

Comparison of Body Mass Index in relation to their place of residence among elderly population in Mangalore

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Abstract

Aim & Objectives: To compare the association of body mass index among the elderly population living in old age homes and those lives along with their family members in Mangalore.

Materials & Methods: 160 elderly individuals above 60 years of age were selected at random from old age homes and families (80 in each group) in Mangalore. Body mass index was calculated. Based on the BMI, the individuals were grouped into underweight, normal, overweight and obese category.

Observations & Results: The percentage of underweight was significantly ($p < 0.01$) higher among the elderly population living in the old age homes when compared to their counterparts staying with the families. Further, the percentage of overweight was found to be significantly ($p < 0.01$) higher in elderly living with their family.

Conclusion: Awareness has to be created among the elder people as well as their families on the importance of moderate physical exercise and weight reduction to prevent obesity and its associated diseases. National nutrition plans for older adults living in long-term care institutions should be considered as an important necessity.

Keywords: BMI, elderly, family, old-age homes.

1. Introduction

The discoveries in medical science and improved socio-economic conditions during the past few decades have increased the life span of man[1]. In India, the number of the elderly population is fast growing [2]. An increasing proportion of elderly people in India and other countries indicate a need for more attention towards them[3]. Urbanization, modernization and globalization have led to changes in the economic structure and social values[4]. A transition of traditional joint family system to the nuclear families has given rise to the concept of old age homes[5]. There are more than 1012 old age homes in India and their number is continuously increasing[6]. Dramatic changes in life style from traditional to modern have lead to physical inactivity due to technological advances[7]. Obesity prevalence is growing progressively even among older age

groups[8]. Obesity, a global epidemic, is found to be associated with increased risk of disease morbidity and mortality[9]. It is important to assess the nutritional status of older adults because of its role in ensuring health and quality of life and its association with functional status[10]. In this modern era, geriatric care continues to be one of the neglected sectors[11]. And under-nutrition remains prevalent among the older individuals[12]. In the recent years, body mass index (BMI) is widely accepted as an indicator of malnutrition[12]. The present study was aimed to compare the association of BMI among elderly living in old age homes and with those living along with their family members in and around Mangalore.

2. Materials and Methods

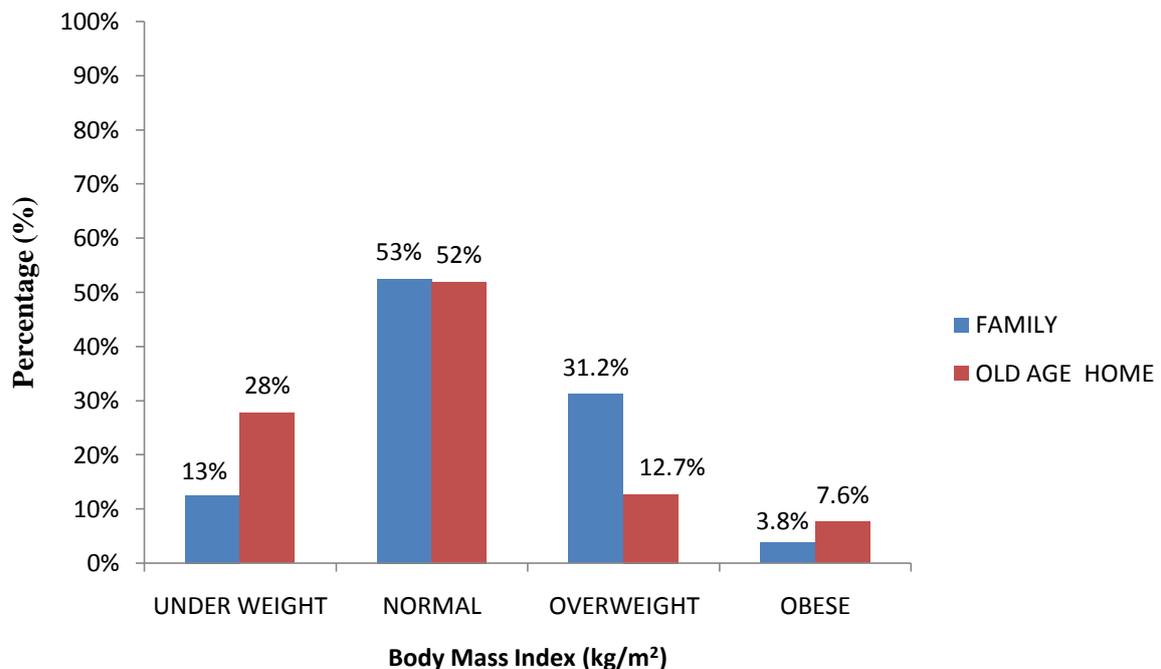
The present cross sectional study was conducted among total of 160 elderly individuals above 60 years of age who were selected from the old age home and families. Random sampling method was used for sampling the population. This study was approved by the Institutional Research Ethics Committee. After obtaining an informed consent, their height and weight were measured according to the standard norms and BMI was calculated by applying the formula, BMI = Weight (in kg) / height (in m²). The individuals were grouped according to their BMI into underweight (<18.5), normal (18.5-24.9), overweight (25-29.99) and obese (30 and above). Statistical analysis was done using SPSS version16. Chi square was used to compare the BMI

of elders living in old age homes and those living in families.

3. Results

Among one hundred sixty elderly people who participated in this study, 50% of the people were residing in the old age home and 50% were with their families. A significant (p<0.01) association between BMI categories and the place of residence was observed. 12.5% (10) of the old age people residing with the family were underweight, 52.5% (42) were in the normal category, 31.2% (25) were overweight and 3.8% (3) were obese. Among the study subjects living in the old age homes, 27.8% (22) of the subjects were underweight, 51.9% (42) were under normal category, 12.7% (10) were overweight and 7.6% (9) were obese. (Figure1)

Figure1: Distribution of elderly population residing with their family members and those living with in old age homes based on the body mass index.



*p <0.01; Family versus old age home

4. Discussion

Intervention programs that target poor nutritional status could potentially improve overall quality of life[13]. The Government of India, through the National Rural Health Mission has embarked on efforts to strengthen provision of primary health services and to reorient health care professionals from curative to preventive services at various levels[14]. There is a need to protect the human rights of the elderly and have gender just laws and policies to ensure adequate economic and social

protection during disability and old age, especially where the aged lack adequate family support[15]. In the present study, the percentage of underweight was found to be relatively higher among the old age homes when compared to their counterparts staying with the families. Dietary inadequacies among the elderly may have important health implications as there is a strong association between nutrition and many degenerative diseases. Further, the percentage of overweight was found to be lower in the old age homes than the senior citizens staying with the

families. Better physical activity profile and diet restriction maintained in the old age homes might probably be the main causes of the lower percentage of overweight. Previous research also highlight on the incidence of overweight among females living with families as compared to those living in old age homes[16]. Body mass index has a direct relation on the mortality risk in the elders[17]. Social care involves independence: socialization and self-development, assistance in tasks of daily living and personal care[18]. Based on the present reports we suggest that shifting to old age homes has a direct correlation on health status of the elderly population.

5. Conclusion

Prevalence of overweight among the elderly population living with their families is on the rise which might be due to the increasing comforts and sedentary lifestyle. Awareness has to be created among the elder individuals and their families on the importance of moderate physical exercise and weight reduction to prevent overweight and its associated diseases. The development of national nutrition plans for older adults living in long-term care institutions should be considered as an important necessity.

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