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Assessment of food intake based on food guide pyramid of elders residing in the old age homes of South Delhi, India: A qualitative analysis

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Abstract

The aim of this study was to compare the servings of diet served in the old age home with the food pyramids of elders. A descriptive cross sectional study was conducted in the months of May and June 2014 in the old age homes of South Delhi. The participants that were included in the study were elders of age group above 60 years who were residing in the old age homes of south Delhi. The sample size was 35 which include 3 free homes and 1 government supported old age homes. A semi structured questionnaire was developed after literature review and pilot study was done to validate the tool. A convenient sample of elderly individual was taken. Data was entered and analyzed using SPSS and MS excel. The qualitative questions were analyzed thematically. Results are represented as frequency and tables. The study concluded that the food servings of fruits, cereals and non-vegetarian food were not provided in sufficient quantity by most of the Old Age homes.

Keywords: Elders, Old age Home, Nutrition, food pyramid

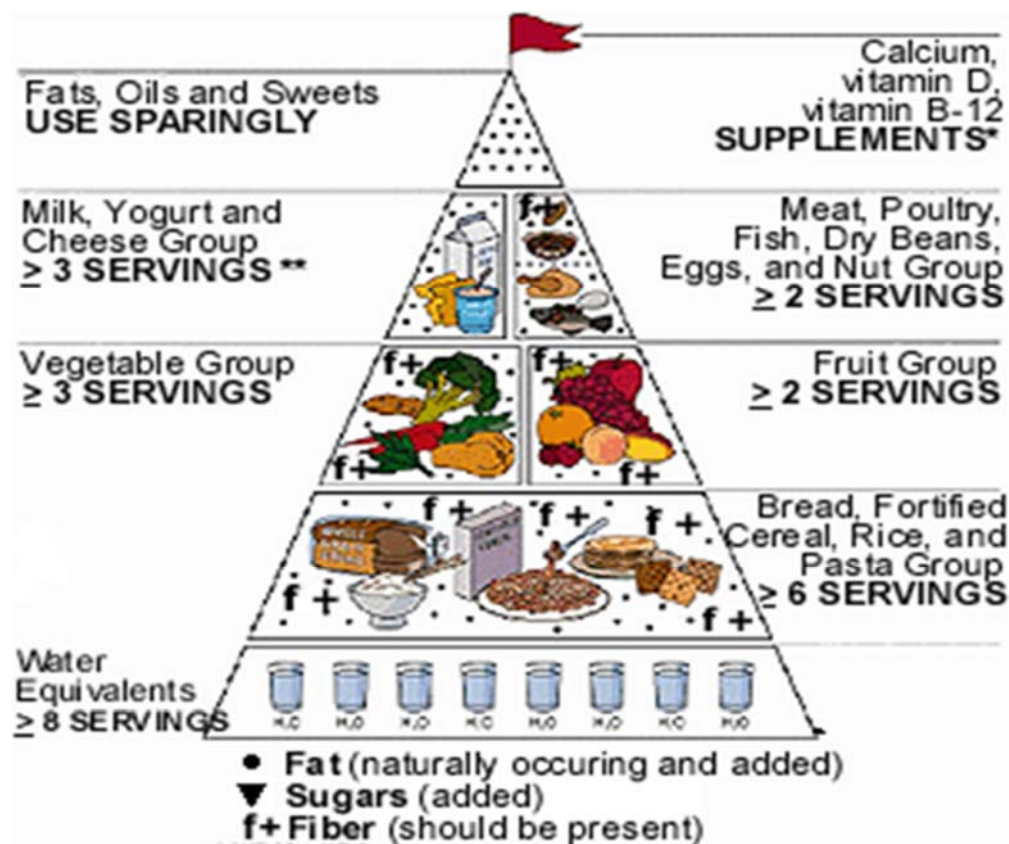
Introduction

Elderly population is increasing tremendously worldwide and it has been estimated that by the year 2025, the projected older population will reach more than 1.2 billion ^[1]. India constitutes approximately 7% of the total elderly population which is expected to increase significantly to 10% by the year 2016 ^[2]. Asia constitutes the highest rank among world's elderly population i.e. 53 percent. This constant pressure will increase in the next 50 years ^[3]. In India, the malnutrition cases in elders are generally under reported. There are some studies that show more than 50% of the elderly population is underweight and more than 90% have food intake below the recommended diet ^[4]. Ageing is not a disease, but a natural process and unstoppable. It brings out biological, Physiological and Socio-psychological changes that are far beyond human control ^[2]. The elderly population has extreme diversity that varies from physically and mentally fit to extremely weak, totally dependent people with chronic diseases and severe disabilities. The older population faces large number of problems ranging from absence of assured income, ill health, absence of social security, loss of social role and recognition. It is a progressive deterioration of the a physical and mental functions resulting in significant downfall in both functionality of body as well as the adaptability of the individual towards various adverse circumstances that lead to many illnesses and further mortality ^[4].

In India, The health policy mainly focuses on maternal health, child health and communicable diseases, but none of them focuses on the health status of the elderly ^[4]. Vast numbers of elders in India are residing in rural areas i.e. approximately 75% according to 2011 census and it was reported that 1/3 of them were below poverty line ^[5]. With increase of age, the energy needs are reduced as a result the food intake also gets lowered but the requirement of the essential nutrients remains unaltered Therefore it becomes very important to provide adequate amount of the essential nutrition and diet to the elders ^[2]. Nutrition of the elderly population also affects their immunity and functional ability which is an important element for the elderly care that should be given further attention ^[4].

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Food Pyramids for Elders



The food pyramid laid emphasizes on the eating dense-nutritional diet for the elders. It highlights the nutritional intake requirements for the elder individuals like water intake, fats, vegetables, fruits, etc. The modified food pyramid also suggests that nutrition supplements like calcium, vitamins D and B12 are also essential for the elders in meeting their nutritional needs by enhancing the nutritional properties, when food alone cannot fulfil these adequate requirements [6]. The aim of this study was to compare the servings of diet being served in the oldage home with food pyramids of elders.

Materials and Methods

A descriptive cross sectional study was conducted in the months of May and June 2014 in the oldage homes of South Delhi. The participants that were included in the study were elders of age group above 60 years who were residing in the oldage homes of south Delhi. The sample size was 35 which include 3 free homes and 1 government supported oldage homes of South Delhi. A semi structured questionnaire was developed after literature review and pilot study was done to validate the tool. A convenient sample of elderly individual was taken. The procedure of the study was explained to every individual in the local language (Hindi). All the individual were assessed for the inclusion and exclusion criteria.

Inclusion Criteria

1. Males and females of age group above 60 years.
2. Elders those who are living in the free and government running oldage homes of south Delhi.
3. The elders who are physical and mentally fit.

Exclusion Criteria

1. Elders who are psychologically disturbed.
2. Elders who are not willing to cooperate

3. Elders living in sick care homes.
4. Elders living in paid oldage homes.
5. Oldage home which were not giving permission to interact with the elders
6. Elders who are terminally ill or cancer patients

A signed consent was taken from the respondents. Then the participants were asked few questions through personal interview via schedule in their local language (Hindi).The quantitative data collected is analyzed statistically using SPSS software and Excel Sheet and the qualitative data was analyzed thematically.

Results and discussion

1) Servings of food

A open ended questions were asked from the respondents about servings of food that were provided to them per day for various foods item like cereals, wheat, vegetable, fruits, milk, pulses, starchy food, fruits, etc. The views that were reported by the respondents from the interview were than analyzed thematically and compared with the food guide pyramid of the elders, as detailed in table (1). The responses that met the food servings as guided in the modified food pyramid of the elders were categorized under “yes” and those did not met the servings were categorized as ‘no’ for various oldage homes.

2) Percentage distribution of food rating

Rating of the food were categorized into 5 categories such as excellent, good, fair, bad and worst. It was reported that 37.1% of the respondents rated the food served to them as excellent, 28.6% of respondents rated as good, 22.9% rated as fair and 5.7% rated as bad and an equal number of respondents rated it worst as shown in table (2).

Table 1: Comparison of The Servings of Food Served in the Oldage Home With Food Pyramids of Elders.

Serving of each food items per day. (acc to food pyramid of elders)	Badarpur Area (Free home)	Rangpuri Area (Free home)	Fatehpur Beri Area (Free home)	Netaji Nagar (govt supported)
Meat (2 serving)	No (maximum people responded 'Never')	No (maximum people responded 'Never')	No (maximum people responded 'Never')	No (maximum people responded 'Once a week')
Milk (3servings per day)	Yes (maximum people responded '3 servings per day')	Yes (maximum people responded '3 servings per day')	Yes (maximum people responded 'more than 3 servings per day')	Yes (maximum people responded 'more than 3 servings per day')
Cereals (6-7 servings)	No (maximum people responded '3-4 servings per day')	No (maximum people responded '3-4 servings per day')	No (maximum people responded '3-4 servings per day')	No (maximum people responded '3-4 servings per day')
Sweets (use sparingly)	Yes	Yes	Yes	Yes
Fatty food (use sparingly)	Yes (maximum people responded '1 serving per day')	Yes (maximum people responded '1 serving per day')	Yes (maximum people responded 'more than 1 serving per day')	Yes (maximum people responded '1 serving per day')
Vegetables (equal to or more than 3 servings)	Yes (maximum people responded '3servings per day')	Yes (maximum people responded '3 servings per day')	Yes (maximum people responded '3 servings per day')	Yes (maximum people responded '3 servings per day')
Pulses (1.5-2 servings)	Yes (maximum people responded '1-2 servings per day')	Yes (maximum people responded '1-2 servings per day')	Yes (maximum people responded '1-2 servings per day')	Yes (maximum people responded '1-2 servings per day')
Fruits (equal to or more than 2 servings)	No (maximum people responded 'sometimes')	No (maximum people responded 'sometimes')	No (maximum people responded 'sometimes')	No (maximum people responded 'Never')
Starch (6-7 servings)	Yes (maximum people responded '6-7 servings per day')	Yes (maximum people responded '6-7 servings per day')	Yes (maximum people responded '6-7 servings per day')	Yes (maximum people responded '6-7 servings per day')
Water (8 or more servings)	Yes	Yes	Yes	Yes

Table 2: Rating of Food As Responded by the Participants Residing in Oldage Homes.

	Rating	Frequency	Percentage
1.	Excellent	13	37.1%
2.	Good	10	28.6%
3.	Fair	8	22.9%
4.	Bad	2	5.7%
5.	Worst	2	5.7%
	Total	35	100%

Conclusion

The study concludes that most of the people residing in the oldage homes were satisfied with the food served to them. On comparison with the food pyramid it was found that maximum oldage homes were providing right amount of serving of milk products, vegetables, pulses, fatty food, starch and water. But the servings of fruits, cereals and non-vegetarian food were not provided in sufficient quantity by most of the oldage homes.

Limitations

In this study the sample size was small; Only South Delhi Area was included in the study. Pay and stay oldage homes were not considered except the government supported (NDMC).

Suggestions

One serving per day of the fruits should be made compulsory to provide them the essential nutrients and fibers. Also the quantity of the cereals should be increased in the meals to match up with the Food pyramid. Regular checks should be conducted by the government in the old age homes to ensure that the proper servings of the food are provided to the elders on regular basis.

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