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Body composition and nutritional status of institutionalized healthy elderly

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Some of the elderly are institutionalized due to lack of family support, which can strongly affect them psychologically resulting in nutritional risk. Aging process shifts the body composition, which influences nutritional status of individuals. Body composition predicts the ability of elderly to live independently, as body composition and poor nutritional status are associated with functional status. The present study aimed to assess current nutritional status of apparently healthy institutionalized elderly and to compare the body composition, and disabilities of Activities of Daily Livings (ADLs) of well-nourished individuals with undernourished.

Apparently healthy institutionalized elders who were free from chronic diseases (aged 60 years and over) were considered as subjects. A randomly selected sample of 54 males and 51 females who gave their consent for participation was included in the study. A pre-tested interview schedule was used to collect general information and ADLs. Anthropometric measurements performed were height, weight, circumferences (mid upper arm, calf, waist and hip) and skin fold thickness (biceps, triceps, subscapular and suprailiac). BMI was used to assess the nutritional status. Body composition and fat distribution were estimated using the sum of the skin fold measurements and waist to hip ratio (WHR) respectively. The Durning and Womersley and Siri's equations were used to estimate percent of fat mass (FM %). Multi-scoring system was used for ADLs to calculate disability score with higher values, indicating higher degrees of disability.

The results revealed that nearly 60% of the subjects were underweight (BMI <18.5 kg/m^2) and only 28% were normal (BMI 18.5 – 23 5 kg/m^2). The rest of the subjects had BMI greater than 23 kg/m^2. The percent of fat mass in underweight subjects was 20.51% whereas in normal elderly it was 26.44 % ($p<0.0001$). WHR were 0.895 and 0.831 for normal and underweight subjects respectively ($p<0.0001$). However there was no significant difference between disabilities of ADLs of the underweight and normal elderly as estimated by disability scores. Females had significantly ($p<0.005$) higher disability score for ADLs than males. Except the height, all other anthropometric measurements were significantly different between normal and underweight subjects.

In conclusion, majority of the institutionalized elders were underweight. The elderly who showed low BMI had low fat mass. Underweight elderly had lower values of WHR. Although, the body composition was different between underweight and normal elderly, the functional status shown by the disabilities of the ADLs was not different.

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