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A Study on Dietary Habits of Elderly People in Hyderabad

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Abstract: ***Eating healthy becomes especially important as you age. That is because ageing is linked to a variety of changes including muscle loss, thinner skin, less stomach acid, nutrient deficiencies, decreased quality of life and poor health outcomes. Older people are particularly vulnerable to nutritional issues and poor nutrition during old can cause a number of complications including the weakened immune system, lowered energy level and chronic health problems such as Type 2 diabetes, hypertension (high blood pressure), cardiovascular diseases, Arthritis and Osteoporosis etc. Some of which are: obesity, malnutrition, osteoporosis and constipation. Many of the elder people suffer from obesity as they fail to make adjustments in their energy intake corresponding to decreased energy needs and lower mobility. The causes of malnutrition during old age can be economic constraints, lack of nutrition awareness, poor nutrient absorption and other psychological factors such as dementia, confusion etc. Decreased bone mass and bone density cause porous, light and fragile bones which results in osteoporosis. This may be a chronic complication of Type 2 diabetes [1]. Ageing disturbs the natural rhythmic contraction of the colon due to loss of stone, stress, lack of exercise and low fibre diet. Constipation is not a physiologic consequence of normal ageing. [2] Many age-related problems (e.g., decreased mobility, co-morbid medical conditions, increased use of medications with a side effect profile that includes constipation, and changes in diet) may contribute to the increased prevalence of constipation in older adults [2].***

Objective: The purpose of this survey was to study the dietary habits, patterns and prevalence of diseases among the elderly in our society and to improve nutritional and health outcomes amongst the geriatrics population.

Method: A structured questionnaire was designed to collect information regarding their dietary habits and health issues. A total of 448 responses were received by personally interviewing the elderly people and the outcomes were recorded.

Result: It was observed that most of the respondents were acquainted with the basic concept of a healthy diet and were aware of healthy eating habits. However, many individuals are found to be suffering from hypertension followed by diabetes.

Conclusion: The provision of integrated care is the key to healthy living among elderly people. Nutrition awareness programmes must be conducted to encourage the elderly to make healthy food choices to lead an independent good quality life.

Keywords: Dietary habits in elderly, DASH diet, nutritional issues, nutrient requirements, and integrated care of the elderly.

I. INTRODUCTION

During the last century, significant increase in the average life expectancy have already been observed among the geriatrics population and an important goal now is to improve the health and quality of elderly people with a major emphasis on helping them to live as independently as possible within the community [5]. In accomplishing this goal, appropriate food intake will have an important role to play, together with exercise and other preventive strategies [5]. Dietary intake is lower among individuals older than 75 than in 65–74 years old [6]. Risk factors for low intake include poor appetite and health status, gastrointestinal problems, and eating alone [6]. The essential role of nutrition in regulation of physiologic functions justifies attention to the role of dietary factors in both prevention and management of common geriatric problems [7]. As a result of this survey, the most common problem faced by the elderly is found to be hypertension. Therefore, The Dietary Approaches to Stop Hypertension (DASH) is a beneficial and well balanced diet to maintain a healthy heart and eating lifestyle. This diet mainly focusses on lowering blood pressure without medication. The DASH diet trail has proven that diet that includes fresh fruits, vegetables and low fat dietary products like poultry, fish, nuts and that contained less intake of sweets and beverages has decreased amounts of blood cholesterol level substantially both in people with hypertension and those without hypertension [8]. This dietary pattern involves a higher uptake of essential nutrients such as calcium, magnesium and fibre. And also promotes less intake of refined carbohydrates and saturated fats [9]. The results could prove that the DASH diet has the ability to replace pharmacologic therapy and the need to combine drug therapy for those patients who would adhere to it [10]. Amongst the general population this diet could prevent the development of hypertension and related cardiovascular diseases [10]. Obese and overweight people who followed DASH diet showed great improvements in vascular and autonomic function along with improved heart health [11]. And also one of the most efficient methods to counteract age-related changes in muscle mass and function is physical exercise [12].

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Eating healthy becomes especially important as you age. That is because ageing is linked to a variety of changes including muscle loss, thinner skin, less stomach acid, nutrient deficiencies, decreased quality of life and poor health outcomes.

Older people are particularly vulnerable to nutritional issues and poor nutrition during old can cause number of complications including weakened immune system, lowered energy level and chronic health problems such as Type 2 diabetes, Hypertension (high blood pressure), Cardiovascular diseases, Arthritis and Osteoporosis etc. Some of which are:-

1) *Obesity:* Many of the elderly suffer from obesity. This happens as they fail to make adjustments in their energy intake (Carbohydrates and Fat consumption) corresponding to decreased energy needs and lower mobility.
2) *Malnutrition:* The causes of malnutrition during old age are economic constraints, lack of nutrition awareness, disease and disability, poor nutrient absorption increased nutrient loss, physical inactivity, social isolation and other psychological factors such as dementia, confusion, etc.
3) *Osteoporosis:* Decreased bone mass and bone density can result in porous, light and fragile bones that are more vulnerable to fractures. Osteoporosis may be a chronic complication of Type 2 Diabetes, there is higher morbidity of osteoporosis in elderly male type 2 DM patients
4) *Constipation:* Ageing disturbs the natural rhythmic contraction of colon due to loss of stone, stress, lack of exercise and low fibre diet. Constipation is not a physiologic consequence of normal ageing. Many age-related problems (e.g., decreased mobility, co-morbid medical conditions, increased use of medications with a side effect profile that includes constipation, and changes in diet) may contribute to the increased prevalence of constipation in older adults.

II. AIM

To study the dietary habits of elderly people and their health issues in context with the cultural eating habits that exist among elderly people in the community.

III. OBJECTIVES

A. To find out the prevalent health problems and issues among the elderly in society.
B. To assess the awareness of elderly people about their health, nutrient requirements and how willing he/she is to improve his/her lifestyle.

IV. MATERIALS AND METHODS

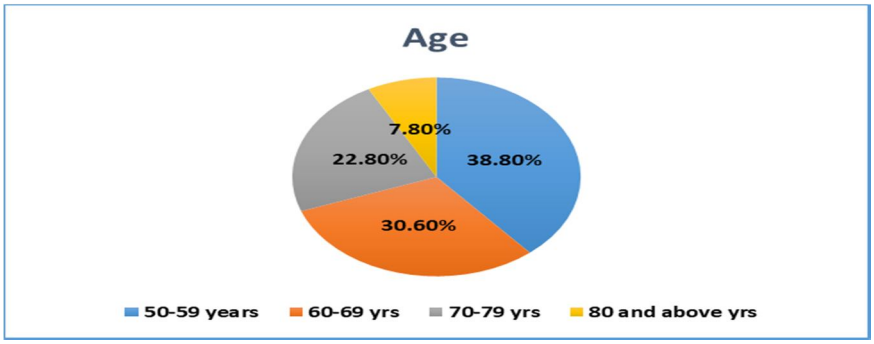
A structured questionnaire was administered to different elderly people to study their awareness of their dietary habits. 448 elders were interviewed via questionnaire method. The survey was carried out by students of the second year studying BSc. Nutrition.

The survey was conducted using an oral questionnaire method and it contained 25 questions of which 4 were of an open-ended type and 21 were of close-ended type. Questionnaires were distributed to each student who surveyed 5 elderly people after explaining them the purpose of conducting the survey. They were also given a detailed explanation on how to fill the questionnaire and were assured about the confidentiality of the contents. Information was obtained by face to face talk with the respondents. The data was compiled and analysed using MS Excel and Google forms, the results were thus obtained.

V. RESULTS AND DISCUSSION

A. Demographic Details

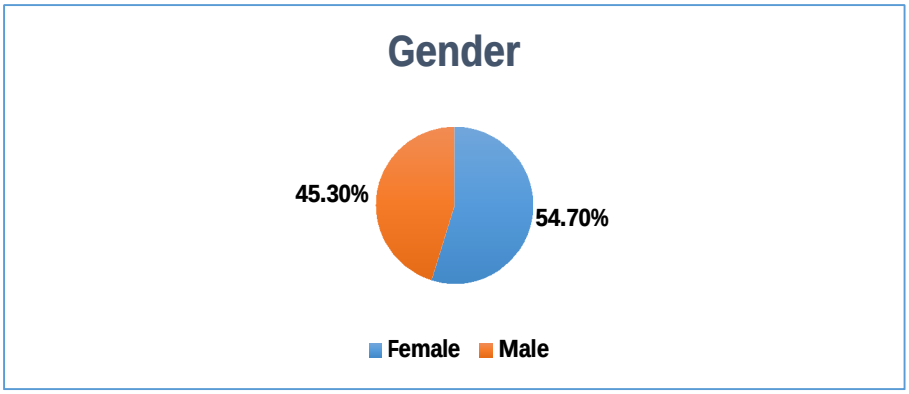
1) Age (448 Responses)



It was found from the survey that the maximum number of elderly people who participated were of 50-59 years of age and only 7.8% were 80 years and above.

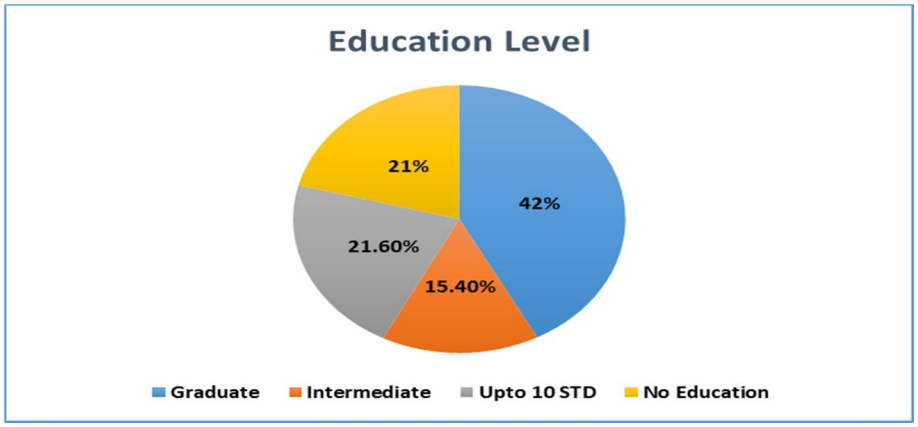
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2) Gender (448 Responses)



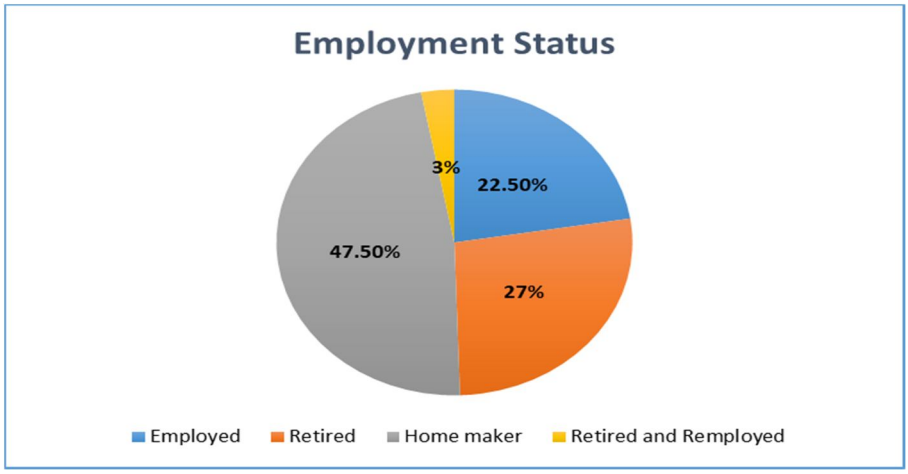
It was noted that 54.7% of the participants were females and 45.3% were males.

3) Education Level (448 responses)



About 42% of them were graduates and 15.4% had studied up to the intermediate level. There were 21.7% who had studied up to class 10th and the rest 21% had no education. This explains that around 79% of the population had at least a basic level of education and knowledge about the importance of eating healthy food to stay hale and hearty.

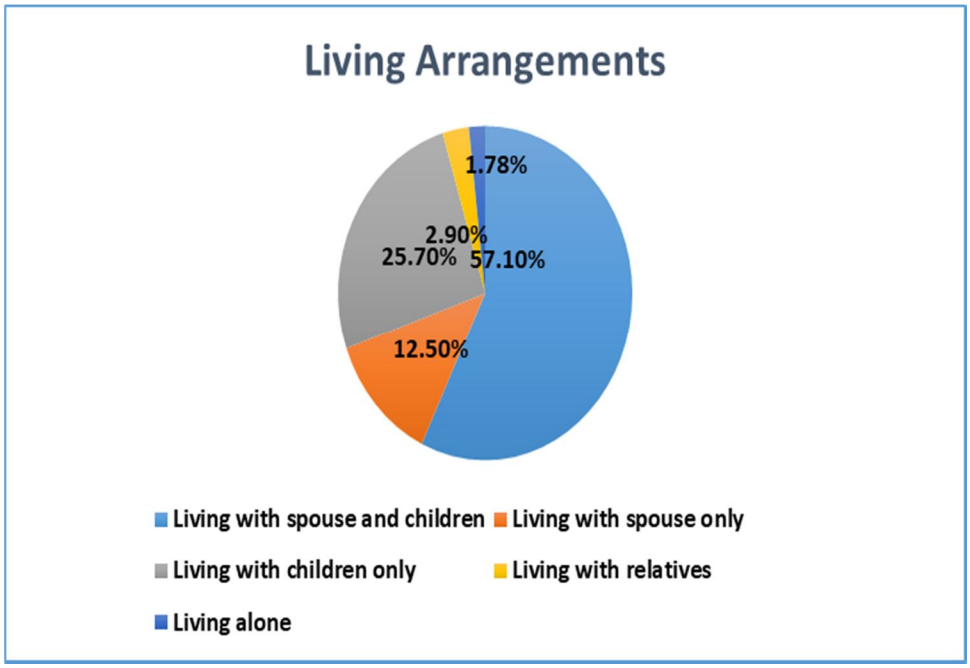
4) Employment Status (448 Responses)



It was revealed that 47.5% were homemakers and 3% of them were retired and re-employed.

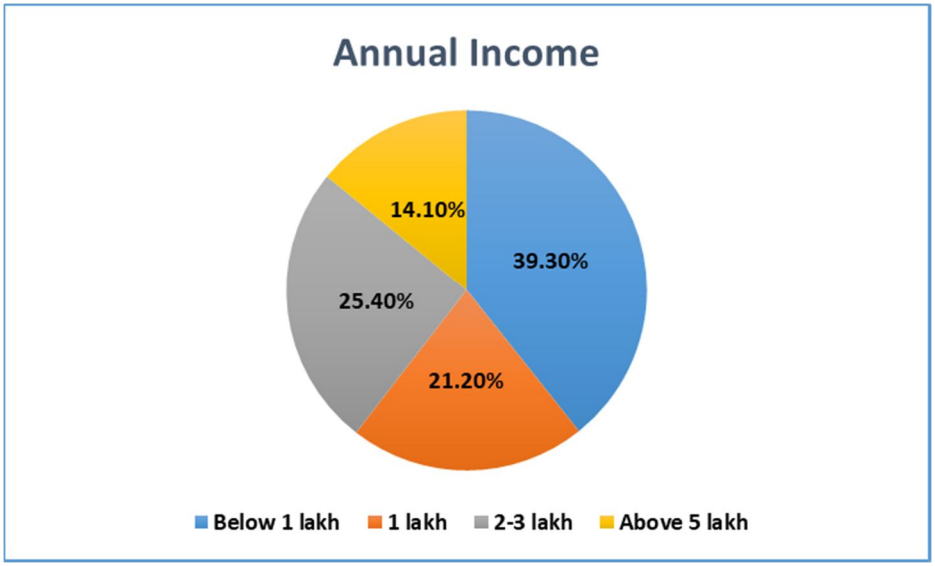
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5) Living Arrangements (448 Responses)



It was also found that 57.1% of the participants were found to be living with their spouse and children. From this, it is understood that their dietary habits are taken care of by their family members; whereas few members were found to be living alone.

6) Annual Income (448 Responses)

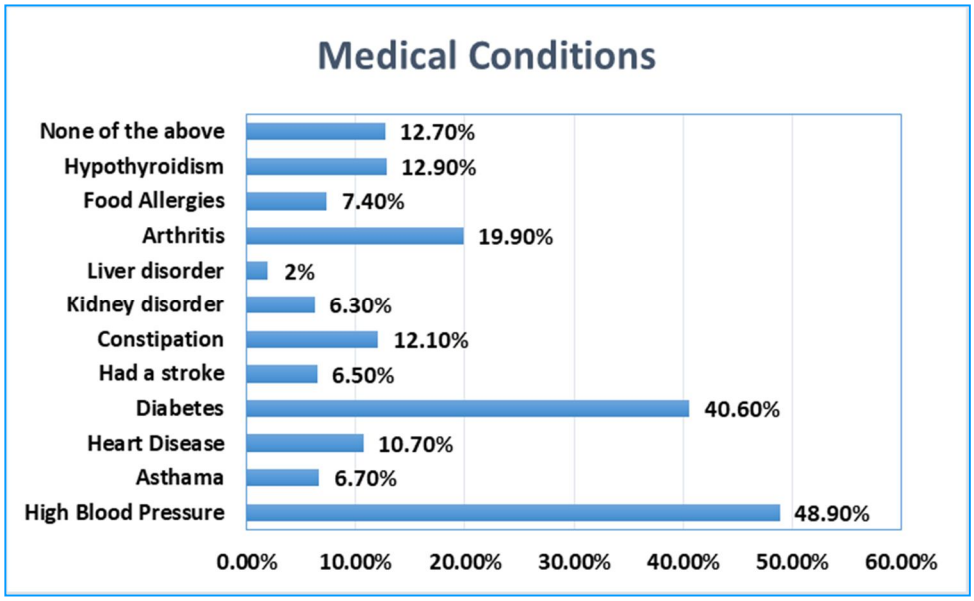


21.2% of people have 1 lakh as annual income. As most of them are homemakers, they'd be dependent on their spouses or children for income. 14.1% of people have an annual income above 5 lakh. Approximately 40% of the population has an annual income below 1 lakh or are economically barred from purchasing meat products, dairy products, certain fruits and nuts which provide the required proteins, vitamins and minerals. This leads to them resorting to cheaper, saturated, trans-fatty foods that often leads to increased cases in High blood pressure, Diabetes and Cardiovascular diseases.

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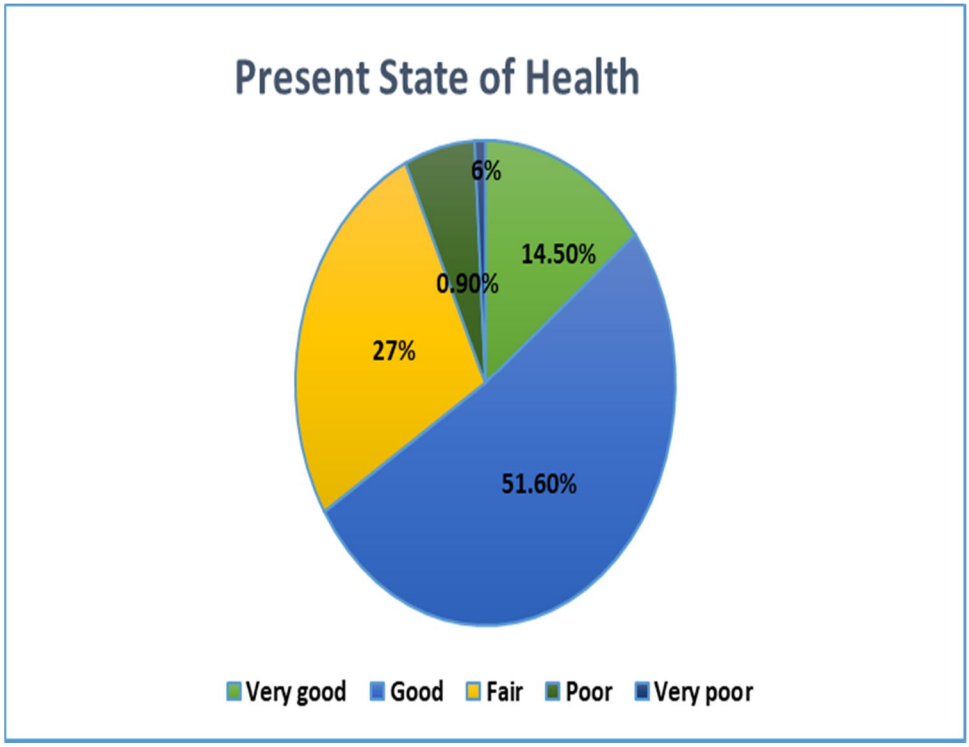
B. Health-Related Details

1) Medical Conditions (448 Responses)



In health-related problems, most of the people 48.9% were found to be suffering from high blood pressure, followed by diabetes 40.6% and few people 2 % suffering from liver disorder.

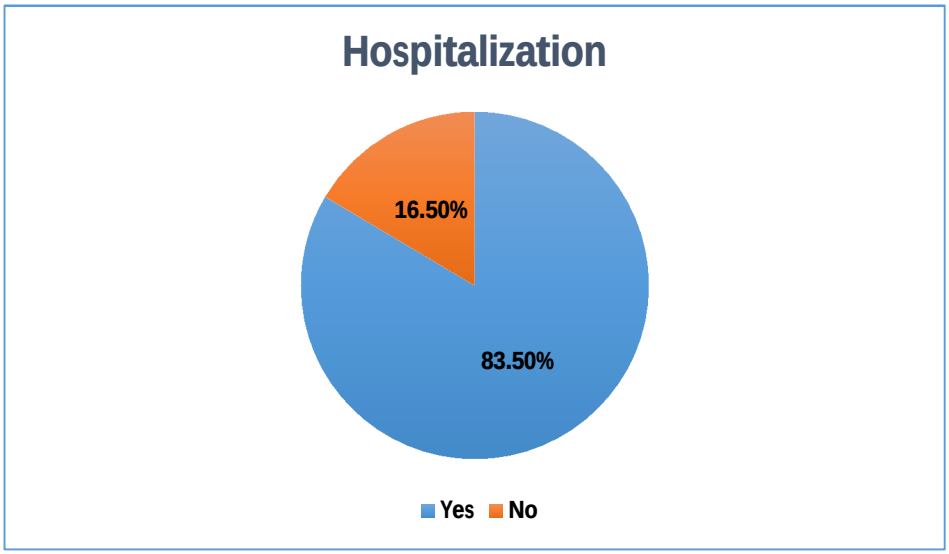
2) Present State of Health (448 Responses)



It was observed that 51.6% of people had a good state of health indicating that they are following a good diet and the least number of participants had a very poor state of health.

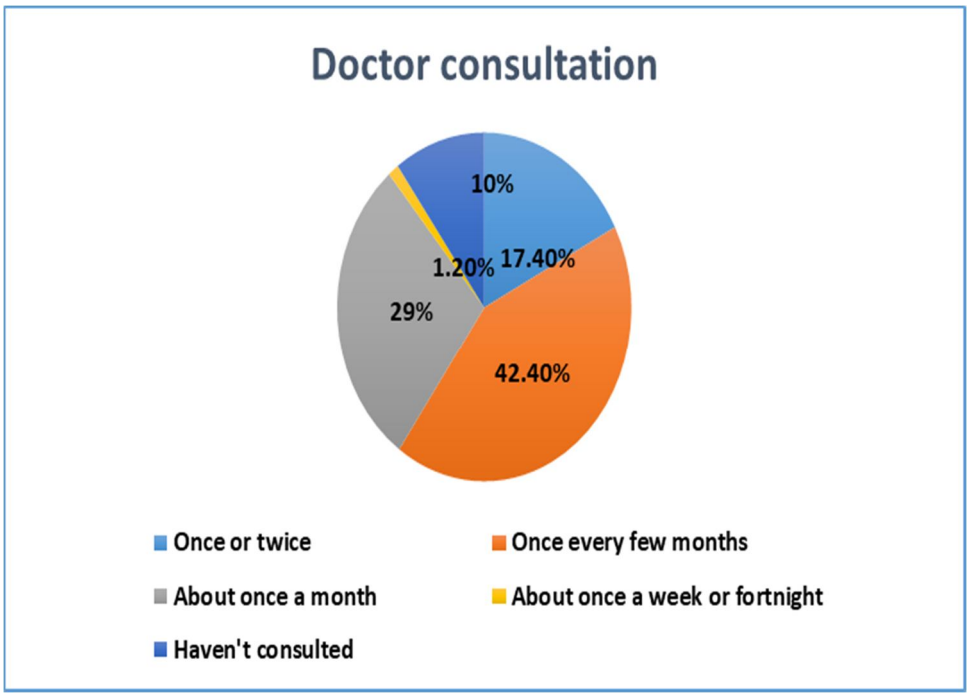
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3) Hospitalization (448 Responses)



It was observed that 83.5% of people were not hospitalized in the past 12 months indicating good health status and nutrition and a lesser number of 16.5% of people were hospitalized.

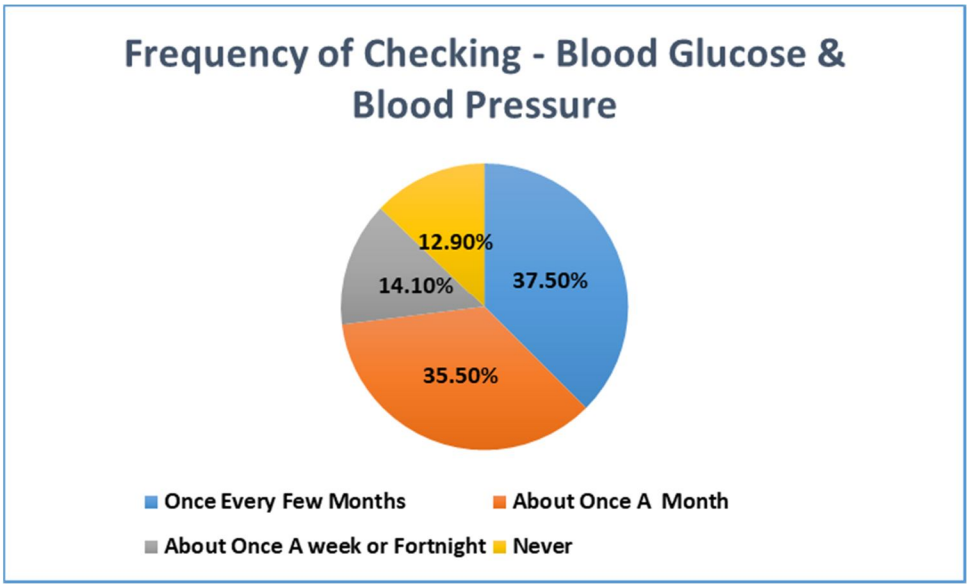
4) Doctor Consultation (448 Responses)



During the past 12 months, 42.4% of the participants consulted a doctor once every few months. 29% consulted every month and very few of them consulted about once a week or fortnight. 10% of the population has not visited the hospital and are advised to do so; as regular health checkups monitor an individual's overall health status and help in maintaining optimum health. Majority of the population consults a doctor regularly and are thus aware of their health status.

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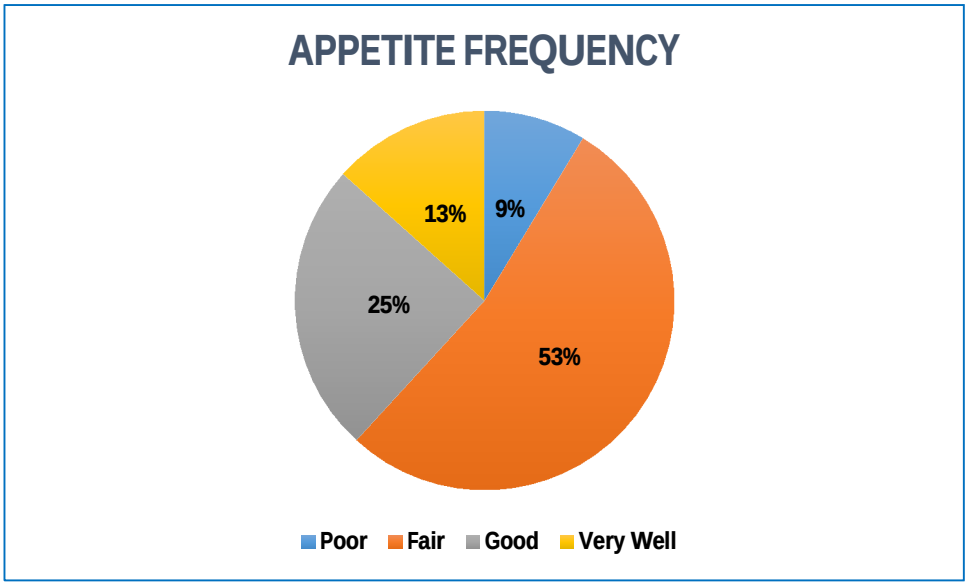
5) Frequency of Checking Blood Glucose and Blood Pressure (448 Responses)



It is noted that 37.5% of people get their blood pressure and blood sugar level checked once every few months, 35.5% get it checked every month. It can be understood from this that the majority of the population is aware of the importance of regular monitoring of diabetes and high blood pressure. A minority of people that is 12.9% never check their blood pressure and blood glucose level. They should be advised to get them checked often to avoid serious health problems.

C. Appetite Related Details

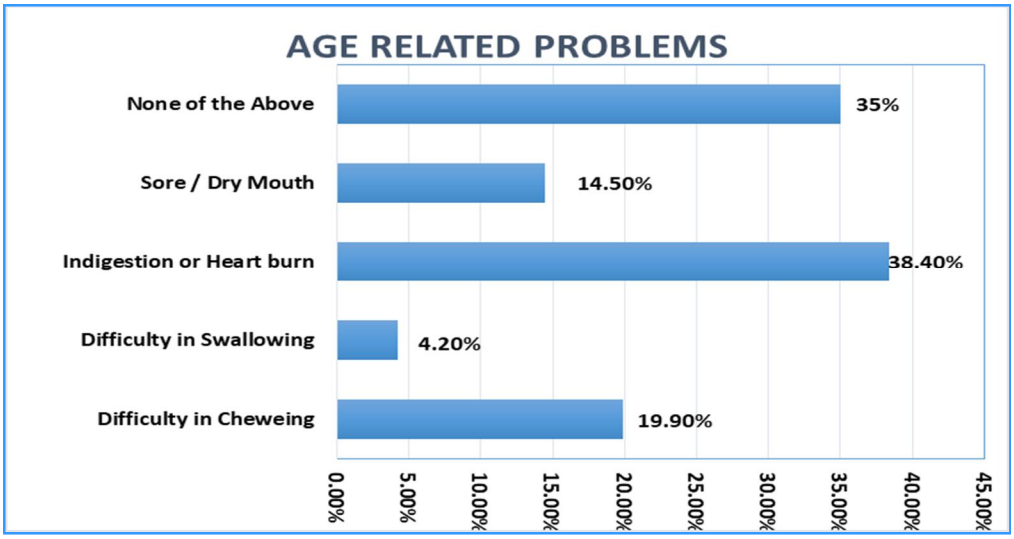
1) Description of Appetite (448 Responses)



In appetite-related questions, 53.1% of people describe their appetite as good appetite and their activity help to boost appetite and 8.7% of them have a poor appetite.

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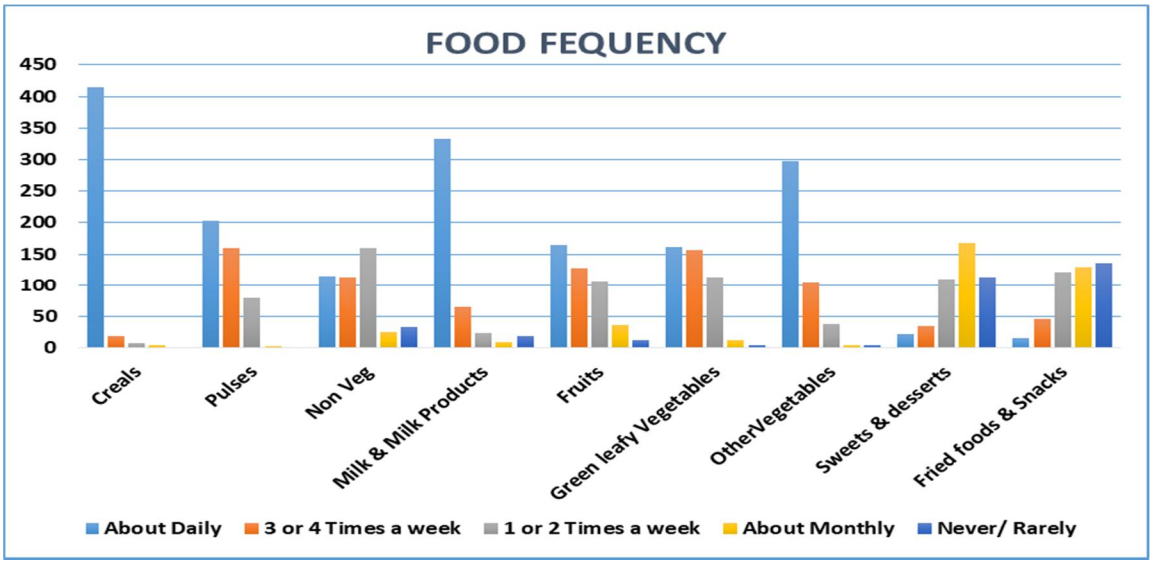
2) Age-Related Problems (448 Responses)



Indigestion or heartburn was the leading problem senior citizens were suffering from. Indigestion is caused by stomach acid, coming into contact with the sensitive, protective lining of the digestive system.[3] The stomach acid breaks down the lining, leading to irritation and inflammation.[3] This causes the symptoms of indigestion. Peppermint helps in treating indigestion by slowing the contractions of smooth muscle in the digestive tract, so from this study it is proved that use of peppermint juice to the subjects with a mild and profound degree of malnutrition had relief from indigestion and improves their digestive status.[3] It was noted that 38.4% of the people are suffering from this issue due to the lack of physical activity and unhealthy lifestyle and 4.2% of them are having difficulty in swallowing. While others experience difficulty in chewing due to dentition problems of old age.

D. Food Frequency Related Details

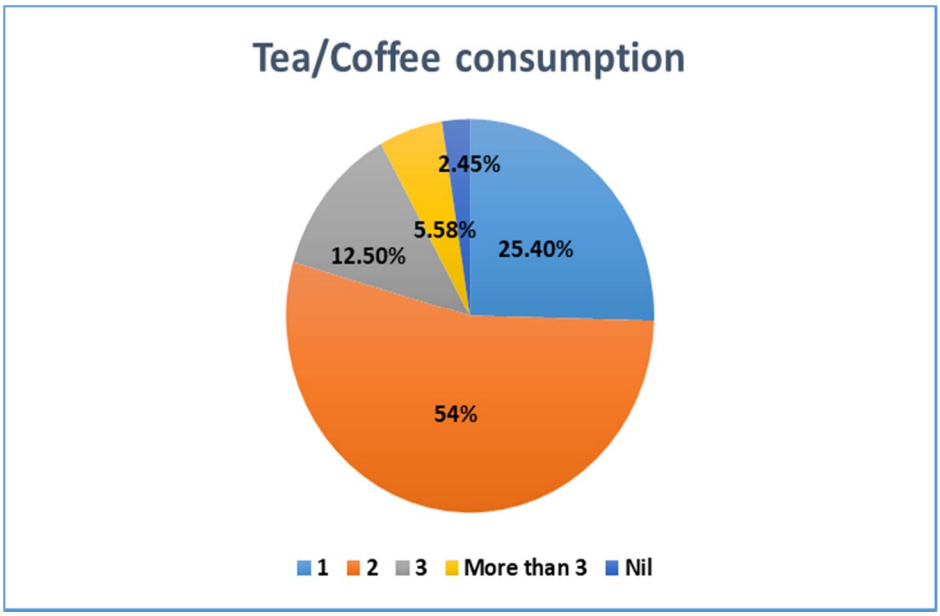
1) Frequency of Food Consumption (448 Responses)



It was found that the cereal portion was found to be dominant as cereals are prominent in Indian diet and most of the participants include milk and milk products in the diet daily. About 3-4 times in a week pulses and green leafy vegetables are consumed, whereas non-veg food items were eaten once or twice a week & the other vegetables were found to be eaten more as compared to green leafy vegetables and roots and tubers. Once a month sweets and fried snacks were consumed as they were suffering from high blood pressure, diabetes and heartburn.

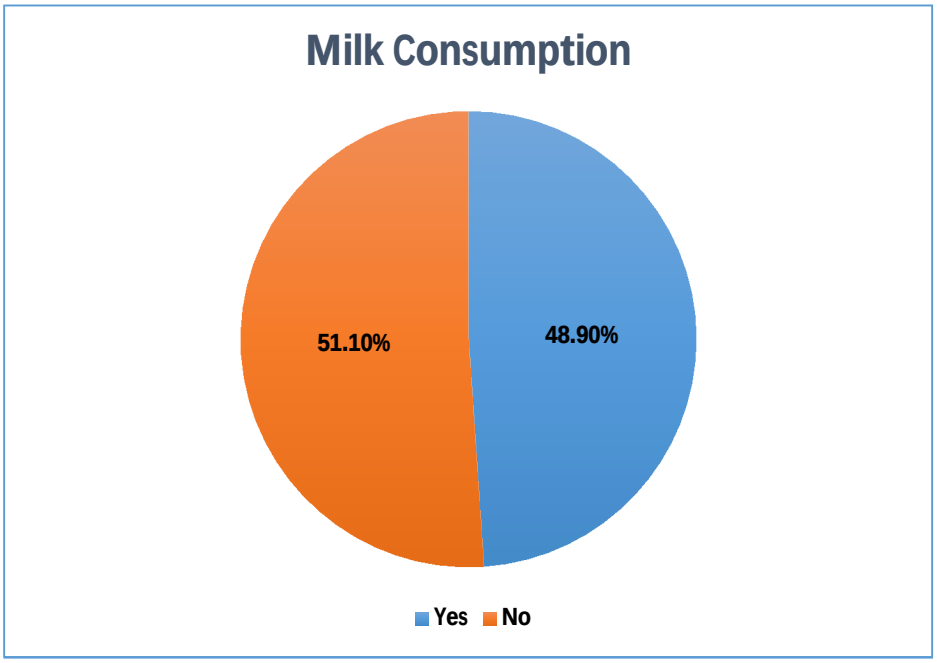
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2) Tea/Coffee Consumption (448 Responses)



54% of the participants consume 2 cups of tea or coffee in a day and the older adults drink more tea or coffee than any other age group. Tea consumption was associated with better physical functional performances in community-living older adults.[4]

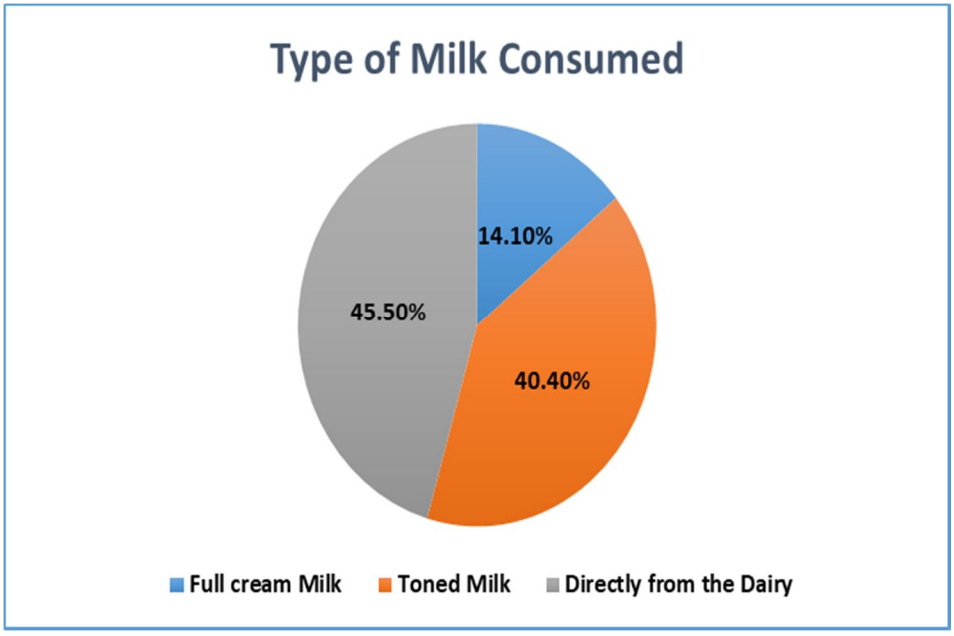
3) Milk Consumption (448 Responses)



It was revealed that 51.1% of people drink milk every day because milk is an excellent source of calcium and it keeps bones strong and prevents osteoporosis. Milk also contains tryptophan which helps in inducing sleep and is especially beneficial to people suffering from insomnia. 48.9% of the population does not drink milk every day.

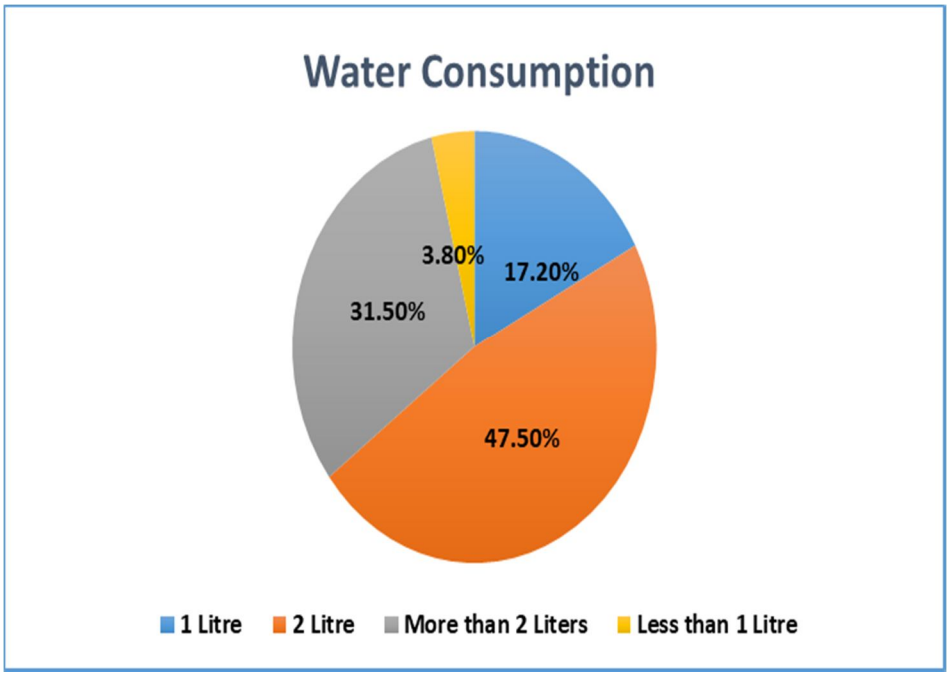
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4) Type of Milk Consumed (448 Responses)



Most of the people i.e., 45.5% consume milk directly from the dairy whereas 40.4% use toned milk and 14.1% consume full cream milk.

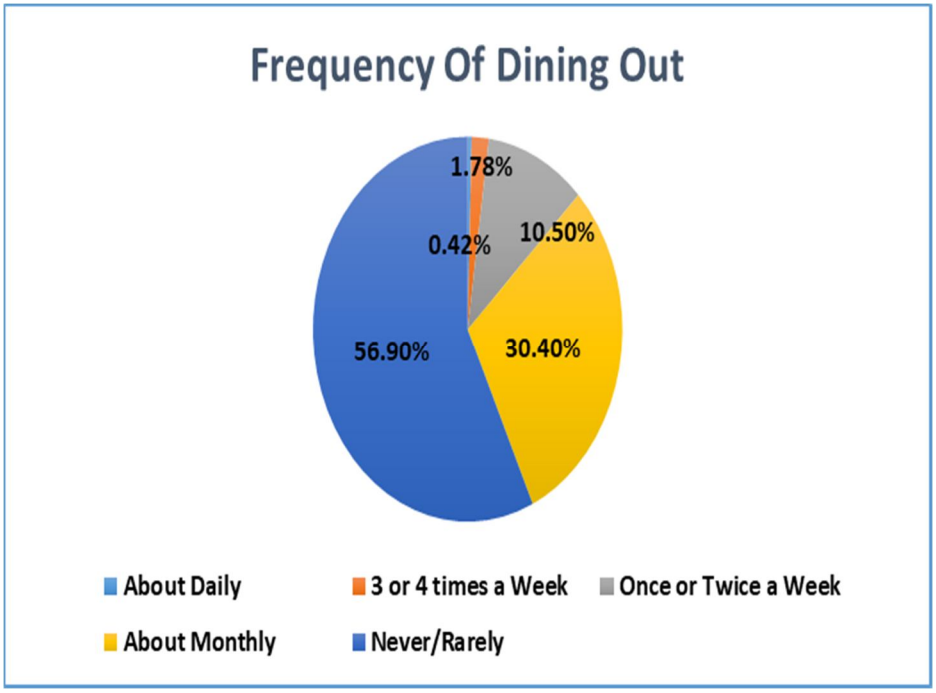
5) Water Consumption (448 Responses)



It was noticed that 47.5% of the individuals drink 2 litres of water to prevent dehydration and few people drink water less than 1 litre. Less consumption of water is the predominant is the cause of dehydration and constipation. So to avoid constipation, people should drink plenty of water.

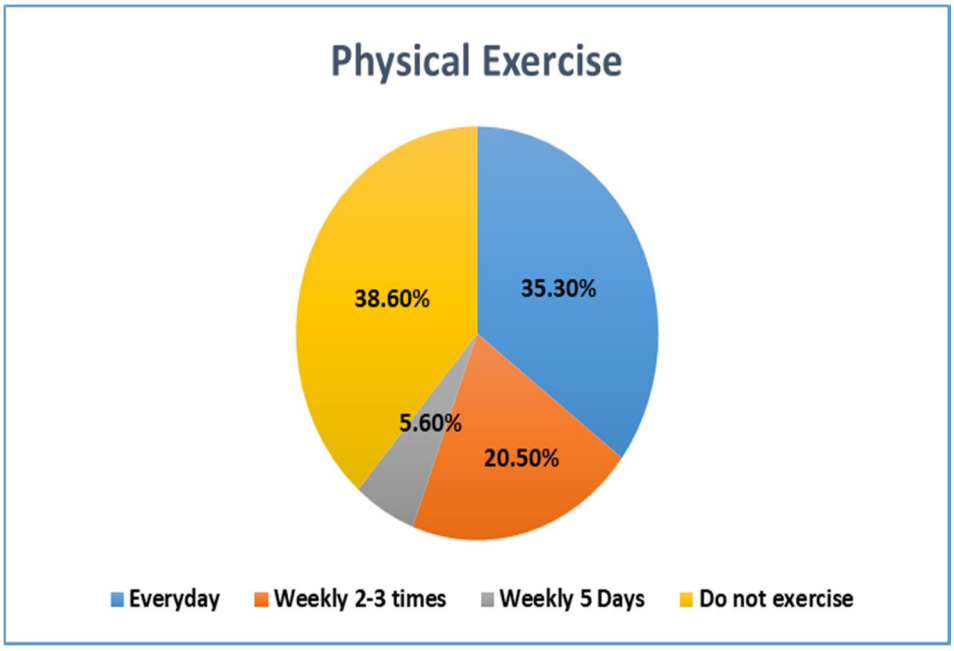
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6) Frequency of Dining Out (448 Responses)



About 56.9% of them never or rarely dine out as they preferred homemade food and less number of people dine out 3-4 times a week.

7) Physical Exercise (448 Responses)

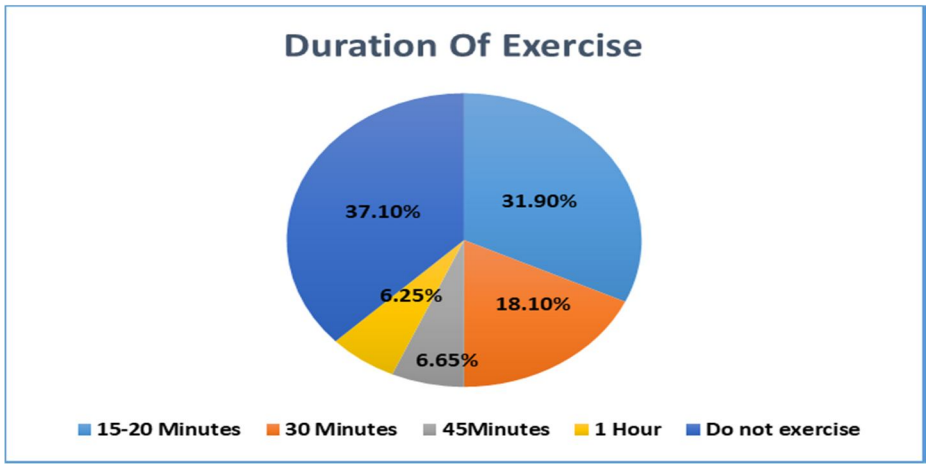


About 35.3% of the population walks or exercises daily and 20.5% exercises twice or thrice a week. 38.8% of people do not work or exercise at all. They are advised to exercise.

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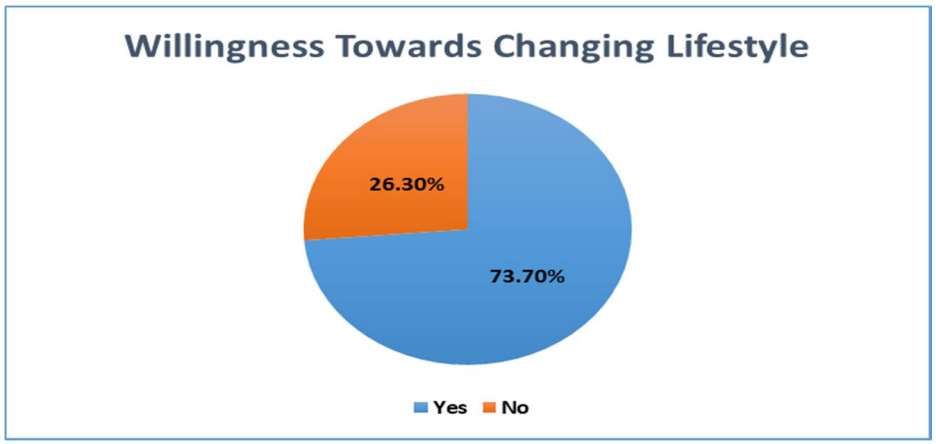
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8) Duration of Exercise (448 Responses)



About 37.1% of participants do not exercise due to joint pains, shortness of breath and lack of energy and the very least number of people exercise for 30 minutes and 45 minutes.

9) Willingness Towards Changing Lifestyle (448 Responses)



It was found in the survey that 73.7% of the people are willing to make diet and lifestyle changes to improve their health and 26.3% are not willing to do so. The elderly population should be encouraged to make lifestyle changes to improve their health.

VI. DISCUSSION

From the above survey, we find that most of the respondents belong to the age group of 50 to 69 years of age and both males and females responded in almost equal numbers. Of these 448 responses, it is observed that majority of the individuals (47.5%) are homemakers and are graduates. We assume that most of these women are acquainted with the general concept of a healthy diet.

More than half of the individuals (57.1%) are found to be living with spouse and children and therefore it can be assumed that their food and dietary intake are carefully monitored by the other members of the family. But it is noticed that their annual income is below 1 lakh and so they cannot afford to eat meat products frequently and will have to opt for other foods to fulfil their protein requirements.

Now by considering the health-related problems, the majority of the individuals have high blood pressure (48.9%) followed by diabetes (40.6%) and arthritis (19.9%). Based on the responses received, half of the geriatrics population (51.6%) claim their present state of health to be good, due to them getting their blood pressure and blood glucose checked once every few months along with frequent doctor consultations and (83.5%) of them were not hospitalised in the past year.

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Approximately half of the individuals (51.3%) witness good appetite which is a positive sign for a healthy diet. However, a fair part of the population suffers from indigestion or heartburn (38.4%) followed by difficulty in chewing (19.9%) the food due to poor dentition. Whereas more than 1/3rd of the individuals have neither of these problems.

Based on the questions related to food frequency intake we were able to estimate the following points:

1) Cereals, milk and milk products and other vegetables are consumed almost every day.
2) Pulses, fruits and green leafy vegetables are consumed 3-4 times a week.
3) Non-veg is consumed about 1-2 times a week.
4) Sweets and deserts along with fried food items were found to be consumed once in a month or rarely.

Almost all individuals drink tea or coffee and 54% of them consume it twice a day. While 50% of the individuals consume milk every day and the rest do not consume it at all. Most households get milk directly from the dairy.

It can be observed that most of the people's (47.5%) water intake is about 2 litres per day, which may be responsible for constipation that (12.1%) of the population suffers from and they also rarely dine out.

However, a fair amount of individuals does not exercise and of those who exercise (31.9%) do it for 15-20 minutes only. This can be mainly due to insufficient energy, fatigue and joint pains.

Lastly, the survey shows that the majority of the population (73.7%) is willing to make diet and lifestyle changes in their daily life and thus show their interest and consciousness to lead a healthy life.

VII. CONCLUSION

As inferred from the above data the following conclusion can be drawn. The individuals who participated in this survey were mostly between the age group of 50-59 years and a large percentage of them were females. Majority of them are graduates living with their families hence being taken care of and healthy.

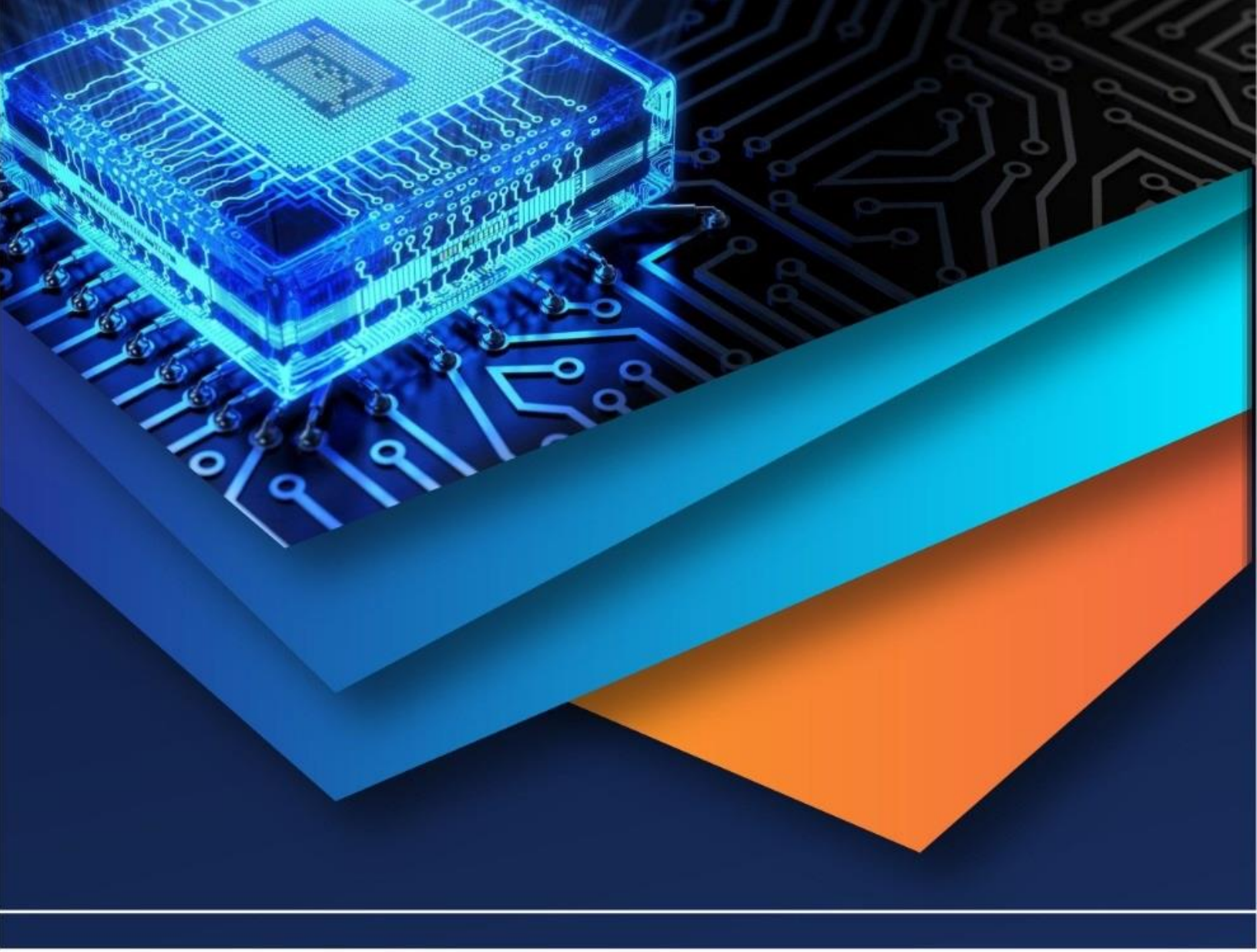
However, the annual income of most of the elderly individuals is below 1 lakh which clearly reflects the economic barriers responsible for not allowing them to buy certain foods such as fruits and high protein foods like meat, eggs etc.

According to a diet survey conducted by 'The Third National Health and Nutrition' by T. O. Obeisant similar results were obtained which concluded the prevalence of high blood pressure, diabetes and arthritis at maximum among the geriatrics. 80% of the adults have one or two chronic diseases. It stands to reason that these seniors will need more healthcare attention to address their health issues.

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