
| | Seldom | 54 | 15 |

From the above table it has been clearly seen that about 63.3%(228) of the study participants will not consume fruits and only 12.5%(45) will take regularly, whereas the remaining will occasionally consume it. Compared to the fruit consumption, vegetable consumption of the participants are better, that 27.5%(99) consume regularly and 50.6%(182) consume occasionally and only 0.3%(1) have reported no consumption of vegetable. In Non vegetarian consumption nearly one-third 15.8%(57) will not take it, only 19.2%(67) of people were consuming regularly and rest 50%(180) take it occasionally. Overall dietary habits were not satisfactory.

6.5.1 B)Diet Preference:

Majority of the study participants 85%(306) opted for Non vegetarian diet and the remaining 15%(54) for Vegetarian diet.

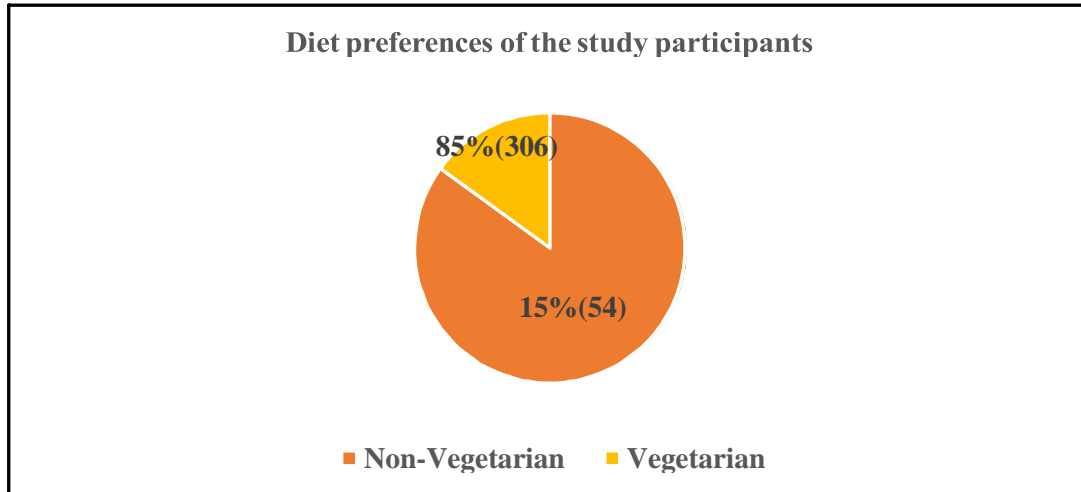


Figure 9:Diet preferences of the study participants

6.5.2 Nutritional status of the Study participants based on the Body mass index:

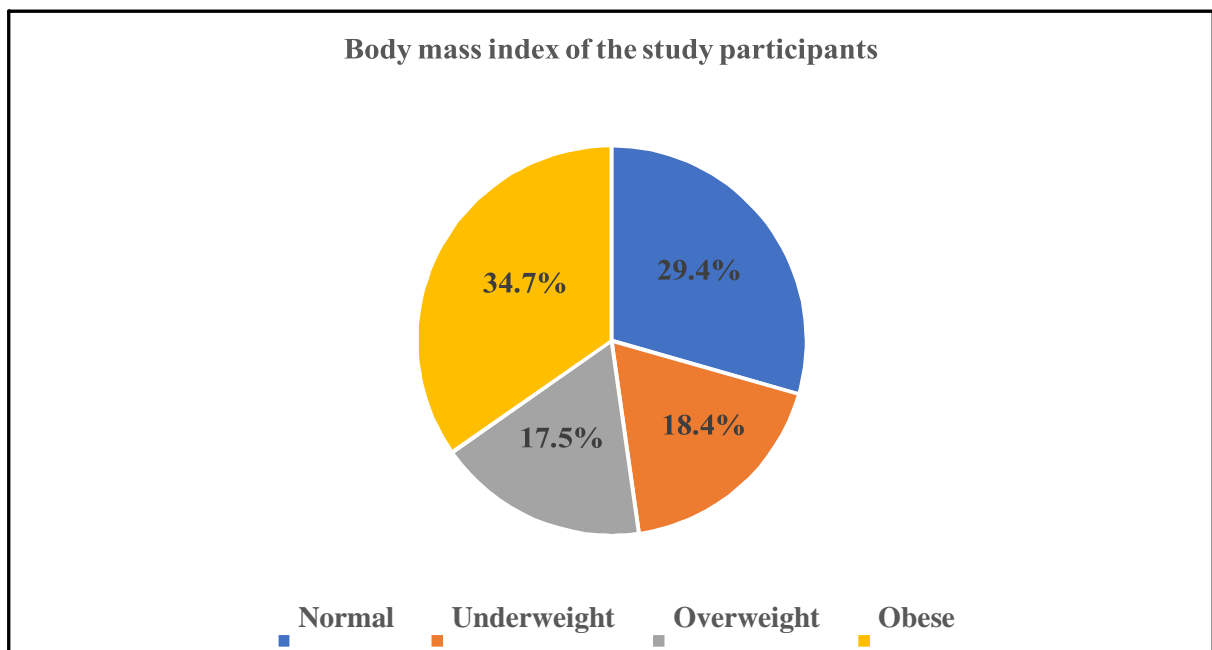


Figure 10:Body mass index of the study participants

In this study ideal body mass index was calculated using Quetelet's formula $\text{Weight in Kilogram/Height} \times \text{Height in meter square}$. And the study participants were categorised based on Asian Body mass index. According to it nearly one third were underweight 18.4%(66), 17.5% (63) were overweight and 34.7%(125) were obese and rest were belong to normal body mass index.

C) Nutritional status of the study participants according to MiniNutrition Assessment score:

The nutritional status of the study participants was assessed by Mini nutrition assessment scale short form.

Table 8:Mini nutrition assessment scoring of the study participants:

| MNA scoring of Nutrition | Number (N) | Percentage (%) |
|--------------------------|------------|----------------|
| Normal | 54 | 15 |
| At risk of malnutrition | 195 | 54.2 |
| Malnourished | 111 | 30.8 |

From the table ,it is seen that nearly half of the study participants 54.2%(195) are at risk of developing malnutrition and 30.8%(111) are already malnourished. Only 15%(54) were normal. And if we see male,female separately ,females are more malnourished 31.5% and are at risk of developing malnutrition 55.2%

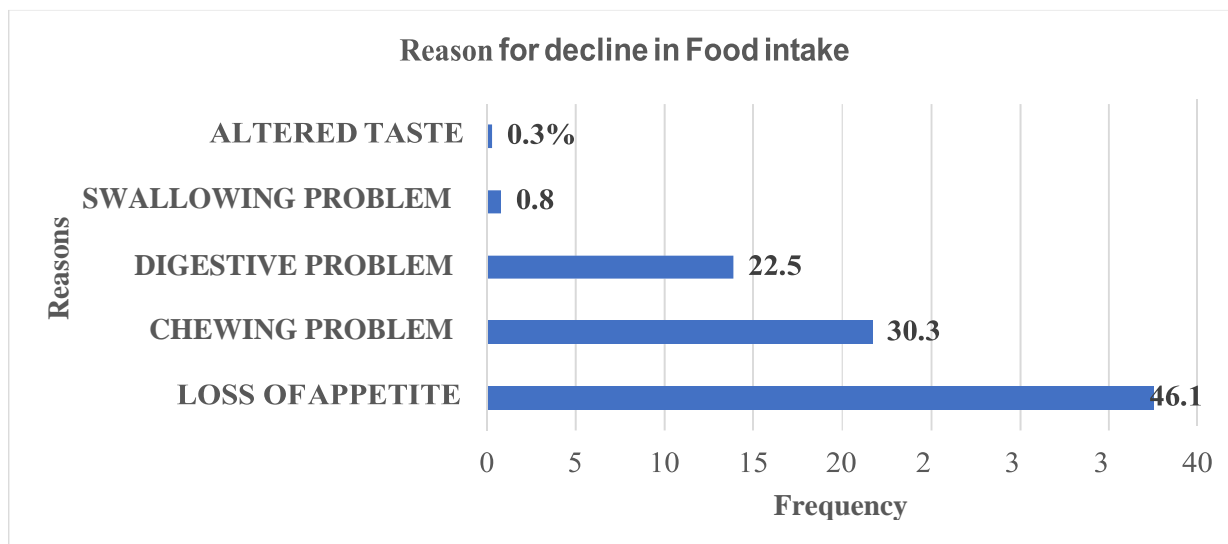


Figure 11: Reason for decline in food intake among the study participants

It is also seen that there was a decline in food intake in some study participants and the most common reason was loss of appetite which accounts for 37.5% of them and the second common cause is edentulousness is about which is 27.2 of participants.

6.5.3: Physical activity of study of the study participants:

Table 9 :Physical activity of the study participants:

| Regular physical activity | Frequency (N) | Percentage (%) |
|---------------------------|---------------|----------------|
| Severe | 10 | 2.8 |
| Moderate | 246 | 68.3 |
| No | 104 | 28.9 |

In this study it is observed that activities of daily living is good but doing regular physical activity 2.8%(10) ,whereas 68.3% (246) involve in the daily household

chores and gardening and the remaining 28.9% (104) not involved in any physical activity .

6.5.4 Quality of sleep among the study participants:

Table 10:Quality of sleep among the study participants

| Quality of sleep | Frequency (N) | Percentage (%) |
|------------------|---------------|----------------|
| Good | 200 | 55.6 |
| Poor | 160 | 44.4 |

Among the 360 study participants, 55.6%(200) have reported that they have a good quality of sleep and remaining 44.4%(160) reported Poor quality of sleep.

Negative Lifestyle factors:

6.5.5 Tobacco use of the study participants:

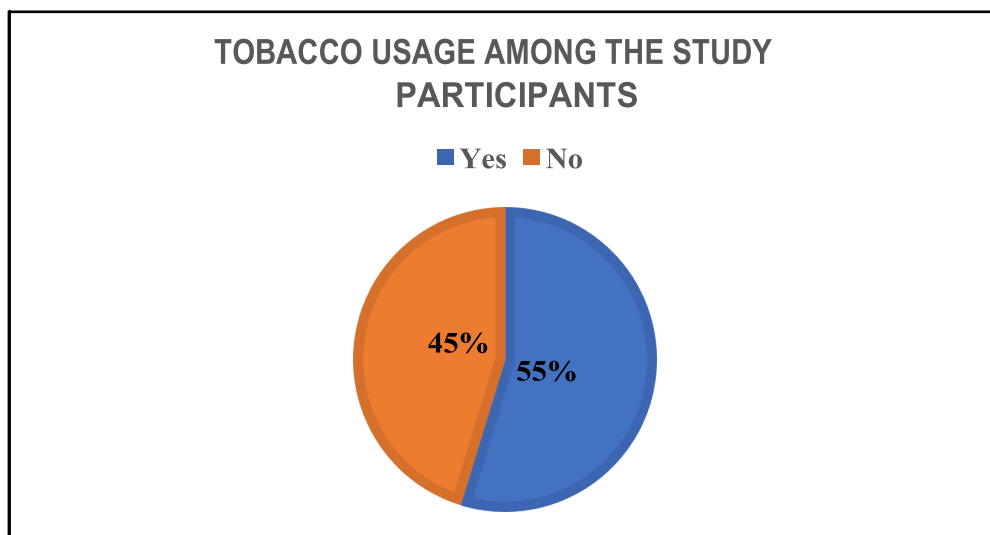


Figure 12: Tobacco usage among the study participants

Out of the 360 study participants,55%(197) are using Tobacco now also.whereas 45%(163) have reported that they have not used tobacco in their lifetime.

6.5.6 Smoking Habit of the study participants:

Table 11: Smoking Habit of the study participants

| Habit of smoking | Frequency (N) | Percentage (%) |
|------------------|---------------|----------------|
| Nonsmoker | 232 | 64.5 |
| Exsmoker | 79 | 21.9 |
| Currentsmoker | 49 | 13.6 |

Among the study participants only 13.6%(49) were current smoker,21.9%(79) were exsmoker and the remaining 64.5%(232) were non-smoker

6.5.7 Alcohol intake of the study participants:

Table 12:Alcohol intake of the study participants(N=360)

| Alcohol intake | Frequency (n) | Percentage (%) |
|-------------------|---------------|----------------|
| Non alcoholic | 281 | 78 |
| Ex-alcoholic | 45 | 12.6 |
| Current alcoholic | 34 | 9.4 |

Out of the 360 study participants,9.4% (34) were currently alcoholic, 78%(281) were non-alcoholic.

6.5.8 Stress among the study participants

Table 13. Stress among the study participants

| Stress | Frequency (N) | Percentage (%) |
|--------|---------------|----------------|
| Yes | 344 | 95.6 |
| No | 16 | 4.4 |

Among the study participants 344(95.6) have reported stress and the remaining doesn't have stress 4.4%(16)

6.6 Quality of Life:

Table 14: Domain wise Quality of life of the study participants

| Domains in Quality of life | Mean | SD |
|----------------------------|-------|------|
| Physical domain | 46.59 | 24.4 |
| Psychological domain | 45.66 | 23.3 |
| Socialrelationship domain | 50.51 | 22.8 |
| Environmental domain | 45.95 | 17.9 |

Among this population the highest score was for Social relationship domain with mean 50.5 and standard deviation 22.8 and the lowest score was for Psychological domain with mean score of 45.6 and standard deviation of 23.3.

Table 15.1: Quartile distribution of the study participants:

| Total QOL Scores | Number (N) | Percentage (%) |
|-----------------------------|------------|----------------|
| 0-25 (First Quartile) | 19 | 5.3 |
| 26-50 (Second Quartile) | 214 | 59.4 |
| 51-75 (Third Quartile) | 121 | 33.6 |
| 76-100 (Fourth Quartile) | 6 | 1.7 |

Majority of the study participants i.e,59.4%(214) fall in the Second Quartile ,33.6%(121) falls in the third quartile .5.3%(19) comes in the first Quartile.Only negligible falls in the fourth quartile 6(1.7%).

The quality of life is assessed by the WHO-BREFscale. According to a study done in Samambia Brazil that WHOQOL-BREF score<60 is poor QOL and more than 60 as Good QOL.We are also using the similar cut off for our analysis.According to which in our study about 15.8%(57) has good QOL which is >60 and majority (84.2%) 303 has poor QOL which is <60.

Table 15.2 QOL Classification of Study Participants:

| QOL Category (Score) | Number (N) | Percentage (%) |
|-------------------------|---------------|-------------------|
| Poor QOL (<60) | 303 | 84.2 |
| Good QOL (>60) | 57 | 15.8 |
| TOTAL | 360 | 100 |

6.7 Association between socio-demographic characteristics and the Quality of life

Table 16:Age and the Quality of life

| Age category | Quality of life | | Total | Chi square | P value |
|--------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| <70 | 51 (20.6%) | 196 (79.4%) | 247 | 13.69 | <0.001* |
| >70 | 6 (5.3%) | 107(94.7%) | 113 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among those aged less than 70 years of age (20.6%) had good quality of life compared to those who are more than 70 years of age ,where had good quality of life and it was statistically significant.

6.7.1 Association between Education and Quality of life

Table 17 : Education and Quality of life

| Education | Quality of life | | Total | Chi square | P value |
|------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Literate | 39 (24.7%) | 119 (75.3%) | 158 | 16.5 | <0.001* |
| Illiterate | 18 (8.9) | 184 (91.1%) | 202 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Out of 360 study participants those who were literate had a good quality of life 24.7%(39) compared to those who were illiterate with good quality of life(8.9%) and this difference was statistically significant.

6.7.2 Association between Occupation and Quality of life

Table 18: Occupation and Quality of life

| Occupation | Quality of life | | Total | Chi square | P value |
|------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Employed | 47 (27.6%) | 123 (72.4%) | 170 | 33.7 | 0.001* |
| Retired | 10 (5.3%) | 180 (94.7%) | 190 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the study participants those who were working 27.6%(47) have good quality of life compared to those who were retired 5.3%(10) and this difference is statistically significant.

6.7.3 Association between Comorbidities and Quality of life

Table 19. Comorbidities and Quality of life

| Comorbidities | Quality of life | | Total | Chi square | P value |
|---------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| >2 | 17 (9.6%) | 160 (90.4%) | 177 | 10.137 | 0.001* |
| <2 | 40 (21.9%) | 143 (78.1%) | 183 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the study participants who are having less than 2 comorbidity 21.9% had good quality of life whereas among the persons having >2 comorbidities 9.6% had good quality of life and this difference was statistically significant.

6.7.4 Association between Functional status and Quality of

life Table 20:Functional status and quality of life

Using Barthel scoring,the study participants were dichotomized using a cut-off value of 90 score.A score above 90 as almost independent.

| ADL Grade | Quality of life | | Total | Chi square | P value |
|--------------------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Almost Independent | 56 (15.7%) | 302 (84.8%) | 356 | 16.5 | <0.001* |
| Dependent (Moderate and total) | 1(25%) | 3 (75%) | 4 | | |
| Total | 57(15.8%) | 303 (84.2%) | 360 | | |

Among those who were dependent (25%) had Good quality of life compared to those who are independent (15.7%).

6.7.4 Association between subjective and objective quality of life:

Table 21:Subjective and objective quality of life

| Subjective quality of life | Quality of life | | Total | Chi square | P value |
|----------------------------|-----------------|------------|-------|------------|---------|
| | Good | Poor | | | |
| Good | 54 (43.5%) | 70 (56.5) | 124 | 109 | <0.001* |
| Poor | 3 (1.3%) | 233 (98.7) | 236 | | |
| Total | 57(15.8%) | 303(84.2%) | 360 | | |

Of the total ,124 participants who had subjective perception of good QOL,had concordance with good QOL as measured by QOL scale. Similarly among those who perceived poor quality of life , 98.7% had concordance with poor QOL as measured by WHO bref scale.This association was statistically significant.

6.8 Finding association between Lifestyle factors and the Quality of life among the study participants:

Table:22 Nutrition status and the Quality of life

| Nutrition status | Quality of life | | Total | Chi square | P value |
|-------------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Normal nutrition | 32 (59.3%) | 22 (40.7%) | 54 | 89.9 | <0.001* |
| At risk of malnutrition | 22 (11.3%) | 173 (88.7%) | 195 | | |
| Malnutrition | 3 (2.7%) | 108 (97.3%) | 111 | | |

People who are having normal nutrition 59.3%(32) have a better quality of life compared to the at risk group 11.3%(22) and malnourished group 2.7%(3) and the difference was statistically significant.

Table 23: Fruit consumption and quality of life

| Fruit Consumption | Quality of life | | Total | Chi square | P value |
|-------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 35 (26.7%) | 96 (73.3%) | 131 | 18.30 | <0.001* |
| No | 22 (9.6%) | 207 (90.4%) | 229 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the 360 study participants those who were consuming fruits in optimal amount have a better quality of life (26.7%) compared to those who do not take it (9.6%) and the

difference was statistically significant.

Table 24: Vegetable consumption and quality of life

| Vegetable Consumption | Quality of life | | Total | Chi square | P value |
|-----------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 53(18.9%) | 228 (81.1%) | 281 | 8.80 | 0.002* |
| No | 4 (5.1%) | 75 (94.9%) | 79 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Out of the 360 study participants those who are consuming vegetables 53(18.1%) in optimal amount have a better Quality of life then those who do not take it 4(6%) and which was statistically significant. Since only 1 participant responded as No, we have combined No and Seldom as 'No Category' and Occasional and regular as 'Yes Category'.

Table 25: Meat consumption and quality of life

| Meat Consumption | Quality of life | | Total | Chi square | P value |
|------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 56 (18.6%) | 247 (81.4) | 303 | 105 | <0.001* |
| No | 1 (1.8%) | 56 (98.2%) | 57 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the 360 study participants those who are consuming Meat 56(18.6%) in right amount have a good quality of life compared to those who do not take it 1(1.8%) and the difference was statistically significant.

Table 26: Quality of sleep and quality of life

| Quality of Sleep | Quality of life | | Total | Chi square | P value |
|------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Good | 43 (21.5%) | 157 (78.5%) | 200 | 10.8 | 0.001* |
| Disturbed | 14 (8.8%) | 146 (91.2%) | 160 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Out of 360 study participants those who have Good sleep 43(21.5%) have a good quality of life compared to those with disturbed sleep 14(8.8%) and the difference was statistically significant

Table 27: Physical activity and Quality of life

| Physical activity | Quality of life | | Total | Chi square | P value |
|-------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 47 (18.4%) | 209 (81.6%) | 256 | 4.24 | 0.039* |
| No | 10 (9.6%) | 94 (90.4%) | 104 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Out of the 360 study participants, 256 persons were doing regular physical activity and they had a better quality of life (18.4%) compared to those who do not. This difference between two groups was statistically significant.

Table 28: Stress and quality of life

| Stress | Quality of life | | Total | Chi square | P value |
|--------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 51 (14.8%) | 293 (85.2%) | 344 | 5.89 | 0.015* |
| No | 6 (37.5%) | 10 (62.5%) | 16 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the study participants, those who had stress 293 (85.2%) had poor quality of life compared to those who do not have stress (62.5%) and this difference was statistically significant.

Table 29: Tobacco consumption and quality of life

| Tobacco Consumption | Quality of life | | Total | Chi square | P value |
|---------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 20 (10.2%) | 177 (89.8%) | 197 | 23.9 | <0.001* |
| No | 50 (30.7%) | 113 (69.3%) | 163 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the study participants those who don't use tobacco 50(30.7%) have better quality of life and who used have 20(10.2%) and it is not statistically significant.

Table 30: Smoking habit and quality of life

| Smoking habit | Quality of life | | Total | Chi square | P value |
|---------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 7 (5.5%) | 121 (94.5%) | 128 | 16.01 | <0.001* |
| No | 50 (21.6%) | 182 (78.4%) | 232 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Out of the 360 study participants who doesn't have the habit of smoking 50(21.6%) have good quality of life and those who have had 7(5.5%) and the difference is statistically significant.

Table 31: Alcohol consumption and quality of life

| Alcohol intake | Quality of life | | Total | Chi square | P value |
|----------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 5 (6.3%) | 72 (93.7%) | 77 | 6.412 | 0.011* |
| No | 52 (18%) | 231 (82%) | 293 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among those who do not consume alcohol about(18%) had better quality of life whereas (6.3%)of those who consumed had good quality of life and it was statistically significant.

Table 32. Favourable lifestyle factors and quality of life

| Favourable lifestyle factors score | Quality of life | | Total | Chi square | P value |
|------------------------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Good | 39 (19.9%) | 157 (80.1%) | 196 | 5.33 | 0.021* |
| Poor | 18 (11%) | 146 (89%) | 164 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

(Note:Refer annexure 4)

Among the study participants who scored good in favourable lifestyle factor score 19.9%had better quality of life compared to those who scored poor in lifestyle factor score.This difference was statistically significant.

Table 33:Unfavourable lifestyle factors and quality of life

| Unfavourable lifestyle factors score | Quality of life | | Total | Chi square | P value |
|--------------------------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Good | 48 (31.6%) | 104 (68.4%) | 152 | 5.33 | 0.021* |
| Poor | 9 (4.3%) | 199 (95.7%) | 208 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

(Note:Refer annexure 4)

Reverse scoring was followed.Among the study participants with good unfavourable lifestyle score had good quality of life 48 compared to those who had poor score 4.3%. This was statistically significant.

Table 34 : Overall lifestyle factors and Quality of life

| Lifestyle factors score | Quality of life | | Total | Chi square | P value |
|-------------------------|-----------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Favourable | 40 (38.1%) | 65 (61.9%) | 105 | 55.13 | <0.001* |
| Unfavourable | 17 (6.7%) | 238 (93.3%) | 255 | | |
| Total | 57 (15.8%) | 303 (84.2%) | 360 | | |

Among the study participants the persons who have favourable life style factors leads a good quality of life 40(38.1%) than those with unfavourable lifestyle factors 17(6.7%). Most of the study participants have perceived themselves to have poor QOL 236(65.6%) and the rest that they have good QOL 124(34.4%).

Table 35 :Tobacco use and perceived quality of life

| Tobacco use | Perceived Quality of life | | Total | Chi square | P value |
|-------------|---------------------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 20 (10.2%) | 177 (89.8%) | 197 | 113 | <0.001* |
| No | 104 (63.8%) | 59 (36.2%) | 163 | | |
| Total | 124 (34.4%) | 236 (65.6%) | 360 | | |

About 63.8% perceived to have good quality of life as they don't use tobacco whereas among those who others who used tobacco 10.2% perceived as having good quality of life .There is a difference and it is statistically significant

Table 36 : Smoking and perceived QOL

| Smoking | Perceived Quality of life | | Total | Chi square | P value |
|---------|---------------------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Yes | 35 (27.3%) | 93 (72.7%) | 128 | 5.20 | 0.022* |
| No | 89 (38.4%) | 143(61.6%) | 232 | | |
| Total | 124 (34.4%) | 236 (65.6%) | 360 | | |

Among non-smokers ,38.4% perceived that they have a good quality of life while among smokers only27.3% had a perception of a good quality of life .There is a difference and it is statistically significant.

Table 37 : Lifestyle factors and perceived QOL

| Lifestyle factors score | Perceived Quality of life | | Total | Chi square | P value |
|-------------------------|---------------------------|-------------|-------|------------|---------|
| | Good | Poor | | | |
| Favourable | 77 (73.3%) | 28 (26.7%) | 105 | 99.2 | <0.001* |
| Unfavourable | 47 (18.4%) | 208 (81.6%) | 255 | | |
| Total | 124 (34.4%) | 236 (65.6%) | 360 | | |

(Note:Refer Annexure 4)

Among 73.3% of study participants with favourable ‘overall lifestyle factor score’ perceived their quality of life to be good while among those with unfavourable overall lifestyle factor score, only 18.4% had a perception of good quality of life. This difference was statistically significant.

Logistic regression analysis

Association of Lifestyle factors with Quality of life by multivariate analysis

Table 38: Logistic regression analysis of the lifestyle factors associated with Quality of life

| Lifestyle factors | Good quality of life | | |
|-------------------|----------------------|------------|---------|
| | OR | 95%CI | P value |
| Occupation | 8.16 | 2.21-30.8 | 0.002* |
| Vegetables | 4.59 | 2.07-10.18 | <0.001* |
| Body mass index | 3.36 | 1.49-7.58 | 0.009* |

a. Variables entered on step 1: Age, education, occupation, fruits consumption, vegetable consumption, meat consumption, body mass index, sleep and stress. Binary logistic regression analysis showed that the difference in the lifestyle factors on the quality of life between occupation, vegetable consumption, ideal body weight continuous to be statistically significant even after adjusting other lifestyle factors like age, education, fruit consumption, meat consumption, sleep and stress. The risk of having a poor quality of life is 8 times higher among those who are retired and dependent compared to working population and it is statistically significant with an adjusted odds ratio 8.156(2.21-30.08), independent of other risk factors.

Similarly Vegetable consumption had an adjusted OR of 4.59(2.07-10.18) and ideal body weight had adjusted OR of 3.36(1.49-7.58). In baseline characteristics occupation plays major role, its adjusted OR being 8.16(2.21-30.8).

Discussion:

This study was conducted among 360 elderly people in alangiyam area, Tamil nadu which comprising of young old(60-69),old old(70-79) and Oldest old (80 and above) were 68.6%,25.3% and 6.1% of the study population which is in accordance with the National figures were 62%,28%,10% but less than of Tamil Nadu which is 75%,14%,10.4% respectively¹⁹.The difference noticed in this study on the age distribution in comparison with national and state figures is due to TFR which 1.6%.

In this study ,the female(64.4%) elderly outnumbered the male(35.6%) whereas the findings of the study conducted by Sowmya et al ²²where in female formed 59.2% and males 40.8% and in the study conducted by Anil Purty et al ⁵⁸where female formed 58.8% and 42.2% were males of the study subjects. Among the study participants 50% were widowed and 0.3% divorced which is almost equal to the national data which states that the proportion of widowed were 36.4% and the divorced were 0.4% among elderly.

7.1 Sociodemographic characteristics:

The illiteracy rate among the study participants was 56.1% and the literate were 43.9% .Among the literate 32.8% finished their primary education and 9.2% had their middle school education ,0.8% had their high school and the rest have completed Higher secondary school studies which is similar to our national data which also revealed 56.5% illiteracy rate and 11.4%,5.5% and 3.4% and 0.1% having primary, middle, high and higher secondary school respectively.Illiteracy was more in this study population and it eventually make them to depend on others for their works.As

illiteracy was more they were not aware of government schemes or policies and finding difficulty in availing benefits.

Majority of study participants are unskilled 47.5% and 2.2% clerical or Business activities and 3.1% are doing semiskilled work. Almost more than half of the elder people are working to make their living. Many of them were unskilled worker and which is a big burden for them at this age to do work as there will be a decline in their capacity to do work

Majority of the study participants (92.8%) were living in Nuclear family and only 6.4% live Joint family and the rest in three generation family.

In our study the participants living alone were 34.7%, with spouse alone is 29.2% and with children 31.3%. Similar findings were found in our state data where living alone is 10.9% with spouse alone 18.9 and with children 36.7%. Living alone and with spouse is more than Tamil Nadu state data²⁷. In our study it was found that living alone elderly people facing more problems like no one is to take care or give food. They depends on their neighbourhood for certain things.

In our study 56.3% of male and 43.7% of female were working as marginal or main worker which is higher compared to our last population census data where 66% of male and 28% of female were working population.

In our study most of the participants belong to lower socioeconomic status i.e 68% followed by 5% of Lower middle and upper middle. Most of the study participants were dependent on their spouse i.e 43% and 8.1% on their children and 1.4% on their grandchildren and 3.8% on others which is relatively higher when

compared to our national data where 16% on spouses, 75% on children, 3% on grandchildren and 6% on others. This gross difference may be due to their living arrangement as most of them are living in nuclear family and so the spouses are taking care of each other.

From the baseline sociodemographic characteristics it is understood that our study population data had depicted our national data except the widow which is high in our study and females who were working for their living were also increased.

7.2 Nutritional status of the study participants:

The nutritional status of the study participants when assessed with MNA scale, was found that majority of the population 54.2% were at risk of developing malnutrition and around 30.8% were already in malnourished state. Similar finding is also seen in a study done in Vellore where 49% were found to be at risk of malnutrition and 14% were malnourished.

This finding is similar to the study done in West Bengal by Surajit Laniri et al where the risk of malnutrition were 60.4% and those who have developed malnourished as 29.4%. Compared to the study done in Bangladesh among the rural elderly it also portrayed a high prevalence of malnutrition which is 29.4% and risk of malnutrition were 60.4% which also depicts similar results of our study. Our results showed that most of the elder people were at risk of malnutrition compared to those who were actually malnourished. Among the study participants females were more malnourished 31.5% and more at risk of malnourishment 53.2% compared to males which is also similar to the West Bengal study. The risk of malnourishment increases as the age increases.

It is also found in the study that most of the subjects 74.2% reported of decline in food intake of which 37.5% reported loss of appetite and 21.7% have chewing problem followed by digestive problem which is higher compared to the Surajit Lahiri et al study. Malnourished persons are already in the state of depressed immune system functions which leads to flare up of infections .Malnutrition was more in people of low socioeconomic status which influences their dietary choices and eating pattern and in turn affects their nutritional status. Therefore at risk of malnutrition is a crucial period where we can do intervention so as to break the vicious cycle of malnutrition and thereby their liability to infections.

7.3 Nutritional status of the study participants based on Anthropometric participants:

In our study the participants 34.7% were obese,29.4% were underweight and 17.5% were overweight.However in the study done in the Bangladesh it was found that nearly 24% were underweight which is similar but 12% were obese and 32% were overweight which is vice versa in our study.This difference may be due to lack of physical activity awareness among the study participants and couldn't find time to do it due to their work.

7.4 Comorbidities of the study participants:

The most common comorbidity seen in the study participants were the vision problems (77.8%)followed by hearing problem which account for 40% and then hypertension(37.5%).Diabetes and edentulous teeth account for 27.2% and 27.5% respectively.Cancer is noticed in 0.6% of the elderly.This finding is higher than the study done by the Anil Purty et al in rural area of Pondicherry where Joint pain was

the common comorbidity which accounts for 43.4% followed by Edentulousness (42.1%)⁵⁸.The vision impairment and hearing impairment were relatively low vice-versa 24.6% and 14.3% compared to our study.This gross difference occurs due to their sample driven methodology .They have taken four villages for data collection .The average number of illness per person in our study was 1.51 which was relatively lower than the study done by Anil purty et al where the average number of illness per person was reported as 2.77 and other studies in North and South india where it is reported as 2.627 and 2.42 respectively.

In our study 50.8% have only one chronic morbidity whereas 49.2% have more than 2 chronic morbidity which is similar to the findings of Ratana Somronthong et al done in Thailand where 55% showed only one chronic morbidity³⁸.Similar finding was also seen in the study done in westbengal that majority of the study population had visual problem (34%) followed by joint pain (26.4%) and the hypertension(15.3%).It was also stated in this study that among the study participants nearly 54.4% had more than one chronic morbidity. In the study conducted by Joseph et al in Mangalore⁵⁹ that the mean average illness was 2.4 ± 1.2 which is a little higher than our study $1.51 \pm .501$ and the most common problem they reported was hypertension of (46%) followed by diabetes which is 39.3%.The difference in the average illness may be due to the fact that the study participants were actively engaged in their work which make them less susceptible to diseases compared to others.The mean number of comorbidities in other studies ranged from 1.6 to 6.1.In our study females reported more than 2 comorbidities i.e 51.7% compared to males where it is 44.5% which is similar to the study done in mangalore .

7.5 Functional status of the study population:

In our study nearly 97.7% were independent of their activities of daily living and only 0.3% has severe dependency and 0.9% had moderate dependency and the remaining 1.1% were slightly dependent..Totally 2.3% had disability in doing their activities of daily living which is lesser compared to the study done in rural community in Puducherry⁵⁸ where it was 13.9% .Similarly Sharifa EBW Puteh⁶⁰ in her study stated that 14.9% were mildly dependent and 9.1% were moderately dependent and 9.1% were totally dependent which is also very high compared to our results.Gupta et al also stated in his study that the prevalence of disability was 23.4% in Jhansi⁶¹.Ganesh kumar et al also stated that the majority of the study participants were independent 94 % which is closely similar to our study .This difference may be due to different scales used to measure their disability in activities of daily living.Moreover the rural elderly have to work to earn their livelihood and need to take care by themselves which indirectly turns out beneficial to them by keeping them active and independent compared to the urban people⁶⁰.

7.6 Quartile distribution of Quality of the life among the elderly:

The quartile distribution of the study participants was stated that majority falls in the second quartile i.e 59.4% indicating the moderate quality of life which is similar to the results of study conducted by KR Sowmya et al ²²where it is 49.6%.The overall mean score for all the elderly persons together was 46.17 and standard deviation of 12.3 which is similar to the study done in mettupalayam which is 47.59 and standard deviation is 14.56 which tell us that the whole of the study participants have an moderate quality of life as it falls in the second quartile.

7.7 Domains of the study population:

According to the domain ,the social relationship domain has the better mean score which is 50.5 and standard deviation of 22.8 which is similar to the study conducted in the rural area ,mettupalayam,Chennai.The least score was found in the psychological domain which is 45.66 and standard deviation of 23.3 whose results are similar to the study conducted in rural setting of kerala by S.E Thadathil et al¹⁵ ,where the least mean score in the psychological domain is 26.95.The mean score of the psychological domain is affected because as the age advances the psychological feeling of the elderly is affected . Ganesh kumar et al study stated that there is lower mean score for social relationship domain which is of 36.68 and this difference may be due to culture difference.Similar findings were also found in the study conducted by Nabarun Karmakar et al where he stated that high mean score was found in Social relationship domain and the least score in the psychological domain.The mean score for the perceived overall quality of life in the study population were 55.21 ±23.6 which is little higher than the study done by K.R.Sowmya²² et all where the mean perceived quality of life score is 49.1±21.56.

Determinants like advancing age,education and occupation are significantly associated with the good QOL which is also similar to the results of the study done in Kerala¹⁵.Sociodemographic characteristics in this study vice-versa belong to 60-70 age groups and most of them were hindu by religion,majority were illiterate and majority were belonging to socioeconomic class were similar to studies done by Akbar et al.in Siliguri,karma in rural Punjab and Thadathil in kerala.

7.8 Lifestyle factors:

In our study population the use of smokeless tobacco was more than half that is 55%(197) and among them 61.6%(143) were females who have the habit currently also. It was also seen in our study that illiteracy, living alone, being Widow and unemployed were having a higher association with usage of smokeless tobacco. Similar results were also seen in the study conducted by Kaur P in Tamilnadu which stated that the female were more likely to use smokeless tobacco in their study⁴⁰.

In our study, current smoker were 13.6% whereas non smokers were 64.5%, whereas in a study done in north india the current smoker was 35% and non smoker were similar to our study 65%. In a study conducted in kancheepuram also the percentage of current smokers were more 35.8%⁴⁰. This may be due to as there is no facilities for entertainment in rural area they may indulge in smoking. Smoking for cherishing their social circle and company.

In our study the current alcoholic were 9.4% and non-alcoholic were 78.9%. Whereas similar findings were also found in the study conducted in Shimla hills by Deepak sharma stated that the current alcoholic is 10.5% and non-alcoholic is 89.5%. But it was observed in many findings that alcohol consuming habit is more in urban compared to rural⁵⁴.

In our study the fruit consumption taken regularly was 12.5% and occasionally was 13.1% and vegetable consumption taken regularly was 27.5% and occasionally was 50.6%. Non vegetarian consumption regularly was 19.2% and whereas occasional

was 50% .However in the study done in Shimla regularly was 45% and occasionally was 55% which is quite higher than our study⁵⁴.

In our study regular physical activity was done regularly by 71.1% whereas other do not ,which is similar to the study done by Deepak sharma et al where he stated 67% did regular physical activity .This gross difference may be do to the lack of awareness about the significance of physical activity among the people and musculoskeletal problem which interfere them not to do it routine.Walking is the common form of physical activity in our study 2.8% which is similar to the studies done by Mcphillips JB et al and Frandlin K et al ^{55,56}.

A good dietary pattern is important contributor to the health of the elderly.Vegetable consumption,fruit consumption and meat consumption were all significant with the good quality of life.In multivariate logistic regression, vegetable consumption is inversely associated with good quality of life.Similar finding is also seen in a study done by Houston DK which also said that high consumption of vegetables and fruits i lower the risk of functional impairment among the elderly⁵⁷.

In our study the nutritional status of study participants according to the body mass index stated that 29.4% were underweight ,17.5% were overweight whereas around 34.7% were obese A trend is seen that there is prevelance of undernutrition as education decreases or illiterate whereas trend of overweight and obesity increases as the education increases which is similar to the study by R.Rajkamal et al.

7.9 Lifestyle factors influence on the Quality of life:

Ferreira et al⁸ in her study stated that lifestyle factors like physical activity, diet, alcohol intake, smoking have an influence on quality of life on the elderly. It is stated that socio demographic characteristics like age, sex, literacy and occupation have an influence on good quality of life. Good quality of sleep, physical activity, diet all have an impact on good quality of life, whereas obesity, smoking, alcoholic intake have high influence on bad quality of life.

Dairush et al⁷⁸ in his study stated that the nine key factors forms healthy lifestyle which include diet, sleep, physical activity, substance abuse, gender, medication abuse, recreation, education and application of modern technology. He also stated that malnutrition, unhealthy diet, smoking, alcohol intake, stress are presentation of unhealthy lifestyle and have a dominant role on health and their quality of life.

In this study fruit consumption, vegetable consumption and meat consumption were poor. Physical activity and maintaining ideal body weight awareness were not present in this group. Tobacco use, smoking habit and alcohol intake were found to be more. Thus positive lifestyle factors like good sleep, ideal body weight, nutrition awareness were less whereas negative lifestyle factors were found to be more.

As per Dairush et al stated that 9 key factors which suggested of healthy life style should be addressed and systematic planning in micro and macro level have to be established. It can also provide individual and social healthy lifestyle. According to our study results the awareness about physical activity, good quality sleep and maintaining ideal body weight is lacking in this population. Health education and Behavioural change communication is not reached to this population. Government schemes awareness is not present to majority population. Since cohabitation is there, no one is there to take care of

this special group health. So they have to create separate model, separate program to elderly. At primary health care level health care providers should address this problem.

8.

Summary and Conclusion:

A community based cross sectional study was done to assess the lifestyle factors and it's influence on the Quality of life among the 360 geriatric population in the Alangiyam area,Ponnapuram Block of Tirupur district.

A semistructured pretested questionnaire in regional language was used to collect the information regarding the sociodemographic details,assessing nutritional status,assessing activities of daily living and assessing the quality of life .Those who are above 60 years and willing were interviewed in this study.

The study revealed the following findings:

- The majority of the study participants were between 60-69 and the mean age was 66 years
- Most of them 56.1%(202) were Illiterate and majority of the study participants 54.4%(136) were currently working to make their livelihood
- Among the study participants in our study majority belong to lower socioeconomic class i.e 68%
- Majority of them are living in Nuclear family and 34.7% were living alone
- Only 10%(36) were receiving Old age Pension and other were dependent among the non working population
- In our study group most of them 97.7% were able to independently perform their activities of daily living

- Among the lifestyle factors,63.3%(229)majority did not consume fruits and 27.5%(99) will consume vegetables regularly and only 0.3% will not consume vegetables
- Only 19.2% consumes meat regularly and majority preferred Non Vegetarian Food
- Majority in our study was found to be 54.2% (195)at risk of malnutrition and 30.8%(111) were already malnourished
- 37.5% in our study subjects stated that they have loss of appetite which is the first reason for decline in food intake in this population
- Among the study participants 71.1% reported of doing physical activity .But most of them i.e around 246(68.3%) involve in regular household chores,travelling etc.Only 2.8%(10) were doing walking regularly.
- Around 55%(197) were using Tobacco and Female prepondance were seen in the use of tobacco.
- About 13.6% (49) were current smokers and 21.9%(79) were Exsmokers and only 9.4%(34) were currently alcoholic and 12.5%(45)were Exalcoholic
- 44.4%(160) reported of Poor quality of sleep
- Lifestyle factors like vegetable consumption,fruit consumption ,Meat consumption ,physical activity ,nutritional status,functional status were found to be associated significantly with good Quality of Life
- It was found in our study that the favourable lifestyle factors have an association with quality of life and it is found to be statistically significant.

- After adjusting the confounding factors , adequate vegetable consumption,meat consumption,maintaining ideal body weight,adequate sleep and no stress were significantly associated with the good quality of life.
- The study participants perceived quality of life and subjective quality of life is found to be associated significantly.
- In our study population 95.6% (344)reported of experiencing stress.
- Majority of study participants are living a Moderate Quality of life i.e 59.4%(214) and Social domain had the highest mean score and the least score was found in Psychological domain.This study provides information regarding the lifestyle factors of the elderly population .They should be educated about quitting smoking and harmful effects of use of alcohol.They should be aware of the benefits of regular physical activity and should be encourage to do it regularly.They should be educated to adop healty lifestyle activities like regular nutritious diet so that it prevents their functional limitation

The study therefore highlights that through favourable lifestyle factors the quality of life of the elderly population can be improved. In order to increase their quality of life the important barriers like unfavourable lifestyle factors, lack of awareness and lack of knowledge on nutrition,physical activity should be addressed. Lifestyle factors is important for active and healthy ageing and it should be imparted from the childhood days .

9.

Limitations:

1.Nutritional status of the elderly people was assessed by screening tool and anthropometric measurements only. Hematological and Biochemistry investigations and screening for micronutrient deficiencies are out of scope of our study.

2.Qualitative research will throw more light on the role of Lifestyle factors on Quality of life.

3.Further studies involving larger sample size will give better focus on this public problem

10.

Recommendations:

1. Positive Lifestyle factors like adequate nutrition, maintaining ideal body weight, having good sleep and adequate physical activity need to be promoted to reach to all the elderly population through awareness and health education

2. Negative Lifestyle factors like smoking, alcohol consumption, stress which adversely affect the quality of life in the elderly should be discouraged through health education at primary care level

3. In addition to the negative lifestyle factors like tobacco, smoking, alcohol consumption, stress other factors like illiteracy, lower socioeconomic status also have a role on the negative impact on the Quality Of Life of the elderly . These factors should be addressed for remedial measures .

4. Awareness should be created about all the government schemes and benefits for the betterment of the QOL of the elder population to achieve healthy ageing

5. Public Health importance of improving QOL among elderly is to be strengthened at primary care level is the need of the hour in this special group for promoting Active ageing.

6. National Program for elderly need to address this and had to add as one of its component

11.**References:**

1. Ageing trends:International population report [Internet]. 2015 (Cited 5th June 2019).Available from :<https://un.org>
2. Medical definition of Aging [Internet]. (Cited 5th June 2019).Available from :<https://www.medicinenet.com>
3. World Health Organization ,Global Health and Ageing [Internet]. (Cited 10th June 2019).Available from: <https://www.who.int>
4. World Health Organization,World report on Ageing and health [Internet] (Cited 10th June 2019).Available from: <https://apps.who.int>
5. World Health Organization ,Older Persons [Internet] (Cited 12th June 2019). Available from: www.searo.who.int
6. Jamuna D,Ageing in India :Some Key Issues.Ageing International 2000 Dec25(4);16-31
7. World Health Organization, Centre for Health Development. A glossary of terms for community health care and services for older persons. Geneva: WHO; 2004. (Ageing and Health Technical Report)
8. Ferreira LK, Meireles JFF, Ferreira MEC, Ferreira LK, Meireles JFF, Ferreira MEC. Evaluation of lifestyle and quality of life in the elderly: a literature review. Rev Bras Geriatr E Gerontol. 2018 Oct;21(5):616–27
9. Sharma D, Salig Ram Mazta, Anupam Parashar .Behavior and lifestyle factors among older persons living in a district of North India.Journal of Medical Society .2013;27(1).
10. Edangji AE,Ahankari AS, Myles PR.An investigation to identify potential risk factors associated with common chronic diseases among the older population in India. Indian J Community Med 2017;42:46-52.

11. Wu F, Guo Y, Chatterji S, Zheng Y, Naidoo N, Jiang Y.

Common risk factors for chronic non-communicable diseases among older adults in China, Ghana, Mexico, India, Russia and South Africa: the study on global AGEing and adult health (SAGE) wave . BMC Public Health 2015;15:88

12. Khaje-Bishak Y, Payahoo L, Pourghasem B, Asghari J M. Assessing the Quality of Life in Elderly People and Related Factors in Tabriz, Iran. J Caring Sci. 2014 Dec 1;3(4):257–63.

13. Mellor D, Russo S, McCabe MP, Davison TE, George K. Depression training program for caregivers of eldercare recipients : implementation and qualitative evaluation. J Gerontol Nurs 2008;34(9):8-17. 13. Gureje O, Ogunniyi A, Kola L, Afolabi E. Functional disability in elderly Nigerians: Results from the Ibadan study of aging. J Am Geriatric Society 2006; 54(11):1784-9.

14. Donmez L, Gokkoca Z, Dedeoglu N. Disability and its effects on quality of life among older people living in Antalya city center. Turkey Arch Gerontol Geriatric 2005; 40 (2): 213-23.

15. Thadathil SE, Jose R, Varghese S. Assessment of Domain wise Quality of Life Among Elderly Population Using WHO-BREF Scale and its Determinants in a Rural Setting of Kerala. International Journal of current Medical and Applied sciences 2015,7(1),43-46

16. Wong FY, Yang L, Yuen JWM, Chang KKP, Wong FKY. Assessing quality of life using WHOQOL-BREF: a cross-sectional study on the association between quality of life and neighborhood environmental satisfaction, and the mediating effect of health-related behaviors. BMC Public Health (2018)18:1113

17. Mónica Machón, Isabel Larrañaga^{4,3}, Miren Dorronsoro^{5,6,3}, Kalliopi Vrotsou^{1,2,3} and Itziar Vergara^{1,2,3}. Health-related quality of life and associated factors in functionally independent older people. *BMC Geriatr.* 2017;17(19).
18. Thara Govindaraju , Berhe W. Sahle ¹, Tracy A. McCaffrey ^{2 ID} , John J. McNeil ¹ and Alice J. Owen . Dietary Patterns and Quality of Life in Older Adults: A Systematic Review. *Nutrients.* 10(971).
19. Elderly in India, Ministry of Statistics and Programme implementation ,2016.1 – 114
20. Flatt T. A New Definition of Aging? *Front .Gene .* August 2012.3(148)
21. Dasgupta A, Pan T, Paul B, Bandopadhyay L, Mandal S. Quality of life of elderly people in rural area of West Bengal: A community based cross sectional study. *Med J. DY Patil Vidyapeeth* 2018;11;527-31
22. Sowmiya KR, Nagarani. A Study on Quality of Life of Elderly Population in Mettupalayam, A Rural Area of Tamil Nadu. *Nat J Res Com Med*, 2012; 1(3): 123 – 177
23. Theories of Aging [Internet]. [cited 2019 Sep 26]. Available from: [https://www.researchgate.net/Theories of Aging](https://www.researchgate.net/Theories_of_Aging)
24. Agarwal A, Lubet A, Mitgang E, Mohanty S, Bloom DE. Population Aging in India: Facts, Issues, and Options. August 2016:1-23.
25. Population Pyramid : United Nations 2009 (Cited on 2019 12th June). Available from: <https://population.un.org>.
26. World Population Prospects 2019-Population Division-The United Nations [Internet].

(Cited 2019 12th June). Available from :<https://population.un.org>.

27. Evangeline Mary A, Seenivasan P, Shibiyeswanth R. I., Prakash V, Solaimuthurajagopal S., Valaiyapathy N. C. A study to assess the prevalence of behavioral risk factors for lifestyle diseases among late adolescents in Chennai, Tamil Nadu. *Int J Community Med Public Health*. 2017 Apr;4(4):1260–6.
28. Status of Elderly in TamilNadu 2011[Internet].(Cited 2019 12th June). Available at :<https://india.unfpa.org>.
29. Zhang S, Tao F, Ueda A, Wei C, Fang J. The influence of health-promoting lifestyles on the quality of life of retired workers in a medium-sized city of Northeastern China. *Environ Health Prev Med*. 2013 Nov;18(6):458–65
30. Kritika, DeepShikha, Jayanti Semwal, Shaili Vyas, Ruchi Juyal ,Hem Chandra Sati. Nutritional status and associated comorbidities among the elderly in Doiwala block, Dehradun. *Indian J Community Health*. 26(Suppl S2):197–203.

31. Mayuri K. Effectiveness Of Sleep Management Strategies In Reducing Insomnia Among Elderly. Tamil Nadu Dr Mgr Med Univ Chennai. 2011[Internet]. (Cited on 2019 July 11) Available at :<https://repository-tngmu.ac.in>
32. Moreno-Vencino B, Arija-Blázquez A, Pedrero-Chamizo R, Gómez- Cabello A, Alegre L.M, Pérez-López F.R. Sleep disturbance, obesity, physical fitness and quality of life in older women: EXERNET study group. *Climacteric*, 2017 Feb;20(1):72–79.
33. Gouveia ERQ, Gouveia BR, Ihl A ,Kliegel M, Maia JA, Badia SBI, et al. Correlates of health-related quality of life in young-old and old-old community dwelling older adults. *Qual Life Res*. 2017;26(6):1561-9.
34. Compan B, Castri AD. Epidemiological study of Malnutrition in Elderly Patients in Acute, Sub-acute and Long-Term Care using the Mna. *J Nutr*. 1999;3(3):6
35. Parikshit Chakraborty. Activities of Daily Living among the Oldest-old People: A Rural Urban Study. *J Adv Res Humanit Soc Sci*. 2018;5(1):1–4.
36. Wu T, Lu L, Luo L, Guo Y, Ying L, Tao Q, et al. Factors Associated with Activities of Daily Life Disability among Centenarians in Rural Chongqing, China: A Cross-Sectional Study. *Int J Environ Res Public Health* . 2017 N,14,1364
37. Cecilie Fjeldstad¹, Anette S Fjeldstad¹, Luke S Acree¹, Kevin J Nickell¹ and Andrew W Gardner . The influence of obesity on falls and quality of life. *Dyn Med*. 7(4).
38. Somrongsong R, Wongchalee S, Ramakrishnan C, Hongthong D, Yodmai K, Wongtongkam N. Influence of socioeconomic factors on daily life activities and quality of life of Thai elderly. *J Public Health Res*. 2017;6(862)
39. Rejeski W J and Mihalko S L. Physical Activity and Quality of Life in Older Adults. *J Gerontol Ser A*. Vol. 56A(II):23–35.

40. Kaur P, Rao SR, Radhakrishnan E, Ramachandran R, Venkatachalam R, Gupte md. High prevalence of tobacco use, alcohol use and overweight in a rural population in Tamil Nadu, India. *J Postgrad Med.* 2011 Jan;57(1):9–15.
41. Chikkerahally GDMD. Assessment of quality of life in patients with alcohol dependence syndrome. *Open J Psychiatry Allied Sci.* 2019;10(1):57.
42. R. S. Rajasri, Thomas Mathew, Zinia T. Nujum, T. S. Anish, Reshmi Ramachandran, Tony Lawrence. Quality of Life and Sociodemographic Factors Associated with Poor Quality of Life in Elderly Women in Thiruvananthapuram, Kerala. *Indian J Public Health.* 2016 Sep;60(3).
43. Onunkwor OF, Al-Dubai SAR, George PP, Arokiasamy J, Yadav H, Barua A. A cross-sectional study on quality of life among the elderly in non- governmental organizations' elderly homes in Kuala Lumpur. *Health Qual Life Outcomes.* 2016 Dec;14(1):6.
44. Md Asadullah, Kunal Kuvalekar, Basavraj Katarki, Sowmya Malamardi, Santosh Khadka, Shailesh Wagle and Padmamohanan. A Study On Morbidity Profile And Quality Of Life Of Inmates In Old Age Homes In Udupi District, Karnataka, India. *Int J Basic Appl Med Sci.* 2012 Dec;2(3):91–7.
45. WelfareSchemes. [Internet] [cited 2019 August 30]. Available from: <https://pensioners.portal.gov.in>.
46. Kamala Krishnasamy, B. Sesikeran, Dietary guidelines For Indians-National Institute of Nutrition. [Internet] (Cited 2019 August 30) .Available at :<https://www.icmr.nic.in>.
47. National Sleep Foundation [Internet] (Cited 2019 September 1). Available from

<https://www.sleepfoundation.org>.

48. World Health Organisation-Physical activity . [Internet]. (Cited 2019 September 2).Available from <https://www.searo.who.int>.

49.NHIS-Adult Tobacco Use-glossary 2017[Internet] (Cited 2019 September 3).Available from <https://www.cdc.gov/nchs/nhis/tobacco/tobaccoglossary.htm>.

50.What is Stress?Industrial Psychology[Internet].(Cited 2019 September 3).Available from <https://Kalyan-city.blogspot.com>

51.World Health Organisation-WHOQOL-Measuring Quality of Life [Internet]. (Cited 2019 September 4) Available at <https://www.who.int>.

52.Disabled World [Internet] (Cited 2019 September 4).Available at <https://www.disabled-world.com>

53.Daruish D.Farhud,Impact of Lifestyle on Health,Iran J Public Health,Vol44(11),Nov2015,1442-1444

54.Sharma,Deepak& Mazta,Saliram & Parashar,Anupam.Behaviour and lifestyle factors among older persons living in a district of North India.Journal Medical Society .2013.27(1)61-64

55.McPhillips JB, Pellettera KM, Barrett-Connor E, Wingard DL, Criqui MH. Exercise patterns in a population of older adults. Am J Prev Med 1989;5:65-72.

56.Frandin K, Grimby G, Mellstrom D, Svanborg A. Walking habits and health related factors in a 70 year old population. Gerontology 1991;37:281-8

57.Houston DK, Stevens J, Cai J, Haines PS. Dairy, fruit, and vegetable intakes and functional limitations and disability in a biracial cohort: The Atherosclerosis Risk in Communities Study. Am J Clin Nutr 2005;81:515-22.

58.Purty AJ,Bazroy J,Kar M,Vasudevan K,Veliath A,Panda P.Moridity Pattern among the elderly population in rural area of Tamil Nadu,India.Turk J Med SCi 36(2006)45-50

59.Joseph N, Nelliyanil M, Nayak SR, Agarwal V, Kumar A, Yadav H, et al. Assessment of morbidity pattern, quality of life and awareness of government facilities among elderly population in South India. J Fam Med Prim Care. 2015 Sep;4(3):405–10.

60.Puteh, Sharifa Ebw. et al. “A Prevalence Study of the Activities of Daily Living (ADL) Dependency among the Elderly in Four Districts in Selangor, Malaysia.” (2015).J.Epid Prev Med 1(2)

61.Shubanshu Gupta ,Rashmi Yadav and Anil Kumar ,Assessment of physical disability using Barthel index among elderly of rural areas of district Jhansi(U.P),India.2016.5(4)853-857

ANNEXURES

ANNEXURE1

Patient Information Sheet

Topic: A study on Lifestyle factors and its determinants and its impact on Quality of life among the geriatric population, in Tirupur District.

Purpose of the study:

Procedure:

The survey would take approximately 15-30 minutes of your valuable time. You will be asked a few questions regarding yourself, your activities of daily living, and about your nutrition. The collected data will be used for research purpose only.

Benefits:

There may not be any direct benefit for you from this study. But the information provided by you may prove to be of great importance with respect to understanding the difficulties faced by you at the community level and the health care delivery level.

Confidentiality:

Utmost priority will be given to protect the privacy and confidentiality of your personal information. The collected information will not be shared with anyone not involved in the study and reporting will be done in aggregate form only.

Voluntary participation:

Your participation in this study is voluntary and you have the right to withdraw your participation at any time during the interview without any explanation. Refusal to participate will not involve any penalty or loss of benefits to which you are otherwise entitled. There might be certain questions which you may not wish to answer. You can choose to decline answering these questions.

Signature/Left thumb impression of the participant

ANNEXURE 1

தகவல் நகல்

இந்த ஆராய்ச்சியில் உங்களிடம் கேட்கும் கேள்விகளுக்கு உங்கள் முழு மனதுடன் பதிலளிக்க வேண்டும்.

இந்த ஆராய்ச்சியில் உங்களுக்கு எந்த பின்விளைவுகளும் ஏற்படாது என்பதை உறுதியளிக்கிறேன்.

உங்களிடம் கேட்கும் கேள்விகளில் உங்களின் சுயவிபரம், தினசரி செயல்கள், உங்களது உணவு பழக்கவழக்கங்கள், உணவை பற்றிய விழிப்புணர்வு, வாழ்கைதரம், பற்றி சில கேள்விகள் கேட்கப்படும்.

உங்களுக்கு பணம் எதுவும் அளிக்கப்படமாட்டாது என்பதை இதன் மூலம் தெரிவித்துக் கொள்கிறேன்.

இந்த ஆய்வில் உங்களுக்கு நேரடி பயன் எதுவும் கிடையாது. நீங்கள் அளிக்கும் தகவல் மூலம் புது யுக்திகள் வகுக்கப்படலாம். அதன் மூலம் வருங்காலத்தில் உங்களுக்கோ அல்லது உங்களை போன்ற மக்களுக்கோ பயன்படலாம்.

நீங்கள் எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து விலகி கொள்ளலாம். அதனால் உங்களுக்கு எந்த பாதிப்பும் இல்லை. உங்களின் விபரங்கள் எதுவும் மற்றவர்களுக்கு தெரிவிக்கப்படமாட்டாது என்பதை உறுதியளிக்கிறேன்.

இந்த ஆராய்ச்சியின் முடிவுகள் பத்திரிக்கைகளில் பிரசுரிக்கப்படலாம். ஆனால் உங்களின் அடையாளம் எதுவும் தெரிவிக்கப்படமாட்டாது.

கையொப்பம்

ANNEXURE 2

Informed Consent form

Participant identification number:

Title of the study: A study on Lifestyle factors and its determinants and its impact on Quality of life among the Geriatric population

Name of the Principal Investigator:

Phone number:

I have read/been read the details of the information sheet. The nature of the study and my involvement have been explained and all my questions regarding the study have been answered satisfactorily. By signing/providing thumb impression on this consent form, I indicate that I understand what is expected from me and that I am willing to participate in this study. I know that I can withdraw my participation at any time during the interview without any explanation.

Name of the participant:

Signature / Left thumb print

Date of consent:

If participant is willing to participate but unwilling to provide signature / thumb impression (verbal consent)

Name of witness:

Signature of witness:

Signature of investigators:

Date:

ஒப்புதல் படிவம்

Topic: A study on Lifestyle factors and its determinants and its impact on Quality of life among the Geriatric population

நான் தகவல் நகலில் கொடுக்கப்பட்டுள்ள முழு விவரங்களையும் கவனமாகப் படித்தேன்/ ஆய்வின் முழு விவரங்களையும் தமிழில் எனக்கு விளக்கமாக எடுத்துரைக்கப்பட்டது.

நான் இந்த ஆய்வின் விபரங்களை முழுமையாக புரிந்துகொண்டேன்.

ஆய்வில் பங்கு எடுக்கும் போது எனது சுய விவரம், தினசரி செயல்கள், உணவு முறை, உணவு பற்றிய விழிப்புணர்வு மற்றும் வாழ்க்கைமுறை பற்றிய விபரம் இதில் கேட்கப்படும் மற்றும் அதை சாத்தியமான அபாயங்கள் மற்றும் பயன்களை நான் அறிந்துள்ளேன்.

மேலும், நான் எந்த ஒரு வேளையிலும் ஆய்வில் இருந்து திரும்ப முடியும் என்றும், அதன் பின்னர் நான் வழக்கம் போல் மருத்துவச் சிகிச்சைப் பெற முடியும் என்றும் புரிந்துக் கொள்கிறேன்.

நான் ஆய்வில் பங்கு கொள்ள பணம் எதையும் பெற முடியாது என்று அறிந்துள்ளேன்.

நான் இந்த ஆய்வில் பங்கு எடுப்பதன் மூலம் நான் என்ன செய்ய போகிறேன் என்று தெரியும்.

நான் இந்த ஆய்வில் என் முழு ஒத்துழைப்பையும் கொடுப்பேன் என்று உறுதியளிக்கின்றேன்.

ஆய்வில் பங்கேற்பவர் பெயர்:

சாட்சி:

பெயர் மற்றும் முகவரி:

பெயர் மற்றும் முகவரி:

கையொப்பம்/விரல் ரேகை

கையொப்பம்/விரல்

ரேகை

Questionnaire

A study on Lifestyle factors and its determinants and their impact on Quality of life among the geriatric population in Tirupur district

1.Subject id no:

2.Name:

3.Age:

4.Sex:1.Male 2.Female

5.Address:

6.Area/Street:

7.Religion: 1.Hindu 2.Christian 3.Muslim 4.Other

8.Education: 1.Illiterate 2.Literate

9.Occupation: 1.Unemployed 2.Retired 4.Employed.....

10.Marital Status:1.Married 2.Widow/Widower 3.Divorced/separated

11.Type of Family:1.Nuclear 2.Joint 3.Third generation 4.Extended

12.Living arrangements:1.Alone 2.Old age homes/institutions 3.Residing with a)spouse b)children c)Grand children d)Relative e)non relative

13.Is satisfied with this living arrangement?a)yes b)no .If no reason.....

14.Individual income:

15.Source of income:1.Pension 2.Getting rent on houses 3.Working after retirement 4.dependent.If dependent whom.....

16.If Pension a)OAP b)others specify.....

17.Family Income(per month):

18.Number of household members:

19.Socioeconomic status:1.Upper 2.Upper middle 3.Lower middle 4.Upper lower 5.Lower

20.Comorbidity :

| S.No | Diseases | Yes | No | Duration | Treatment |
|------|---------------------------|-----|----|----------|-----------|
| 1 | Vision impairment | | | | |
| 2 | Hearing impairment | | | | |
| 3 | Diabetes | | | | |
| 4 | Hypertension | | | | |
| 5 | Musculoskeletal disorders | | | | |

| | | | | | |
|----|------------------------------|--|--|--|--|
| 6 | COPD | | | | |
| 7 | Asthma | | | | |
| 8 | CAD | | | | |
| 9 | CVA | | | | |
| 10 | Chronic liver diseases | | | | |
| 11 | Cancers | | | | |
| 12 | Thyroid | | | | |
| 13 | Previous H/o Surgery | | | | |
| 14 | CKD | | | | |
| 15 | Others(insomnia,memory loss) | | | | |

21.

| | | | | | |
|---------------------------|-----|----|-------------------------------|-----------------|-----------------|
| 21.1 Ever used Tobacco | yes | no | If yes pattern | Smoking/chewing | Sniffing/others |
| 21.2 Ever Smoked | yes | no | If yes Exsmoker/Current | How long | |
| 21.3 Ever drunked alcohol | | | If yes Exalcoholic/current | How long | |

22. Current diet pattern : 1. Veg 2. Nonveg .If Non veg Frequecy/week

23. Sleep hours:

24. Quality of sleep: 1. Good 2. Disturbed

24.a How fast will you asleep soon as you go to bed?

24.b. How many times will you wake in the night?

25. Are you stressed?

25.a In the last month how often have you felt nervous and stressed?

0 1 2 3 4

25.b In the last month how often have you been able to control irritations in your life?

0 1 2 3 4

26. Do you do exercise? 1. Yes 2. No

27. Type of exercise? 1. Walking 2. Jogging 3. Gym 4. Others

28. How many hours in a week?

29. Have you attained Menopause(women) : 1. yes 2. no

30. If attained how many years back?

31. How many times you take fruits and vegetables in a week?

1.All days 2.4-6 days/wk 3.2-3days/wk 4.1 or less days

32. how many servings?

1.5 or more servings 2.2-4 servings/day/all days 3. 1 servings/day all day

33. MNA SCALE:

33.1. Has food intake declined over past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?

1. Severe loss of appetite 2. Moderate loss of appetite 3. No loss of appetite

33.2. Weight loss during last 3 months:

1. >3 Kg 2. does not know 3. between 1-3 kg 4. No weight loss

33.3. Mobility:

1. Bed Or Chair Bound 2. Able to get out of Bed or Chair but does not go out 3. goes out

33.4. Has suffered in the past 3 months?

1. Psychological stress 1. Yes 2. No

2. Acute disease 2. Yes 2. No

33.5. Neuropsychological Problems:

1. Severe dementia or depression 2. Mild dementia 3. No psychological problems

WHO QOL SCALE Physical Domains:

34. To what extent do you feel that physical pain prevents you from doing what you need to do?

5. Not at all 4. A little 3. A moderate amount 2. Very much 1. an extreme amount

35. How much do you need any medical treatment to function in your daily life?

5. Not at all 4. A little 3. A moderate amount 2. Very much 1. an extreme amount

36. Do you have enough energy for everyday life?

1. Not at all 2. A little 3. Moderately 4. Mostly 5. Completely

37. How well are you able to get around?(attend functions)

1. Very Poor 2. Poor 3. Neither poor or good 4. Good 5. Very Good

38. How satisfied are you with your sleep?

1. Very dissatisfied 2. Dissatisfied 3. Neither Satisfied nor Dissatisfied 4. Satisfied 5. Very Satisfied

39. How satisfied are you with your ability to perform your daily living activities?

1. Very dissatisfied 2. Dissatisfied 3. Neither Satisfied nor Dissatisfied 4. Satisfied 5. Very Satisfied

40. How satisfied are you with your capacity for work?

1. Very dissatisfied 2. Dissatisfied 3. Neither Satisfied nor Dissatisfied 4. Satisfied 5. Very Satisfied

Psychological Domain:

41. How much do you enjoy life?

1. Not at all 2. A little 3. A moderate amount 4. Very much 5. an extreme amount

42. To what extent do you feel your life is to be meaningful?

1. Not at all 2. A little 3. A moderate amount 4. Very much 5. an extreme amount

43. How well are you able to concentrate?

1. Not at all 2. A little 3. A moderate amount 4. Very much 5. Extremely

44. Are you able to accept your bodily appearance?

1. Not at all 2. A little 3. Moderately 4. Mostly 5. Completely

45. How satisfied are you with yourself?

1. Very dissatisfied 2. Dissatisfied 3. Neither Satisfied nor Dissatisfied 4. Satisfied 5. Very Satisfied

46. How often do you have negative feelings such as blue mood, despair, anxiety, depression?

5.Never 4.Seldom 3.Quite Often 2.Very often 1.Always

Social relationship Domain :

47.How satisfied are you with your personal relationship?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

48.How satisfied are you with your sex life?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

49.How satisfied are you with the support you get from your friends?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

Environment Domain:

50.How safe do you feel in your daily life?

1.Not at all 2.A little 3.A moderate amount 4.Very much 5.Extremely

51.How healthy is your physical environment?

1.Not at all 2.A little 3.A moderate amount 4.Very much 5.Extremely

52.Have you enough money to meet your needs?

1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely

53.How available to you is the information that you need in your day today life?(Ration,oap)

1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely

54.To what extent do you have the opportunity for leisure activities?

1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely

55.How satisfied are you with the conditions of your living place?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

56.How satisfied are you with your access to health services?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

57.How satisfied are you with your transport?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

58..How could you rate your Quality of life?(WHOQOL BREF)

1.Very poor 2.Poor 3.Neither poor nor good 4.Good 5.Very good

59.How satisfied are you with your Health?

1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied

60.

| Activities | Options | Score |
|------------|---|-------|
| Bowel | 0.Incontinent 1.Occasional2.continent | |
| Bladder | 0.Incontinent /catheterised1.Occasional 2.continent | |
| Grooming | 0.needs help 1.independent | |

| | | |
|------------|--|--|
| Toilet use | 0.dependent 1.needs help 2.independent | |
| Feeding | 0.unable 1.needs help 2.independent | |
| Transfer | 0.unable 1.major help 2.minor help 3.independent | |
| Mobility | 0.immobile 1.wheelchair dependent 2walk with help of person3.independent | |
| Dressing | 0.dependent 1.needs help 2.independent | |
| Stairs | 0.unable 1.needs help 2.independent | |
| Bathing | 0.dependent 1.independent | |

61.Anthropometric

a.Height :

b.Weight:

62..Body Mass Index(BMI)

1.BMI<19 2.BMI19-<21 3.BMI 21to<23 4.BMI>23 Or greater

Annexure 3

வாழ்க்கை முறை மற்றும் முதியோரின் வாழ்க்கைத் தரம் கேள்வித்தாள் வடிவம்

1. நபரின் அடையாள எண் :

2.பெயர்:

3.வயது:

4.பாலினம்: 1.ஆண் 2. பெண்

5. முகவரி:

6. இடம் /தெரு:

7. மதம் 1. இந்து 2. கிறிஸ்துவர் 3. முஸ்லீம் 4. மற்றவைகள்

8. கல்வி மதிப்பெண்:

1.தொழிற்முறை கல்வி 2.பட்டதாரி / முதுநிலை பட்டதாரி 3. இடைநிலை /உயர்நிலைப்பள்ளிக்கு பிந்தைய டிப்ளமோ 4.உயர்நிலைப்பள்ளி 5.நடுநிலைப்பள்ளி சான்றிதழ் 6.ஆரம்ப பள்ளி 7. கல்வியறிவற்றவர்

9. தொழிற்சார் மதிப்பெண்:

1.தொழிற்முறை வல்லுநர் 2.பகுதி தொழிற்முறை வல்லுநர் 3. எழுத்து சார்ந்த பணியாளர் / கடை உரிமையாளர்/ விவசாயி 4.நுட்பமான தொழில் செய்பவர் 5.இடைநிலை நுட்பம் சார்ந்த தொழில் செய்பவர் 6.நுட்பமற்ற தொழில் செய்பவர் 7.வேலையற்றவர்

10.திருமணத் தகுதி:

1. மணமானவர் 2. கைம்பெண் 3. பிரிந்து வாழ்பவர்

11. குடும்ப வகைப்பாடு

1.தனி குடும்பம்

2.கூட்டு குடும்பம்

3.நீட்டிக்கப்பட்ட குடும்பம்

12. வாழும்முறை ஏற்பாடுகள்

1.தனியாக 2.1. துணையோடு 2. குழந்தைகள் 3.பேரன்/ பேத்தி 4.சொந்தம்

5.சொந்தமல்லாத

13. இந்த வாழ்க்கை ஏற்பாட்டில் திருப்தியாக உள்ளீர்களா?

1. ஆம் 2. இல்லை

14. தனிநபர் வருமானம்:

15. வருமானம் ஈட்டும் வழி

1.முதியோர் உதவித்தொகை 2.வீட்டு வாடகை 3.தற்போது பணியிலிருப்பது

4.சார்ந்திருப்பது 5.சார்ந்திருக்கும் நபர் யார் ?

16. உதவித்தொகை

1.முதியோர் உதவித்தொகை 2.மற்றவை

17. குடும்ப மாத வருமானம்((மொத்தம்)

18. குடும்பத்தில் எத்தனை நபர்கள் உள்ளார்கள்

19. சமூகப்பொருளாதார மதிப்பீட்டு அளவு:

20.

| | வியாதிகள் | ஆம் | இல்லை | எத்தனை வருடங்கள் | மருந்து உட்கொள்ளுதல் |
|----|--|-----|-------|---------------------|-------------------------|
| 1 | பார்வைதிறன் உள்ளதா | | | | |
| 2 | காது கேட்கும் திறன் | | | | |
| 3 | சர்க்கரை நோய் | | | | |
| 4 | இரத்தக் கொதிப்பு | | | | |
| 5 | தசை எலும்பு நோய் | | | | |
| 6 | நுரையீரல் நோய் | | | | |
| 7 | ஆஸ்துமா | | | | |
| 8 | இதய நோய் | | | | |
| 9 | பக்கவாதம் | | | | |
| 10 | கல்லீரல் நோய் | | | | |
| 11 | புற்றுநோய் | | | | |
| 12 | திரையீடு | | | | |
| 13 | ஏதேனும் அறுவை சிகிச்சை செய்யப்பட்டுள்ளதா | | | | |
| 14 | சிறுநீரக நோய் | | | | |
| 15 | மற்றவை | | | | |

21:

| | ஆம் | இல்லை | எத்தனை வருடங்கள் | |
|---------------|------------------|-------|------------------|--|
| புகையிலை | முன்னாள்/தற்போது | | | |
| புகைத்தல் | முன்னாள்/தற்போது | | | |
| குடிப்பழக்கம் | முன்னாள்/தற்போது | | | |
| | | | | |

22. தற்போதைய உணவு பழக்க வழக்கம் ?

1.சைவம் 2. அசைவம்

23. தினசரி இரவு உறக்க நேரம் எவ்வளவு ?

24. உங்கள் உறக்கத்தின் தரம் ?

1. இரவு உறக்கத்தின் போது எத்தனை முறை கண் விழிப்பீர்கள்

2. படுத்தவுடன் உறங்கிவிடுவீர்களா ?

1. நன்று

2. நன்றல்ல

25. மன அழுத்தம் ?

25.1 கடந்த மாதம் எத்தனை முறை உங்களால் மன எரிச்சலை கட்டுப்படுத்த முடிந்தது ? 0 1 2

3 4

25.2கடந்த மாதம் எத்தனை முறை நீங்கள் படபடப்புடனும் எரிச்சலுடனும் காணப்பட்டீர்கள் ?

0 1 2 3 4

1.ஆம் 2. இல்லை

26. உடற்பயிற்சி செய்வீர்களா ? 1. ஆம் 2. இல்லை

27. உடற்பயிற்சி செய்தால்

1.நடை பயிற்சி 2. ஓட்டப்பயிற்சி

3. உடற்பயிற்சிக் கூடம் 4.மற்றவை

28. ஒரு வாரத்தில் எத்தனை மணிநேரம் உடற்பயிற்சி செய்வீர்கள் ?

29. மாதவிடாய் நின்று விட்டதா (பெண்கள் மட்டும்)?:

1.ஆம் 2. இல்லை

30. மாதவிடாய் எத்தனை வருடங்களுக்கு முன்னால் நின்றது ?

31. ஒரு வாரத்தில் எத்தனை மணிநேரம் உடற்பயிற்சி செய்வீர்கள் ?

32. ஒரு வாரத்தில் எத்தனை முறை பழங்கள் மற்றும் காய்கறிகள் எடுத்துக் கொள்வீர்கள் ?

1.அனைத்து நாட்களிலும்

2. 4-6 நாட்கள்

3. 2-3 நாட்கள்

4. ஒரு நாள் அல்லது அதற்கும் கீழ்

33. ஒரு நாளைக்கு எத்தனை வேளை எடுத்துக்கொள்கிறீர்கள்?

1. 5 அல்லது அதற்கும் மேல் 2. 2-4 3. 1 முறை

மினி நியூட்ரிஷன் அசஸ்மென்ட் ஸ்கேல்:

34.1 கடந்த மூன்று மாதங்களில் உட்கொள்ளும் உணவின் அளவு குறைந்துள்ளதா பசியின்மையால், அஜீரணத்தினால் மெல்லுவதில் (அ) விழுங்குவதில் சிரமம்?

அ) கடுமையாக ஆ) மிதமாக இ) இல்லை

34.2.கடந்த மூன்று மாதங்களில் எடை இழப்பு ஏற்பட்டதா?

அ)>3 கிலோகிராம் ஆ) தெரியாது இ)1-3 கிலோகிராம்

34.3. இயக்கம்

அ) படுக்கை அல்லது நாற்காலியில் பிணைக்கப்பட்டு

ஆ) படுக்கை அல்லது நாற்காலியிலிருந்து எழ முடியும் ஆனால் வெளியில் செல்வதில்லை

இ) வெளியே செல்வதுண்டு

34.4 கடந்த மூன்று மாதங்களில் மன அழுத்தம் அ கடுமையான நோய் ஏற்பட்டதா?

அ) ஆம் ஆ) இல்லை

34.5. நரம்பியல் பிரச்சினைகள் உள்ளதா?

அ) கடுமையான டிமென்ஷியா ஆ) மிதமான டிமென்ஷியா இ)நரம்பியல் பிரச்சினைகள் இல்லை

உடல்சார் களம்:

35.உடலில் ஏற்படும் வலிகள் எவ்வாறு உங்கள் இயல்பு வாழ்வை பாதிக்கிறது?

அ) உச்சத்தில் ஆ) அதிகமாக இ)மிதமாக ஈ) கொஞ்சமாக உ)இல்லை

36.உங்கள் இயல்பு வாழ்வு தடைபடாமல் இருக்க எவ்வளவு மருத்துவ சிகிச்சை தேவை?

அ) உச்சத்தில் ஆ) அதிகமாக இ) மிதமாக ஈ) கொஞ்சமாக உ)இல்லை

37. உங்கள் இயல்பு வாழ்விற்கு தேவையான ஆற்றல் உள்ளதா?

அ) இல்லை ஆ) சிறிது இ)மிதமாக ஈ) அதிகமாக உ) முழுமையாக

38. மற்றவர்களுடன் இயல்பாக பழக முடிகிறதா?

அ) மிகவும் பின்தங்கிய நிலை ஆ) பின்தங்கிய நிலை இ) சுமாராக ஈ)நன்று உ)மிக நன்று

39. நிம்மதியாக உறங்க முடிகிறதா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ)சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

40. தினசரி வேலையில் திருப்தி அடைகிறீர்களா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

41. உங்கள் வேலையில் ஆற்றல் திருப்தி அடைகிறீர்களா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

மனம்சார் களம்:

42. உங்கள் வாழ்வை எவ்வளவு மகிழ்ச்சியோடுகளிக்கிறீர்கள்?

அ) இல்லை ஆ) கொஞ்சமாக அதிகமாக இ)மிதமாக ஈ) அதிகமாக உ) உச்சத்தில்

43.உங்கள் வாழ்வின் எந்த பகுதியை அர்த்தமுள்ளதாக எண்ணுகிறீர்கள்?

அ) இல்லை ஆ) கொஞ்சமாக அதிகமாக இ)மிதமாக ஈ) அதிகமாக உ) உச்சத்தில்

44. உங்கள் மனதை வேலையில் ஒருநிலை படுத்த முடிகிறதா?

அ) இல்லை ஆ) கொஞ்சமாக அதிகமாக இ)மிதமாக ஈ) அதிகமாக உ) உச்சத்தில்

45. உங்கள் உடல் தோற்றத்தை ஏற்றுக்கொள்ள முடிகிறதா?

அ) இல்லை ஆ) சிறிது இ) மிதமாக ஈ) அதிகமாக உ) முழுமையாக

46.

அ) மிகவும் பின்தங்கிய நிலை ஆ) பின்தங்கிய நிலை இ) சுமாராக ஈ)நன்று உ)மிக நன்று

47. எதிர்மறை எண்ணங்கள் எப்பொழுதெல்லாம் தோன்றுகிறது?

அ) இல்லை ஆ) ஏதோ ஒரு முறை இ) அடிக்கடி ஈ) அவ்வப்போது உ)
எப்போதும்

சமூக களம்:

48. உங்கள் தனிப்பட்ட உறவில் திருப்தி அடைகிறீர்களா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை
இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

49. உங்கள் தாம்பத்திய வாழ்வு திருப்தி அளிக்கிறதா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை
இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

50. உங்கள் நண்பர்கள் அளிக்கும் ஆதரவு திருப்தி அளிக்கிறதா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை
இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

சுற்றுப்புறம் சார் களம்:

51. உங்கள் தினசரி வாழ்வில் எவ்வளவு பாதுகாப்பாக உணர்கிறீர்கள்?

அ) உச்சத்தில் ஆ) அதிகமாக இ) மிதமாக ஈ) கொஞ்சமாக உ) இல்லை

52. உங்கள் சுற்றுப்புறம் எவ்வளவு ஆரோக்கியமாக உள்ளது?

அ) உச்சத்தில் ஆ) அதிகமாக இ) மிதமாக ஈ) கொஞ்சமாக உ) இல்லை

53.உங்கள் தேவைக்கு தகுந்த பணவசதி உள்ளதா?

அ) இல்லை ஆ) சிறிது இ) மிதமாக ஈ) அதிகமாக உ) முழுமையாக

54. உங்கள் தினசரி வாழ்வில் தேவையான தகவல்கள் கிடைக்கிறதா?

அ) இல்லை ஆ) சிறிது இ)மிதமாக ஈ) அதிகமாக உ) முழுமையாக

55. பொழுதுபோக்கிற்கு எவ்வளவு நேரம் செலவிடுகிறீர்கள்?

அ) இல்லை ஆ)சிறிது இ)மிதமாக ஈ) அதிகமாக உ) முழுமையாக

56. உங்கள் இருப்பிடம் உங்களுக்கு நிம்மதி அளிப்பதாக உள்ளதா?

அ) உச்சத்தில் ஆ)அதிகமாக இ)மிதமாக ஈ) கொஞ்சமாக உ)இல்லை

57. மருத்துவ வசதிகள் திருப்தி அளிக்கிறதா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

58. உங்கள் போக்குவரத்து வசதிகள் திருப்தி அளிக்கிறதா?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ) சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

59.உங்கள் வாழ்க்கை தரத்தை எப்படி நிர்ணயிப்பீர்கள்?

அ) மிகவும் பின்தங்கிய நிலை ஆ) பின்தங்கிய நிலை இ) சுமாராக ஈ)நன்று உ)மிக நன்று

60. உங்கள் உடல் நிலை குறித்து எண்ணுவது?

அ) மிகவும் திருப்திகரமாக இல்லை ஆ) திருப்திகரமாக இல்லை

இ)சுமாராக ஈ) திருப்திகரமாக உள்ளது உ) மிகவும் திருப்திகரமாக உள்ளது

61. அன்றாட வாழ்க்கை நடவடிக்கைகள்:

| நடவடிக்கைகள் | விருப்பம் | மதிப்பெண் |
|-----------------|---|-----------|
| குடல் இயக்கம் | 0.அடங்காமை 1.எப்போதாவது 2. தன்னடக்கம் | |
| சிறுநீர்ப்பை | 0.அடங்காமை1.எப்போதாவது 2.தன்னடக்கம் | |
| பராமரிப்பு முறை | 0.துணைதேவை 1.தன்னிச்சையாக | |
| கழிப்பறை உதவி | 0.கண்டிப்பாக துணை தேவை 1.சிறு உதவி தேவை 2. தன்னிச்சையாக | |
| உணவு | 0.முடியாது, 1.உதவி தேவை 2.தன்னிச்சையாக | |
| படுக்கையைவிட்டு | 0.முடியாது, | |

| | | |
|--------------------------------------|---|--|
| எழுந்து நாற்காலியில் அமர முடியுமா | 1. முக்கிய உதவி 2. சிறிய உதவி 3. தன்னிச்சையாக | |
| இயக்கம் | 0.அசைவற்ற 1.சக்கர நாற்காலியில் 2.ஒருவர் உதவி தேவை 3.தன்னிச்சையாக | |
| உடை அணியும் முறை | 0.கண்டிப்பாக துணை தேவை 1. சிறு உதவி தேவை 2. தன்னிச்சையாக | |
| மாடிப்படி ஏறுதல் | 0.முடியாது 1. துணை தேவை 2. தன்னிச்சையாக | |
| குளியல் முறை | 0. துணை தேவை 1. தன்னிச்சையாக | |

60.1: எடை

60.2: உயரம்:

60.3: உடல் நிறைக் குறியீட்டெண்:

ANNEXURE:4

MINI NUTRITION ASSESSMENT SCALE

Mini Nutritional Assessment

MNA[®]

Nestlé Nutrition Institute

| | | | | | | | | | |
|------------|----------------------|-------------|----------------------|-------------|----------------------|-------------|----------------------|-------|----------------------|
| Last name: | <input type="text"/> | First name: | <input type="text"/> | | | | | | |
| Sex: | <input type="text"/> | Age: | <input type="text"/> | Weight, kg: | <input type="text"/> | Height, cm: | <input type="text"/> | Date: | <input type="text"/> |

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

Screening

| | | |
|-----------|---|--------------------------|
| A | Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties? 0 = severe decrease in food intake 1 = moderate decrease in food intake 2 = no decrease in food intake | <input type="checkbox"/> |
| B | Weight loss during the last 3 months 0 = weight loss greater than 3 kg (6.6 lbs) 1 = does not know 2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs) 3 = no weight loss | <input type="checkbox"/> |
| C | Mobility 0 = bed or chair bound 1 = able to get out of bed / chair but does not go out 2 = goes out | <input type="checkbox"/> |
| D | Has suffered psychological stress or acute disease in the past 3 months? 0 = yes 2 = no | <input type="checkbox"/> |
| E | Neuropsychological problems 0 = severe dementia or depression 1 = mild dementia 2 = no psychological problems | <input type="checkbox"/> |
| F1 | Body Mass Index (BMI) (weight in kg) / (height in m²) <input type="checkbox"/> 0 = BMI less than 19 1 = BMI 19 to less than 21 2 = BMI 21 to less than 23 3 = BMI 23 or greater | <input type="checkbox"/> |

IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.
DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.

| | | |
|-----------|---|--------------------------|
| F2 | Calf circumference (CC) in cm 0 = CC less than 31 3 = CC 31 or greater | <input type="checkbox"/> |
|-----------|---|--------------------------|

| | | |
|---|---|---|
| Screening score (max. 14 points) | <input type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> |
| 12-14 points: <input type="checkbox"/> | Normal nutritional status | <input type="button" value="Save"/> |
| 8-11 points: <input type="checkbox"/> | At risk of malnutrition | <input type="button" value="Print"/> |
| 0-7 points: <input type="checkbox"/> | Malnourished | <input type="button" value="Reset"/> |

ANNEXURE:4

MINI NUTRITION ASSESSMENT SCALE

The nutrition status was assessed by using Mini Nutrition Assessment Scale . It is devised by the Nestle Nutritional Institute to

perform a nutritional screening for the elderly people. In this study the mini version of the Nutrition assessment scale was used for quick assessment and time consumption. The tool comprises of 6 questions. Each Question given three choices of answer and the score of 0, 1 and 2. Finally all the scores will be added and will get a grand total point. In this screening scale they have already categorised the score such as 0-7 points are categorised as malnourished, 8-11 were categorised as at risk of Malnutrition and 12-14 points were categorised as Normal Nutrition status based on points score. Then we will see to which category the grand total will belong and will categorize the people.

ANNEXURE:4

WHO BREFF SCALE

| | | Very poor | Poor | Neither poor nor good | Good | Very good |
|---|--|-------------------|--------------|------------------------------------|-----------|----------------|
| 1 | How would you rate your quality of life? | 1 | 2 | 3 | 4 | 5 |
| | | Very dissatisfied | Dissatisfied | Neither satisfied nor dissatisfied | Satisfied | Very satisfied |
| 2 | How satisfied are you with your health? | 1 | 2 | 3 | 4 | 5 |

The following questions ask about **how much** you have experienced certain things in the last two weeks.

| | | Not at all | A little | A moderate amount | Very much | An extreme amount |
|---|--|------------|----------|-------------------|-----------|-------------------|
| 3 | To what extent do you feel that physical pain prevents you from doing what you need to do? | 5 | 4 | 3 | 2 | 1 |
| 4 | How much do you need any medical treatment to function in your daily life? | 5 | 4 | 3 | 2 | 1 |
| 5 | How much do you enjoy life? | 1 | 2 | 3 | 4 | 5 |
| 6 | To what extent do you feel your life to be meaningful? | 1 | 2 | 3 | 4 | 5 |
| 7 | How well are you able to concentrate? | 1 | 2 | 3 | 4 | 5 |
| 8 | How safe do you feel in your daily life? | 1 | 2 | 3 | 4 | 5 |
| 9 | How healthy is your physical environment? | 1 | 2 | 3 | 4 | 5 |

The following questions ask about how completely you experience or were able to do certain things in the last two weeks.

| | | Not at all | A little | Moderately | Mostly | Completely |
|----|--|-------------------|--------------|------------------------------------|-----------|----------------|
| 10 | Do you have enough energy for everyday life? | 1 | 2 | 3 | 4 | 5 |
| 11 | Are you able to accept your bodily appearance? | 1 | 2 | 3 | 4 | 5 |
| 12 | Have you enough money to meet your needs? | 1 | 2 | 3 | 4 | 5 |
| 13 | How available to you is the information that you need in your day-to-day life? | | | | | |
| 14 | To what extent do you have the opportunity for leisure activities? | | | | | |
| | | Very poor | Poor | Neither poor nor good | Good | Very good |
| 15 | How well are you able to get around? | 1 | 2 | 3 | 4 | 5 |
| | | Very dissatisfied | Dissatisfied | Neither satisfied nor dissatisfied | Satisfied | Very satisfied |
| 16 | How satisfied are you with your sleep? | 1 | 2 | 3 | 4 | 5 |
| 17 | How satisfied are you with your ability to perform your daily living activities? | 1 | 2 | 3 | 4 | 5 |
| 18 | How satisfied are you with your capacity for work? | 1 | 2 | 3 | 4 | 5 |
| 19 | How satisfied are you with yourself? | 1 | 2 | 3 | 4 | 5 |
| 20 | How satisfied are you with your personal relationships? | 1 | 2 | 3 | 4 | 5 |
| 21 | How satisfied are you with your sex life? | 1 | 2 | 3 | 4 | 5 |
| 22 | How satisfied are you with the support you get from your friends? | 1 | 2 | 3 | 4 | 5 |
| 23 | How satisfied are you with the conditions of your living place? | 1 | 2 | 3 | 4 | 5 |
| 24 | How satisfied are you with your access to health services? | 1 | 2 | 3 | 4 | 5 |
| 25 | How satisfied are you with your transport? | 1 | 2 | 3 | 4 | 5 |

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

| | | Never | Seldom | Quite often | Very often | Always |
|----|--|-------|--------|-------------|------------|--------|
| 26 | How often do you have negative feelings such as blue mood, despair, anxiety, depression? | 1 | 2 | 3 | 4 | 5 |

WHO BREF Scale:

The Quality of life was assessed by WHO BREF Scale and it is validated for Indian studies.WHO QOL BREF was an abbreviated version of Original WHOQOL-100.It consist of four domains.They are Physical domain,Psychological domain ,Social relationship domain and Environmental domain.Each domain consist of questions and the choices were assessed by Likert scale.Then the score was made for 20 in each domain and then it is converted into transformed score which is for 100 which is already in the scale

ANNEXURE:4**BARTHEL SCALE**

Barthel Index of Activities of Daily Living

Instructions: Choose the scoring point for the statement that most closely corresponds to the patient's current level of ability for each of the following 10 items. Record actual, not potential, functioning. Information can be obtained from the patient's self-report, from a separate party who is familiar with the patient's abilities (such as a relative), or from observation. Refer to the Guidelines section on the following page for detailed information on scoring and interpretation.

The Barthel Index

Bowels

- 0 = incontinent (or needs to be given enemas)
- 1 = occasional accident (once/week)
- 2 = continent

Patient's Score: _____

Bladder

- 0 = incontinent, or catheterized and unable to manage
- 1 = occasional accident (max. once per 24 hours)
- 2 = continent (for over 7 days)

Patient's Score: _____

Grooming

- 0 = needs help with personal care
- 1 = independent face/hair/teeth/shaving (implements provided)

Patient's Score: _____

Toilet use

- 0 = dependent
- 1 = needs some help, but can do something alone
- 2 = independent (on and off, dressing, wiping)

Patient's Score: _____

Feeding

- 0 = unable
- 1 = needs help cutting, spreading butter, etc.
- 2 = independent (food provided within reach)

Patient's Score: _____

Transfer

- 0 = unable – no sitting balance
- 1 = major help (one or two people, physical), can sit
- 2 = minor help (verbal or physical)
- 3 = independent

Patient's Score: _____

Mobility

- 0 = immobile
- 1 = wheelchair independent, including corners, etc.
- 2 = walks with help of one person (verbal or physical)
- 3 = independent (but may use any aid, e.g., stick)

Patient's Score: _____

Dressing

- 0 = dependent
- 1 = needs help, but can do about half unaided
- 2 = independent (including buttons, zips, laces, etc.)

Patient's Score: _____

Stairs

- 0 = unable
- 1 = needs help (verbal, physical, carrying aid)
- 2 = independent up and down

Patient's Score: _____

Bathing

- 0 = dependent
- 1 = independent (or in shower)

Patient's Score: _____

Total Score: _____

(Collin et al., 1988)

Scoring:

Sum the patient's scores for each item. Total possible scores range from 0 – 20, with lower scores indicating increased disability. If used to measure improvement after rehabilitation, changes of more than two points in the total score reflect a probable genuine change, and change on one item from fully dependent to independent is also likely to be reliable.

ANNEXURE:4

BARTHEL SCALE:

Activities of daily living are assessed by Barthel Scale which is validated. It consists of 10 Questions which include their feeding

,dressing ,grooming,bathing,bowel and bladder movements,toilet use.mobility inside the house,transfer and staircase use.Each question will be allotted a point of 0,1 and 2.where 0 is the least score for unable ,1 needs help and 2 if maximum score for independent.Final categories are done based on point score.They are

0-20 indicates Total dependency

21-60 indicates Severe dependency

61-90 indicates Moderate dependency

91-99 indicates slight dependency

ANNEXURE 4

LIFESTYLE FACTORS SCORING:

Each lifestyle factors were given score separately for Positive or Favourable lifestyle factors and for Negative or Unfavourable lifestyle factors. For Lifestyle factors like vegetable consumption ,fruit consumption, meat consumption ,body mass index, physical activity and Quality of sleep score 1 is given for Good and 0 for Poor.

For lifestyle factors like tobacco use,smoking,alcohol consumption,stress the score given for Good is 0 and 1 for Poor.

After adding both Positive and Negative scores,the overall lifestyle factor score was further categorised into Favourable and Unfavourable lifestyle factors.

ANNEXURE-5

SOCIO ECONOMIC CLASS BASED ON MODIFIED B.G.PRASAD'S CLASSIFICATION

The Scale was formulated in 1961 keeping the base consumer index(CPI) for 1960 as 100.This was revised in 1982 by introducing a linking factor of 4.93 to convert CPI (1982) from the new base of 100 to old base of CPI(1960).As a need was felt in 2001 to revise the base, which was done by introducing the linking factor of 4.93. These linking factors have been given by Labour Bureau.To calculate the new income values,first we have to find out the All India Consumer Price Index (AICPI) for industrial workers(CPI-IW;2001=100),then we have to calculate multiplication factor which is given by the following equation.

Multiplication factor=Current index value/base index value in 2001 i.e 100

As the study was done in rural area and modified B.G. Prasad's classification was used for socioeconomic classification, based on the per capita monthly income of the family

The calculation was done as follows:

Consumer price index for industrial workers (IW) in Tamilnadu during study for November 2018 is rupees 302.(Base 2001=100)

The new income value can now be calculated by using the following equation.

Where 4.63 and 4.93 are the linking factors given by the labour bureau.

Multiplication factor (MF) = Value of consumer price index x 4.63 x 4.93 / 100
= 302 x 4.63 x 4.93 / 100

Modified BG Prasad's classification for November = Per capita income in 1961 x multiplication

| CLASS | Old classification 1961per capita monthly | Income November 2018 per capita |
|-------|---|---------------------------------|
|-------|---|---------------------------------|

| | income limits in rupees | monthly income limits in rupees |
|----|-------------------------|---------------------------------|
| 1. | 100 & above | 6893 & above |
| 2. | 50-99 | 3447-6892 |
| 3. | 30-49 | 2068-3446 |
| 4. | 15-29 | 1034-2067 |
| 5. | <15 | <1033 |

ANNEXURE:6

Map of Tirupur District



TIRUPUR DISTRICT

AREA: 5106.23 Sq/Km

Population : (2001)
 Urban 8,25,006
 Rural 10,92,027
 Total 19,17,033

REVENUE DIVISIONS :

- 1) TIRUPUR
- 2) DHARAPURAM

TALUKS

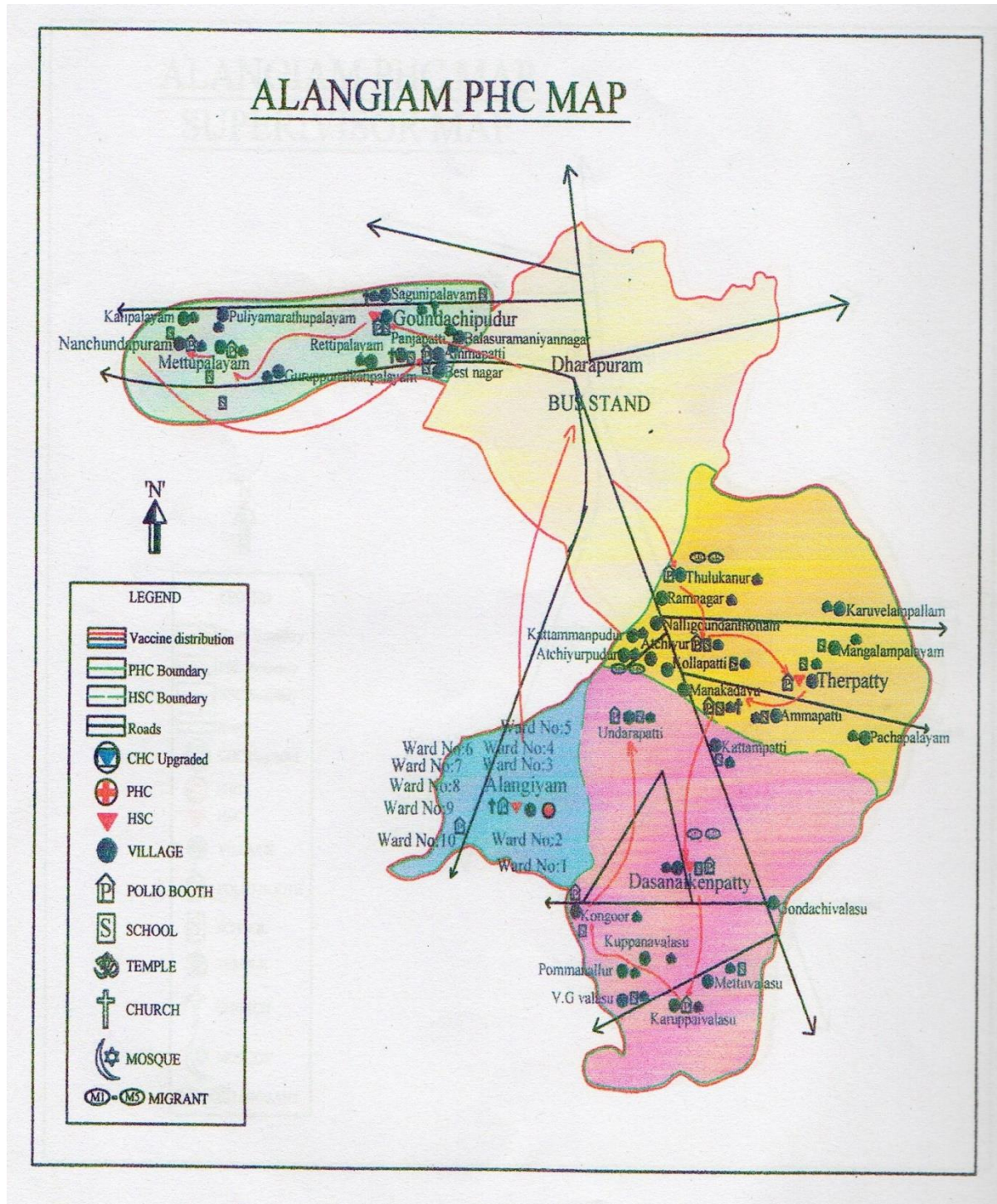
- 1) TIRUPUR
- 2) AVINASHI
- 3) PALLADAM
- 4) UDMALPET
- 5) KANGAYAM
- 6) DHARAPURAM



| FIRKA | VILLAGES |
|-----------------------|------------|
| Tirupur South | 7 |
| Tirupur North | 8 |
| Avinashipalayam South | 8 |
| Palladam | 7 |
| Pongalur | 7 |
| Karadivavi | 7 |
| Samalapuram | 8 |
| Cheyur | 14 |
| Avinashi West | 9 |
| Avinashi East | 10 |
| Perumanallur | 8 |
| Kunnathur | 27 |
| Uthukuli | 22 |
| Dharapuram | 9 |
| Anangiam | 9 |
| Moolanur | 9 |
| Kannivadi | 12 |
| Kundadam | 15 |
| Ponnapuram | 8 |
| Sankarandampalayam | 9 |
| Kangayam | 10 |
| Udhlyur | 8 |
| Nathakadaiyur | 10 |
| Vellakolil | 16 |
| Udumalai | 15 |
| Gudimangalam | 11 |
| Pethappampatti | 13 |
| Kurichikottal | 16 |
| Peria Valavadi | 20 |
| Madathukulam | 18 |
| 30 | 350 |

| REFERENCE | |
|-------------------|-------------------|
| State Boundary | — — — — — |
| District Boundary | — — — — — |
| Taluk Boundary | Colour Separation |
| Firka Boundary | |

ALANGIYAM PHC MAP



1.Block Phc in Tirupur District

| Name of District | Name of Block PHC |
|------------------|---------------------|
| Tirupur District | 1.Uthukuli |
| | 2.Gudimangalam |
| | 3.Vellakoil |
| | 4.Madathukulam |
| | 5.Kundadam |
| | 6.Dharapuram |
| | 7.Mulanur |
| | 8.Udumalapet |
| | 9.Avinashi |
| | 10.Palladam |
| | 11.Pongalur |
| | 12.Tirupur |
| | 13.Kangayam |

2.List of PHC's In Dharapuram Block

| Name of the Block PHC | Name of the PHC's |
|-----------------------|---------------------------|
| Ponnapuram Block | 1.Ponnapuram |
| | 2.Alangiyam |
| | 3.Thalavaipattinam |
| | 4.Dharapuram municipality |

4.List of HSC's In Alangiyam PHC

| Name of HSC | Population |
|------------------------|------------|
| Alangiyam HSC | 5944 |
| Kondachipudhur HSC | 6104 |
| Dhasanayakkanpatti HSC | 3624 |
| Therpatti HSC | 7554 |

KEY TO MASTER SHEET

| S. NO | VARIABLE | LABEL NAME | CODING |
|-------|-------------|---------------------------------|---|
| 1 | SubID | | |
| 2 | Name | Name | |
| 3 | Age | Age | |
| 4 | Sex | Sex | |
| 5 | Address | Address | |
| 6 | Ward/street | Ward/street | |
| 7 | Religion | Religion | 1=Hindu 2=Christian 3=Muslim 4=Other |
| 8 | Education | Education | 1=Professional 2=Graduata 3=Higher Secondary 4=High School 5=Middle School 6=Primary School 7=Illiterate |
| 9 | Occupat | Occupation | 1=Professional 2=Semi professional 3=Clerical,shopowner 4=Skilled worker 5=semiskilled worker 6=unskilled worker 7=unemployed 8=retired |
| 0 | Marital.st | Maritalstatus | 1.Married 2.Widow/Widower 3.Divorced/separated |
| 11 | Famtype | Family type | 1.Nuclear 2.Joint 3.Third generation 4.Extended |
| 12 | Livinarran | Living arrangement | 1.Alone 2.Residing with 2a)spouse 2 b)children 2c)Grand children 2d)Relative 2e)non relative |
| 13 | Satisfactn | Living arrangement satisfaction | 1.Yes 2.No |
| 14 | Indiviinc | Individual income | |
| 15 | Source | Source of income | 1.Pension 2.Getting rent on houses 3.Working after retirement 4.dependent |
| 15 | dependent | Dependent | 1.Spouse 2.Children |

| | | | |
|-------|-------------|--------------------------|--|
| | | | 3.Grandchildren 4.Relative 5.Non relative |
| 16 | Pension | Pension | a.oap b.others |
| 17 | Faminco | Family income | |
| 18 | housho2 | No of Households members | |
| 19 | Ses | Socioeconomic status | 1.Upper 2.Upper Middle 3.Lower Middle 4.Upper lower 5.Lower |
| 20 | Comorbidity | Comorbidity | |
| 20.1 | visionpro | Visionproblem | 1=yes 2=No |
| 20.2 | Hearinpro | Hearingproblem | 1=yes 2=No |
| 20.3 | Lossteeth | Lossofteeth | 1=yes 2=No |
| 20.4 | DM | Dm | 1=yes 2=No |
| 20.5 | HT | Ht | 1=yes 2=No |
| 20.5 | Musculo | Musculoskeletalprob | 1=yes 2=No |
| 20.6 | Copd | Copd | 1=yes 2=No |
| 20.7 | Asthma | Asthma | 1=yes 2=No |
| 20.8 | Cad | Cad | 1=yes 2=No |
| 20.9 | Cva | Cva | 1=yes 2=No |
| 20.10 | Liverdis | Liverdisease | 1=yes 2=No |
| 20.11 | Cancers | Cancers | 1=yes 2=No |
| 20.12 | Thyroid | Thyroid | 1=yes 2=No |
| 20.13 | Hosurgery | H/osurgery | 1=yes 2=No |
| 20.14 | CKd | Ckd | 1=yes 2=No |
| 20.15 | Others | Others | |
| 21.1 | Ever_Tobac | Ever used Tobacco | 1=yes if yes pattern 1.smoking 2=No 2.Chewing 3.Sniffing 4.Others |
| 21.2 | Ever_smok | Ever smoked | 1=Yes if yes 1.Exsmoker 2=No 2.Currentsmoker |
| 21.3 | Ever_drink | Ever drunked alcohol | 1=Yes if yes 1.Exalcoholic 2=No 2.Currentalcoholic |
| 22 | Dietpattn | Dietpattern | 1=Vegetarian |

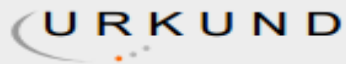
| | | | |
|------|-----------------------------------|---|---|
| | | | 2=Non Vegetarian |
| 23 | Sleep_hrs | Sleep hours | |
| 24 | qosleep | qualityofsleep | 1=Good 2=Disturbed |
| 25 | Stress | Stress | 1=Yes 2=No |
| 26 | exercise | Exercise | 1=Yes 2=No |
| 27 | Type_exer | Type of exercise | 1=Walking 2=Jogging 3=Gym 4=Others |
| 28 | hours | How many hours in a week | |
| 29 | menoup | Have you attained menopause | 1=Yes 2=No |
| 30 | years | How many years back | |
| 31 | Fruit_Veg | How many times you take fruits and vegetables in a week | 1.All days 2.4-6 days/week 3.2-3 days/week 4.1 or less days |
| 32 | Serv | How many servings | 1.5 or more servings per day 2.2-4 servings per day 3.1 servings per day |
| 32.1 | foodintak | Food intake decline over past 3 months | 1=Severe loss of appetite 2=Moderate loss of appetite 3=No loss of appetite |
| 32.2 | weightlos | Weight loss during last 3 months | 1=>3 Kg 2=does not know 3=between 1-3 kg 4=No weight loss |
| 32.3 | Mobility | Mobility | 1=Bed Or Chair Bound 2=Able to get out of Bed or Chair but does not go out 3=goes out |
| 32.4 | Psychological stress_acutedisease | Has suffered in past 3 months | 0=Yes 2=No |
| 32.5 | Nupsprob | Neuropsychologicalproblem | 1=Severe dementia or depression 2=Mild dementia 3=No psychological problems |
| 32.6 | Nutribmi | Nutritionbmi | 1.BMI<19 2.BMI19-<21 3.BMI 21to<23 4.BMI>23 Or greater |
| 33 | Phypain | Physical pain prevents from doing what you need to do | 5.Not at all 4.A little 3.A moderate amount 2.Very much 1.an extreme amount |
| 34 | Phymed | Need any medical | 5.Not at all |

| | | | |
|----|-----------|--|--|
| | | treatment to function in your daily life | 4.A little 3.A moderate amount 2.Very much 1.an extreme amount |
| 35 | Phyenerg | Have enough energy for everyday life | 1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely |
| 36 | Phyaround | How well you able to get around | 1.Very Poor 2.Poor 3.Neither poor or good 4.Good 5.Very Good |
| 37 | Physleep | How satisfied are you with your sleep | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 38 | Phyadl | How satisfied are you with your ability to perform your daily activities | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 39 | Phycapact | How satisfied are you with your capacity for work | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 40 | Psyenjoy | How much you enjoy life | 1.Not at all 2.A little 3.A moderate amount 4.Very much 5.an extreme amount |
| 41 | Psymean | What extend do you feel your life is to be meaningful | 1.Not at all 2.A little 3.A moderate amount 4.Very much 5.an extreme amount |
| 42 | Psyconce | How well you are able to concentrate | 1.Not at all 2.A little 3.A moderate amount 4.Very much 5.Extremely |
| 43 | Psybodya | Are you able to accept your bodily appearance | 1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely |
| 44 | Psyurself | How satisfied you with yourself | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |

| | | | |
|----|------------|---|--|
| 45 | Psynegfe | Do you have negative feelings | 5.Never 4.Seldom 3.Quite Often 2.Very often 1.Always |
| 46 | Scperson | How satisfied are you with your personal relationship | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 47 | Scsexlife | How satisfied are you with your sex life | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 48 | Scfriends | How satisfied with support from your friends | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 49 | Envsafe | How safe do you feel in your daily life | 1.Not at all 2.A little 3.A moderate amount 4.Very much 5.Extremely |
| 50 | Envphysi | How healthy is your environment | 1.Not at all 2.A little 3.A moderate amount 4.Very much 5.Extremely |
| 51 | Envmone | Have enough money to meet your needs | 1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely |
| 52 | Envinfor | How available to you is that the information that you need in your day today life | 1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely |
| 53 | Envleisure | To what extent do you have opportunity for leisure activities | 1.Not at all 2.A little 3.Moderately 4.Mostly 5.Completely |
| 54 | Envcond | How satisfied are you with conditions of your living place | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 55 | Envhealth | How satisfied are you with your access to health services | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied |

| | | | |
|------|-------------|--|---|
| | | | 5.Very Satisfied |
| 56 | Envtrans | How satisfied are you with with your transport | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 57 | Envhealth_A | How satisfied are you with your Health | 1.Very poor 2.Poor 3.Neither poor nor good 4.Good 5.Very good |
| 58 | Envqol | How you rate your quality of life | 1.Very dissatisfied 2.Dissatisfied 3.Neither Satisfied nor Dissatisfied 4.Satisfied 5.Very Satisfied |
| 59.a | adlBowl | Bowels | 0.Incontinent 1.Occasional 2.continent |
| b | Bladder | Bladder | 0.Incontinent /catheterised 1.Occasional 2.continent |
| c | Grooming | Grooming | 0.needs help 1.independent |
| d | Toiletuse | Toilet use | 0.dependent 1.needs help 2.independent |
| e | Feeding | Feeding | 0.unable 1.needs help 2.independent |
| f | Transfer | Transfer | 0.unable 1.major help 2.minor help 3.independent |
| g | Mobility_A | Mobility | 0.immobile 1.wheelchair dependent 2walk with help of person 3.independent |
| h | Dressing | Dressings | 0.dependent 1.needs help 2.dependent |
| i | Stairs | Stairs | 0.unable 1.needs help 2.independent |
| j | Bathing | Bathing | 0.dependent 1.independent |
| | Score | | |
| | Gradeadnew | Gradenewadl | 1=0-20 Total dependency 2=21-60 severe dependency 3=61-90 Moderate dependency 4=91-99 slight dependency 5=>99 Independent |
| 60.a | Height | Height | |

| | | | |
|------|-----------------|-----------------|--|
| 60.b | Weight | Weight | |
| 61 | Body mass index | Body mass index | |
| 62 | Bp | Bloodpressure | |



Urkund Analysis Result

Analysed Document: A study on lifestyle factors and their influence on the Quality of life among the elderly population ,rural area, Tamil Nadu..docx (D57341631)
Submitted: 10/21/2019 7:10:00 AM
Submitted By: drnarmatha87@gmail.com
Significance: 0 %

Sources included in the report:

Instances where selected sources appear:

0

INSTITUTIONAL ETHICS COMMITTEE



GOVERNMENT STANLEY MEDICAL COLLEGE & HOSPITAL, CHENNAI -01
INSTITUTIONAL ETHICS COMMITTEE


Title of the Work : A Study on Lifestyle factors and its Determinants and their impact on Quality of Life among Geriatric People in tirupur district.
Principal Investigator : Dr.Narmathadevi.B
Designation : I MD Community Medicine,
Department : Department of Community Medicine,
Govt. Stanley Medical College.

The request for an approval from the Institutional Ethical Committee (IEC) was considered on the IEC meeting held on 21.11.2017 at the Council Hall, Stanley Medical College, Chennai-1 at 10am.

The members of the Committee, the secretary and the Chairman are pleased to approve the proposed work mentioned above, submitted by the principal investigator.

The Principal investigator and their team are directed to adhere to the guidelines given below:

1. You should inform the IEC in case of changes in study procedure, site investigator investigation or guide or any other changes.
2. You should not deviate from the area of the work for which you applied for ethical clearance.
3. You should inform the IEC immediately, in case of any adverse events or serious adverse reaction.
4. You should abide to the rules and regulation of the institution(s).
5. You should complete the work within the specified period and if any extension of time is required, you should apply for permission again and do the work.
6. You should submit the summary of the work to the ethical committee on completion of the work.


MEMBER SECRETARY,
IEC, SMC, CHENNAI

DPH PERMISSION LETTER

R.No.60456/SBHI-II/S3/2018

Office of the Director of Public Health
and Preventive Medicine, Chennai-6.
Dated: 28.07.2018.

Sub: Public Health-SBHI-Dr.NarmathaDevi.B, doing Post Graduation in Department of Community Medicine, Stanley Medical College - planned to do a dissertation on "Lifestyle factors and its determinants and their impact on Quality of life among Geriatric People in Tiruppur District "- Permission - Granted - Reg.

Ref: 1. G.O (D) No.1258, Health and Family Welfare Department (MC2), dated: 20.11.2014.
2. Letter dated: 14.06.2018 received from Dr.P.Seenivasan, Professor and Head, Department of Community Medicine, Chennai-1.

It is informed that Dr.Narmatha Devi.B, doing Post Graduation in the Department of Community Medicine, Stanley Medical College has planned to do a dissertation on "**Lifestyle factors and its determinants and their impact on Quality of life among Geriatric People in Tiruppur District**".

The Study will be conducted for a period of 1 year among the persons aged 60 years or more in Dharapuram block of Tiruppur District with a sample size of 305.

Upon perusal of the request, the permission to take up the study is granted to the principal investigator with the following conditions.

1. The data should be kept confidential and the report should not be Published without the permission of the Government.
2. The Data should be used for the Project work only.
3. Study report should be submitted to the Director of Public Health and Preventive Medicine. If not submitted it will be addressed to University Authorities for necessary action.

(PTO)

PERMISSION LETTER

4. If there is any deviation in the above action, action will be taken against the individual.
5. The study should not be detrimental to normal functioning of the Institution.
6. The views of the department should be obtained before finalizing the report for submission.
7. Progress of data collection should be appraised at each stage.
8. Study should have institutional ethics committee approval.
9. Consent form should be obtained from the study participant after giving the information sheet.
10. Data on sensitive issues relating to AIDS, Mental health and drugs related need not be given.
11. Fees need not be collected as per. G.O (D) No.1258, Health and Family Welfare Department (MC2), dated: 20.11.2014.

The Deputy Director of Health Services, Tiruppur is requested to provide necessary assistance to the student to undertake the study.

Sd/- K. Kolandaswamy
Director of Public Health and
Preventive Medicine, Chennai-06.


To
The Deputy Director of Health Services, Tiruppur.

Copy to

1. Dr. P. Seenivasan, Professor and Head, Department of Community Medicine, Government Stanley Medical College, Chennai-01.
2. Dr. Narmatha Devi. B, doing Post Graduation in Department of Community Medicine, Government Stanley Medical College, Chennai-01.

Stock File/Spare.

//true copy forwarded//


for Director of Public Health and
Preventive Medicine, Chennai - 6.

ANNEXURE:13

LIST OF EXPERTS

Helped me to complete my dissertation with academic inputs

| S.N O | NAME OF THE EXPERT | DESIGNATION |
|------------------|---|--|
| 1. | Dr. P .SEENIVASAN M.D., | Professor and Head of the Department, Department of Community Medicine, Government Stanley Medical College, Chennai, |
| 2. | Dr.P. SARAVANA KUMAR. M.D, DNB, MBA, PhD (Guide) | Associate Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 3. | Dr.S.ARUN MURUGAN. M.D, DIH,PGHFWM. | Associate Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 4. | Dr. J.ANAIAPPAN, M.D., D.C.H | Associate Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 6. | Dr.T.SUSILA M.D., (Co-Guide) | Assistant Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 7. | Dr.S.KRITHIGA M.D., | Assistant Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 8. | Dr. EVANGELINE MARY M.D., | Assistant Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |
| 9. | Dr.TAMILARASI M.D., | Assistant Professor, Department of Community Medicine, Government Stanley Medical College, Chennai |