## Research Article

# THE DIETARY PROBLEMS, PREFERENCE AND PRACTICES OF THE ELDERLY IN A SELECTED RURAL COMMUNITY OF MANGALORE D.K. DISTRICT, KARNATAKA

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| ARTICLE INFO | ABSTRACT |
|---|---|

**Introduction:** Nutrition is a key factor that determines health among elderly. In order to reduce the risk of developing chronic health conditions, it is necessary that the old age people consume balanced diet.
**Aims and objectives:** To assess the dietary problems preferences and practices of the elderly in a selected rural community.
**Material and methods:** Hundred elderly men and women above 60 years were selected using purposive sampling. Descriptive survey was used. Interview schedule was used to collect data.
**Result:** Majority of the subjects were underweight. Most of the subject practiced consumption of meals twice a day Most of the elderly preferred to have fish and rice preparation. Majority practiced regular meal timings. Majority preferred freshly prepared homemade food, preferred to have hot food. They preferred semisolid food. 18% of the subject had mild dietary problems. Most of the subject had good dietary practices.
**Conclusion:** Making changes in the diet to match the changes of growing age may enhance the quality of life.

## INTRODUCTION

Nutrition is an important determinant of health in elderly. Malnutrition among this group often under diagnosed. Several factors such as physical and mental health, environmental, social factors like poverty, loneliness, social isolation, life style so on influence the likes and dislikes of elderly. Well balanced diet is therefore very essential to enhance the quality of life. Choice of food may be influenced by taste, appetite, cost, availability, convenience, affordability and so on. Often there may be loss of motivation to eat or decline in food intake. Physical factors such as poor dentition, ill fitting dentures, changes in smell and taste connected to age factor may affect choice of food and limit the type and quantity of food consumed.

Various dietary factors give rise to many diseases in the elderly. Micronutrient deficiencies are often common. A slowed metabolism coupled with reduced activity can lead to obesity, which is on the rise in the elderly. Inability to recognize salty and bitter tastes results in increased salt intake. The elderly may avoid drinking fluids because of overactive bladder problems and thus may have dehydration.

## MATERIALS AND METHODS

The purposive sampling technique was used and selected 100 men and women above sixty years. Descriptive approach was used. The investigator explained the purpose of the study, the role of the subject in the study, duration and obtained consent. Interview technique was used to collect data. The subjects were interviewed using structured interview schedule with 21 items collect the baseline information. Three point rating scale with options always (0), sometimes (1), and never (2), comprising of 14 items was used to assess the dietary problems. Reverse scoring was done for negative items. Interview schedule comprising of 12 items was used to assess dietary preferences. These items were not scored. Three point rating scale with always (0), sometimes (1), and never (2) options, comprising of 10 items was used to assess dietary practices. Reverse scoring was done for the negative items. Average time taken per subject was 15 minutes.

### Analysis and interpretation

### Baseline characteristics

Majority (72%) of the subjects belonged to 60-70 years of age. Most of them (59%) were women, 55% were belong to nuclear

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family. Most of them (52%) were illiterate. Forty-three percent of the elderly had lost their spouse. Majority (94%) were consuming non-vegetarian diet. Exactly half of the subjects were not diagnosed to have any illness. Among the diagnosed, most (35%) had hypertension. More than half of the subjects had no bad habits such as smoking, alcohol consumption and so on. Among the bad habits, most of them were chewing beetle leaves. Sixty nine percent were not on food restrictions. Salt intake was restricted among 21%. According to Broca's Index, 34% were overweight and 60% were under weight. Majority (82%) were not practicing fasting. Majority (94%) enjoyed their food. Forty two percent took average 10 minutes to have their meal. 66% were sticking on to their food timings.
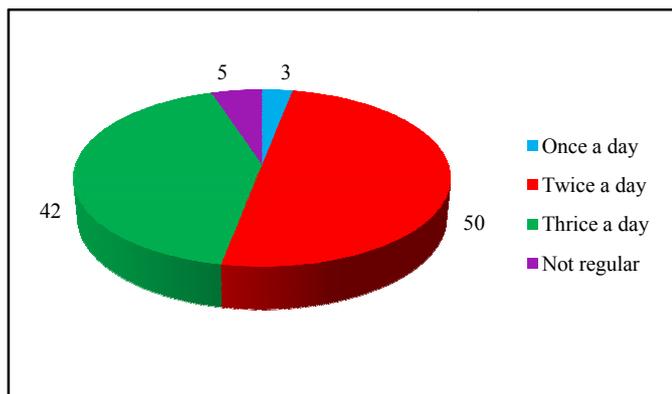


**Figure 1** Pie diagram depicting meal pattern

Data presented in Figure 1 shows that 50% consumed meals twice a day and 5% were irregular in taking meals.

**Table 1** Distribution of subject according to consumption of meat, fish and vegetables

N=100

| Meat consumption | Frequency | Percentage |
|---|---|---|
| Daily | 2 | 2 |
| Once a week | 43 | 43 |
| Twice a week | 8 | 8 |
| Nothing specific | 47 | 47 |
| **Fish consumption** | | |
| Daily | 32 | 32 |
| Once a week | 25 | 25 |
| Twice a week | 24 | 24 |
| Nothing specific | 29 | 19 |
| **Consumption of vegetable in the diet** | | |
| Daily | 84 | 84 |
| Once a week | 2 | 2 |
| Twice a week | 12 | 12 |
| Nothing specific | 2 | 2 |

Table 1 depicts that most of the subject 43% included meat once a week, 47% were not very particular about including meat in the food. Fish consumption was observed on daily basis among 32% of the subjects Majority (84%) included vegetables on daily basis in their diet.
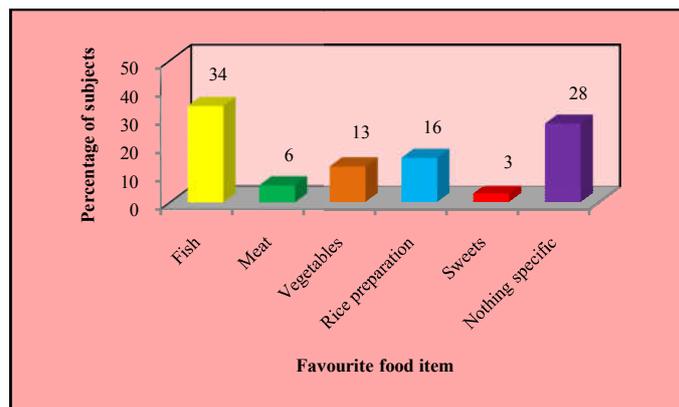


**Figure 2** Favourite food items consumed

Figure 2 shows that fish was the favourite food item consumed by the elderly 34%.

**Table 2** Distribution of subject according to the Dietary problems

n=100

| Dietary problem | Frequency | Mean score | Mean % |
|---|---|---|---|
| No problem | 82 | | |
| Mild problem | 18 | 5.5±3.229 | 19.6 |
| Severe problem | 0 | | |

Max score = 28

Table 2 shows that 82% of the subject had no dietary problems such as indigestion, chewing difficulty, poor appetite, gas formation regurgitation, heart burn, constipation, food allergies, fullness of stomach, necessity to drink water in between meals, adding extra salt and so on.

**Table 3** Distribution of subject according to dietary practices

n=100

| Dietary practice | Frequency | Mean score | Mean % |
|---|---|---|---|
| Good practice | 53 | | |
| Satisfactory practice | 44 | 6.46±2.99 | 32.3 |
| Poor practice | 3 | | |

Max Score: 20

Table 3 shows that 53% of the subject had good dietary practices such as eating less spicy food, no eating outside food no adding extra salt, eating less amount of fried food, eating fruits & vegetables, no alcohol consumption, consuming a glass of milk at bed time, avoiding salted food and so on.

**Table 4** Distribution of subject according to their dietary preferences

| S. No. | Content | Frequency | Percentage |
|---|---|---|---|
| 1. | Type of preparation of food | | |
| | a) Steamed | 32 | 32 |
| | b) Boiled | 30 | 30 |
| | c) Deep fried | 11` | 11 |
| | d) Nothing specific | 27 | 27 |
| 2. | Food liked by the elderly | | |
| | a) Sweet | 22 | 22 |
| | b) Spicy | 42 | 42 |
| | c) Salty | 6 | 6 |
| | d) Nothing specific | 30 | 30 |
| 3. | Beverages preferred | | |
| | a) Coffee | 26 | 26 |
| | b) Tea | 77 | 77 |
| | c) Malt | 3 | 3 |
| | d) Nothing specific | 4 | 4 |

| S. No. | Content | Frequency | Percentage |
|--------|---------|-----------|------------|
| 4. | Alcoholic drinks consumed | | |
| | a) Whisky | 5 | 5 |
| | b) Local preparation | 9 | 9 |
| | c) Rum | 17 | 17 |
| | d) None | 69 | 69 |
| 5. | Fluid preferences at bed time | | |
| | a) Milk | 9 | 9 |
| | b) Water | 56 | 56 |
| | c) Nothing | 34 | 34 |
| | d) Any other | 1 | 1 |
| 6. | Preference of food according to place of preparation | | |
| | a) Homemade food | 98 | 98 |
| | b) Hotel food | 2 | 2 |
| 7. | Preference when served | | |
| | a) Hot food | 42 | 42 |
| | b) Cold Food | 24 | 24 |
| | c) Warm food | 34 | 34 |
| 8. | How should the food be | | |
| | a) Freshly prepared | 73 | 73 |
| | b) Prepared on previous day | 21 | 21 |
| | c) Refrigerated | 2 | 2 |
| | d) Nothing specific | 4 | 4 |
| 9. | Food consistency preferred | | |
| | a) Solid | 19 | 19 |
| | b) Semi-solid | 77 | 77 |
| | c) Liquid | 4 | 4 |
| 10. | Preference at breakfast | | |
| | a) Conjee | 29 | 29 |
| | b) Rice preparations | 59 | 59 |
| | c) Bread | 3 | 3 |
| | d) Nothing specific | 9 | 9 |
| 11. | Curries preferred | | |
| | a) Meat | 14 | 14 |
| | b) Vegetables | 34 | 34 |
| | c) Fish | 45 | 45 |
| | d) Nothing specific | 7 | 7 |

Table 4 shows that 32% preferred steamed food, 42% preferred spicy food, only 6% preferred salty food, majority (77%) preferred to have tea, 69% had no favourite alcoholic drink, 56% preferred water intake at bedtime, 98% liked to have homemade food, 42% liked hot food served to them, freshly prepared food was preferred by 73% of the subjects, 77% preferred semisolid food, rice preparations were preferred at breakfast by 59% of the subjects. Most of the subjects (45%) liked to have fish curry.

**Table 5** Correlation between dietary problems and dietary practices

**n=100**

| Variable | Mean | 'r' value | Inference |
|----------|------|-----------|-----------|
| Dietary problems | 5.5 | 0.1260 | Significant |
| Dietary practice | 6.46 | | |

r=0.05, P<0.05

Table 5 depicts that there was significant correlation between dietary problems and dietary practice (r=0.1260).

## DISCUSSION

In the present study, 21% restricted salt and 14% restricted sugar, and 1% restricted oil. Half of the subjects had meals twice a day, 42% thrice a day, and 3% once a day; forty-two percent liked spicy food. Preference for fried food was only 11%. Hot food while serving was preferred by 42%. A study on anorexia and eating patterns in the elderly showed that 67% usually avoided eating irritating foods like acidic and spicy foods, 59.3% avoided foods with a tough texture, 53.5% cold foods, 50.9% usually avoided heating foods, 45.8% usually avoided cooling foods, 63.3% avoided fried foods. Fewer elderly avoided fermented foods (35.1%), pickled foods (25.7%), high sugar (35.6%) or high starch foods (20.0%). More than 96% usually ate breakfast, 98.2% usually ate lunch, 98.7% usually ate dinner. 94.6% usually ate all three meals.

In the present study, majority (77%) preferred having tea. Most (45%) of them preferred fish curry. Only 22% preferred sweets. A study conducted on habits of elderly women from big city environment suggested that 93% of the subjects frequently consumed fruits and vegetables, 74% rarely consumed sweets. 47% of the subjects were eating three meals a day and did not add salt to the plate (70%). Forty-five percent consumed milk every day, fruits 75%, and vegetables 80%. Sixty-three percent had satisfactory eating habits, 84% consumed tea everyday while 60% consumed coffee every day. Fifty-two percent consumed fish once a week. Eighteen percent consumed sweets every day. Similar findings were observed in this study as only 6% preferred salty food and most (34%) preferred vegetable curries.

In the present study, 82% of the subjects had dietary problems such as lack of appetite, heartburn, constipation, allergies, fullness of stomach, and so on. But 60% of the subjects were found underweight (as per Borca's Index). A study on eating difficulties, nutrition, meal preferences and experience among elderly revealed that nutritional status in the elderly was found to be negatively influenced by motoric eating difficulties. Eating difficulties were often accompanied by feelings of guilt and shame, reducing the number of eating episodes, choosing smaller portions, not cooking independently have been associated with higher risk of malnutrition.

A study on the assessment of nutritional status of the elderly and its correlates revealed that 15% of the subjects were malnourished and 55% were at risk of malnutrition; 52.7% were found to have inadequate calorie intake. Various reasons cited for the inadequate calorie intake were problems of chewing and swallowing (59.5%), loss of appetite (54.2%), and poor affordability (48.4%).

## CONCLUSION

The elderly should eat food rich in Vitamin $B_{12}$, magnesium, Vitamin A, C and D. The diet should contain high fibre foods, green leafy vegetables, whole grains, low fat and non-fat milk, and milk products. In addition to this, small amount of fluids throughout the day are necessary, to prevent dehydration. A well balanced diet can reduce the chances of developing chronic health problems. As there are changes taking place during old age, necessary changes need to be made in the diet to match the changes in the elderly. Both weight loss and weight gain are the problems related to nutrition in elderly. A slowed metabolism coupled with reduced activity can lead to obesity; which in on the rise in the elderly. On the other hand, less access to food, low appetite, side effects of medication, and health problems can cause weight loss.

## Bibliography

1. Wells JL, Dumbrell AC. Nutrition and ageing: assessment and treatment of compromised nutritional status in frail elderly patients. *Clin Interv Ageing* 2006;1(1):67-79.

2. Nyberg M. Eating difficulties: nutrition, mean preferences and experiences among elderly – a literature overview from a Scandinavian context. *Journal of Food Research* 2015;4(1).
3. Agrwalla R, Saikia AM, Bruah R. Assessment of nutritional status of te elderly and its correlates. *Journal of Family and Community Medicine* 2015 Jan-Apr;22(1).
4. www.foodnavigator.com/science/food-preferences-in-elderly
5. Donini LM, Savina C, Cannella C. Eating habits and appetite control in the elderly: the anorexia of ageing. *International Psychogeriatrics* 2003 Mar;15(1):73-87.
6. www.healthline.com/health/healthy-eating-for-seniors
7. Moharan S, Trumbore LS. Nutritional problems of the elderly. *Clin Geriatr Med* 1991 May;7(2):191-214.
8. Pirlich M, Lochs M. Nutrition in the elderly. *Best Pract Res Clin Gastroenterol* 2001 Dec;15(6):869-84.
9. www.who.int/nutrition/topics/aging/en/indexl.html
10. www.healthyeating.sfgate.com/nutrition-problems-elderly-1370.html
11. www.elder.one.stop.com/elderly-nutrition-problems.html

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