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Food pattern and their effect on health of old peoples

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Abstract

The present paper entitled “food pattern and their effect on the health of old peoples” Was conducted with the objectives of the assessing dietary habits of the older peoples and to find out the nutritional problems and their effects associated with diet. Locale of the study was Meerut (U.P.). The survey method was used to attain the objectives. The sample comprised of 30 peoples and only included the peoples above 60 years. The questionnaire consisting of questions related demographic data, anthropometric data, dietary habits related questions was used. Anthropometric measures of the respondents revealed that most of the old peoples were healthy weight with the normal body mass index. Except this 10% of them found overweight and 6% old peoples were also found obese. Further, it was found that 46% old peoples were non-vegetarian, 16% were eggitarian and 36% were vegetarians. 16% found to have higher intake of tea and coffee. Among the total respondents cereals, milk, green leafy vegetables, sugar and oil were the most frequently used food items. 33% peoples had habits of smoking, 3% were addict of tobacco and 10% consume alcohol. Arthritis, hypertension, osteoporosis, heart diseases and anemia were high prevalent diseases. The problems that influence the food intake such as chewing problems, swallowing problems, digestive problems, some problems which decrease the food intake and interest towards food were also found. The older population suffer from many disorders which can be cure or control with the proper balanced diet, regular exercise and with proper care.

Keywords: Food pattern, health, old peoples

Introduction

Peoples in old age are known as vulnerable and they are more prone to deficiency diseases. Adequate nutrition is always necessary in old age. There are risk of many degenerative diseases such as cardiovascular, diabetes etc. can be happen due to improper dietary habits and nutrients imbalance.

The problems of osteoporosis is seen in elderly people. The risk of osteoporosis increases with alcohol consumption, low calcium diet, early menopausal stage, vitamin D deficiencies. The incidence of overweight and obesity is higher among the elderly, particularly women. Due to decrease BMR, low physical activity and sedentary life style, the prevalence of being obese is higher in elder people. As a result, the adipose tissue accumulates leading to overweight/obesity over a period of time. Obesity is associated with a number of complications such as increased morbidity, psychological problems, diabetes, cardiovascular diseases, arthritis, gout, etc. may result in decreased life span of the individual. Due to lower food intake and loss of appetite, there is reduced immune responses due to progressive loss in the ability to fight with foreign antigens increased chances of infections. Anemia is also seen in old age due to vitamin C deficiency, lack of iron in diet, folate deficiency, vitamin B12 deficiency and poor absorption of micronutrients. Malnutrition among elderly may occur due to decreased intake, impaired absorption and poor utilization of various nutrients.

The incidence of type-2 diabetes mellitus (T2DM) increases with age, both among the males and females. Inability of elderly to utilize carbohydrates is perhaps due to decreased sensitivity of the cells to insulin which commonly results in hyperglycemia.

The risk of cancer increases with age, as many forms of cancer have long latent periods. Also, ageing appears to make the individual more susceptible to carcinogens. Various forms of cancer treatment including chemotherapy can cause severe anorexia, nausea, vomiting and cachexia leading to reduced food intake [1].

Ageing is a biological process. This process ends from fetal development to death. Nutritional levels of human, genetic factors and many other factors affect the ageing process.

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The changes that occur during ageing process affect the health, nutritional status and many other activities of an elder people. Many changes such as decreased taste and problems related teeth also affect the food intake in old age.

Changes in organ functioning during old age that leads to lower food intake and poor nutritional status: Deteriorated ability to detect the taste of food due to decreased taste buds, decreased functioning of salivary glands and loss of teeth lead to difficulty in chewing and swallowing of foods, decreased rate of gastric function, small intestinal functions, biochemical and structural changes in liver and biliary function decrease the absorption of nutrients and food intake, changes in metabolism lead to decreased rate of physical activity. Neurological changes occur in old age causing confusion, depression and dementia. These neurological problems are also associated with micro- nutrient deficiencies. Immunity power declines with ageing process [2]. The range of carbohydrates intake in male was higher than that of female. There was a reduced intake of protein in diet with increased age that means their intake were not adequate according to the recommended daily allowances. (Khole & Soletti, 13 April, 2018) [3]

During old age requirements of nutrients vary with the metabolic changes. Energy requirement is also decreased because of lower physical and metabolic rate. Although it may vary with the activity level and according to the nutritional status. As there is low calorie needs but it does not mean lower requirement of the vitamin B complex. The basic intake of protein should be 1gm/kg body weight per day. Elder peoples need iron in low amount and there is greater requirement for the calcium in post-menopausal women. Several studies provide evidence on the higher requirements for vitamins such as vitamin D, riboflavin and vitamin B6 and B12 in older adults. These increased requirements are needed to improve the nutritional status.

The incidence of weight loss in last 6 months was reported by about half of the old population. The rate of weight loss was higher in females than that of males. In this study, the BMI below 18.5 was found in about 20% of the old peoples that means they were underweight and the BMI above 25 was found in 26.6% of the sample population. The prevalence of overweight and obesity was higher in the urban areas. (RP Thakur *et al*, 2013) [5].

The present study topic is “food pattern and their effect on the health in old peoples” and our objectives are:

1. To assess the dietary habits of older peoples
2. To know the causes of abrupt dietary habits
3. To find out the nutritional problems and their effects

associated with diet

Material and Methods

In present study on, “food pattern and their effect on the health in old peoples” we have the following objectives:

1. to assess the dietary intake of older peoples
2. to know the factors effecting the food intake in old age

To complete the objectives of the study, we used

Research method: survey method (A survey is defined as a research method used for collecting data from a pre-defined group of respondents to gain information and insights on various topics of interest.)

Sampling method: purposive sampling

We chose our sample of interest with purposive sampling.

Locale: Meerut

Sample size: 30

Sampling tool: Questionnaire

Limitations: peoples above 60 and below 80 are taken in survey.

Result and discussion

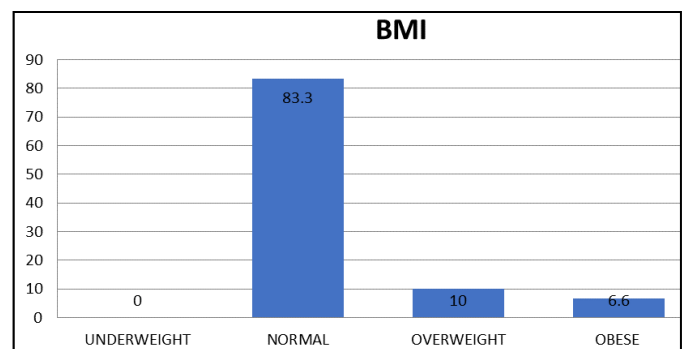


Fig 1: Body mass index old peoples

According to the data most of the old peoples have normal BMI and they are healthy weighted. 10% of peoples are found to have overweight. 6.6% of the old peoples are also found obese. No one found underweight on the observation.

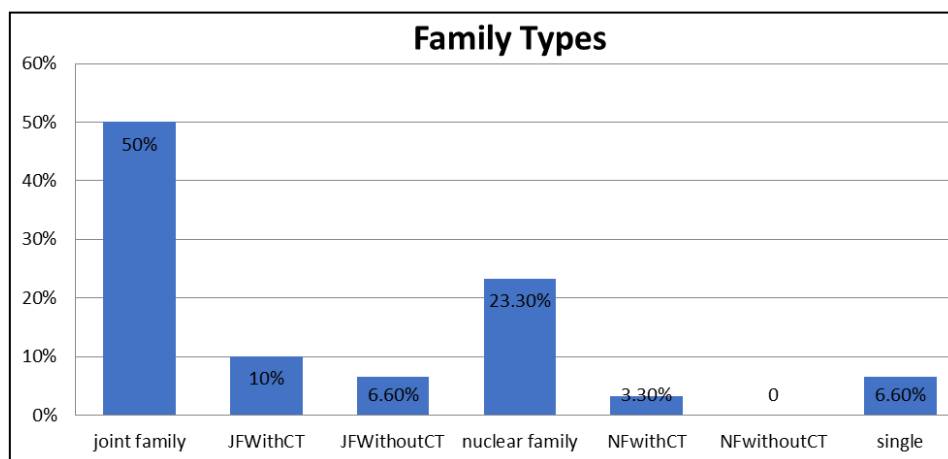


Fig 2: Distribution of family according to type of family

The data reveals that about half of the old population live in joint family and 10% of old peoples live in joint family with care taker. Without care taker 6.6% of old peoples live in joint family. About 23.3% old population live in nuclear family

while in nuclear family 3.3% of people have their care taker. 6.6% of old population also live single without family and without any care taker.

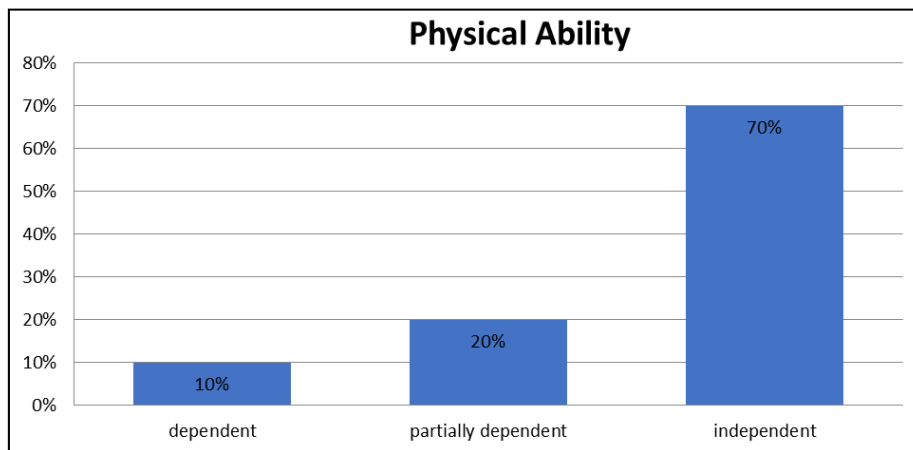


Fig 3: Distribution of peoples according to physical ability

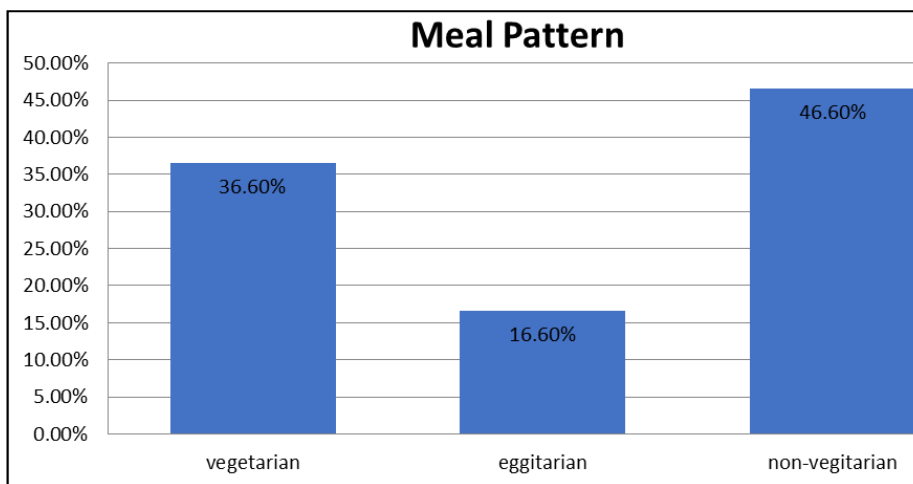


Fig 4: Eating preference of respondents

The data reveals that 46.6% old peoples are non-vegetarian, 36.6% of peoples were vegetarian, 16.6% peoples are Eggitarian.

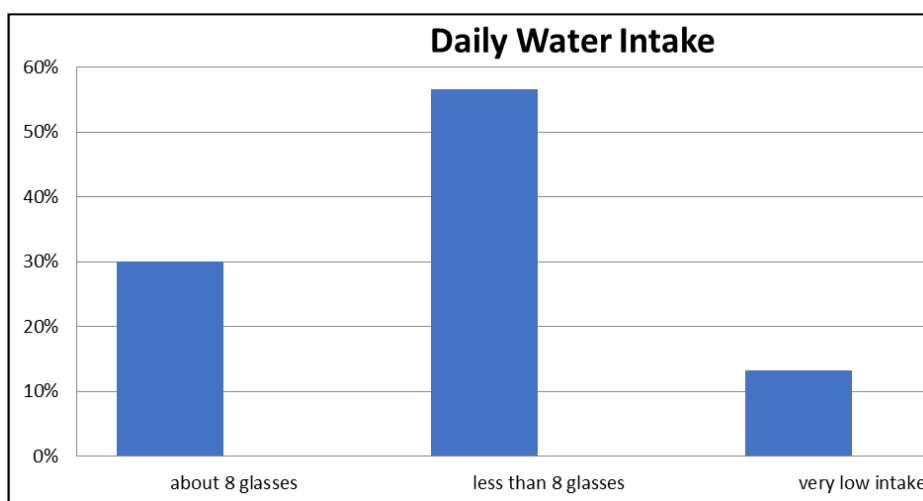


Fig 5: Water intake per day by respondents

The data reveals that only 30% of old age peoples drink adequate amount of water, while about 56% of population does not drink adequate water and 13.6% old peoples have very low intake.

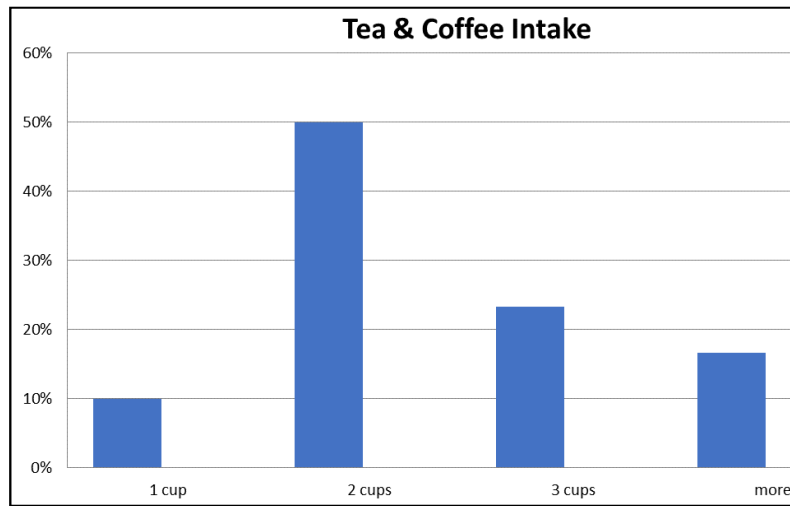


Fig 6: Distribution of peoples according to consumption of tea and coffee

The data reveals that 50% of the elder peoples have habit of normal tea consumption which is 2 cups and about 16% of

them found to have higher intake of tea and coffee on their daily basis.

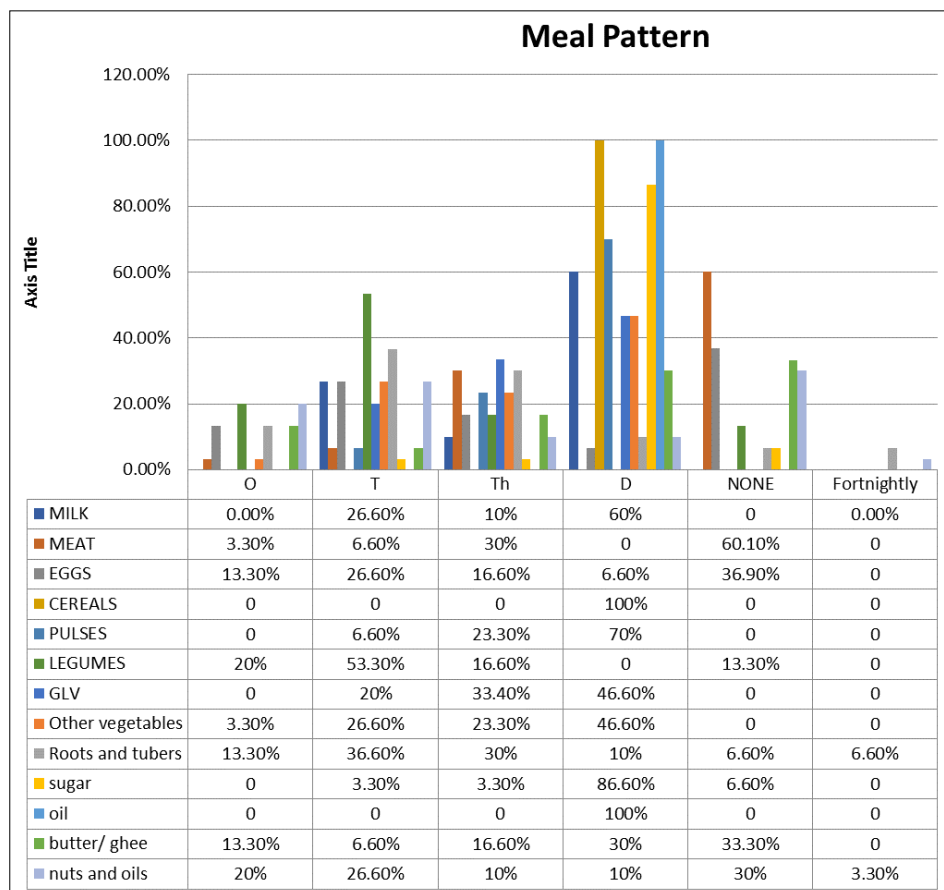


Fig 7: Distribution of peoples according to meal pattern

The data reveals that 60% of old population consume milk daily, 26.6% of them consume milk twice in a week, while 10% of old peoples take milk thrice in a week. The intake of meat is found thrice in a week by 30% of old peoples. The 60% of old population does not take meat and meat products because they are vegetarian. The daily intake of eggs was found to be taken by 6.6% of old peoples while 13.3%, 26.6%, 16.6% of population consume eggs once, twice, thrice in a week respectively. About intake of cereals it is found to be consumed daily by all of the old population. The daily intake of pulses is found by the 70% of the old peoples. The daily intake of legumes is not found. The daily intake of green

leafy vegetables is found by 46.6% of old peoples. The intake of other vegetables such as capsicum, brinjal, pumpkin, carrot, tomato etc. is somewhat similar to that of GLV. The intake of roots and tubers is found daily by 6.6% of the old population. The daily intake of fruits is adopted by only 10% of population. The sugar intake is daily of 86.6% of old peoples while 2.2% of the old peoples do not take sugar and sugar products. The oil intake is reported on daily basis. Nuts and dry fruits is consumed daily by 10% of population while no intake is reported by 30% of the old population. Butter and ghee is reported to be consumed by 30% of respondents on daily basis.

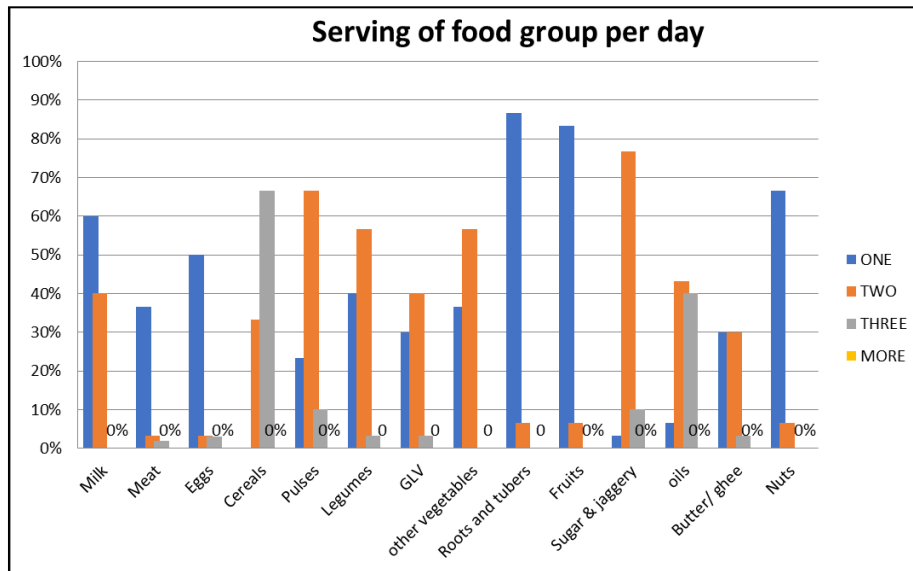


Fig 8: Serving of food groups per day

Serving of milk per day is reported one (250ml) and two by 60% and 40% of old peoples respectively. Regarding the meat serving it is found one serving (40gm) by 36.6% and two by 3.3% only. One serving of eggs is adopted by 50% and two is reported by 3.3% of old population. The serving of cereals is found to be taken two to three per day by 33.33% and 66.6% of population respectively. Most (66.66%) of the population take two serving per day of pulses. It is also somewhat similar in the case of legumes. The most common consumed serving size of green leafy vegetables are two and one i.e. 40% and

30% respectively. Other vegetables consumption found one to two serving by 36.6% and 56.6% of the old peoples respectively. One serving of fruits is taken by 83.3% of the sample population. Jiggery and sugar consumption is found in serving size of two by most (76.6%) of the population. The most common serving size of oil are two (by 43.3%) and three (by 40%). One and two serving in case of butter and ghee consumption is reported by 30-30% of the respondents. The one serving of nuts and dry fruits is reported by 66.66% of the old peoples while 6.6% also reported two serving per day.

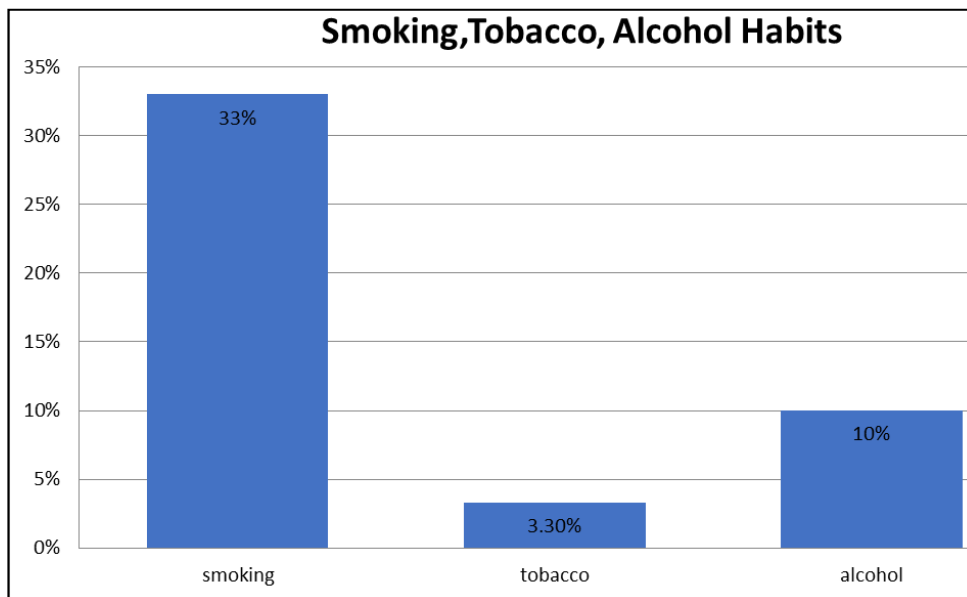


Fig 9: Habits such as smoking, tobacco and alcohol consumption in old age

Data reveals that 33% of old peoples have habit of smoking, 3.3% of them were addict of tobacco and 10% of respondents

consume alcohol. Apart from this, 6.6% peoples consume alcohol, tobacco and smoke sometimes.

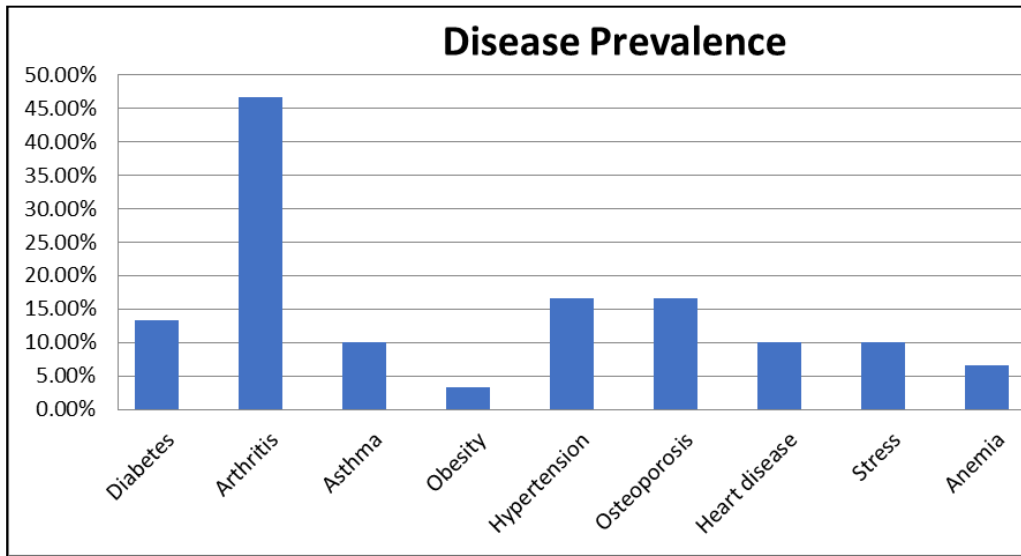


Fig 10: Prevalence of diseases in old age

The data reveals that most of the old population about 46% have the problem of arthritis, 16.6% have hypertension, 16.6% have osteoporosis, 10% have heart diseases, 10% have

stress, while it is also found that 6.6% of the old population also have anemia.

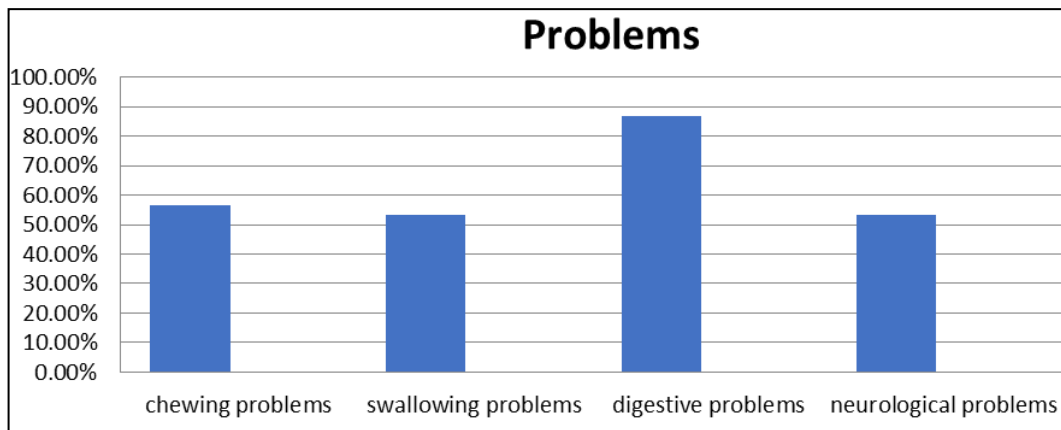


Fig 11: Problems among old peoples

The data reveals that chewing problems found in 56% old population while swallowing problems have seen in 54% elder peoples. 86.6% of old peoples found to have digestive problems including flatulence, constipation, acidity, stomach ache, ulcers etc.

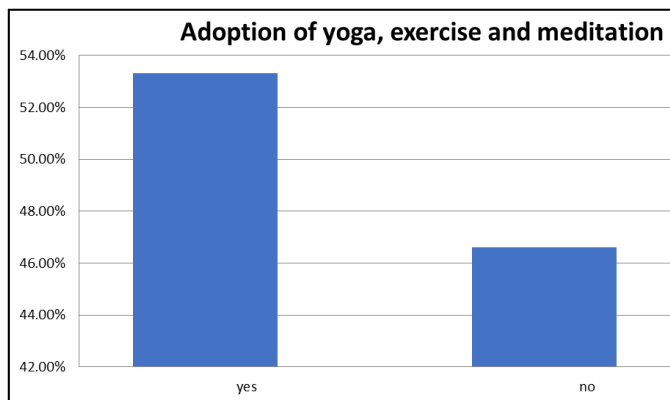


Fig 12: Habits of physical activities like yoga, meditation, exercise in old peoples

The data reveals that only 53.3% of old population do daily exercise, yoga and meditation etc. while 47.7% of old peoples do not have habits of daily exercise etc.

4. Conclusion

In present study it is found that peoples have swallowing, chewing and digestive problems that influence the food intake and food preferences while neurological problems also effect the food intake. Low intake of nutrients and loss of nutrients lead to some problems such as arthritis, osteoporosis due to low calcium intake, constipation due to low fiber and water consumption. Major problems among old peoples was arthritis, hypertension, osteoporosis, heart diseases, stress anemia and asthma were also found among the older peoples. According to Body Mass Index 20% was underweight while most of the population was found at normal BMI category. Half of the peoples were non-vegetarian and 36% of old peoples were vegetarian and rest of them were eggitarian. Most of the population (60%) consume milk daily. Nobody consume meat daily. Regarding the egg intake only a few of peoples had daily consumption. Cereals were the main staple of the diet. 70% of the peoples consume pulses daily and no one consume legumes daily. Green leafy vegetables were found to be taken by 46.6% of the people's daily and there were very low intake of roots and tubers. Daily fruit intake was very poor. Oil intake was reported on the daily basis. Sugar intake was regular among most of the population except those who were diabetic and do not prefer sugar. Daily intake of nuts and dry fruits were adopted by only 10%

peoples who were capable to afford the cost. Most of the old population were independent for their routine work and some were partially dependent, while few of them were depended on others. The causes of low intake and food avoidance were food preferences, problems such as swallowing, chewing and digestive problems and economic conditions. The most of them problems among the old peoples arise because of the abrupt food habits such as low intake of green leafy vegetables, low water consumption, high tea and caffeine intake, tobacco addiction etc. The older population suffer from many disorders which can be cure or control with the proper balanced diet, regular exercise and with proper care. So it is clear that improvement in dietary habits, certain habits, and knowledge regarding nutrition can improve the health status and nutritional related diseases in old age peoples.

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