Health and Nutritional Status of Elderly in Lucknow

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ABSTRACT *The elderly(> 60 years) are a particularly vulnerable group of the population. Health and wellbeing of elderly are affected by many interwoven aspects of their social and physical environment. This Study was carried out to examine the Health and Nutritional Status of the elderly. Anthropometric measurements were carried out on elderly. The nutritional status was assessed by measuring the hight ,weight and BMI (Body Mass Index) classification.*

In all 142 elderly were incuded in the study. The results showed that nutritional status was significantly linked to age while sex was not found to be significantly associated. It was also found that nutritional status was significantly associated with socioeconomic status as well as literacy status. It is thus recommended that income level as well as literacy levels should be paid greater attention in dealing with the elderly.

INTRODUCTION:

The elderly, aged 60 years living in the community are a particularly vulnerable group of society.

This is so because they frequently live alone, their offspring having left due to work or other reasons. Because of the fact that they frequently suffer from some disability or the other they are not able to take adequate care of themselves. Health and wellbeing of elderly are affected by many interwoven aspects of their social and physical environment[1]22

The main area of concern among the elderly is their health, which can in turn have a significant impact on their economic security, level of independence and social interaction. India's elderly population has already crossed 100 million mark during 2011. As per analysis of census data and projections, elderly population sex ratio is in favour of female elderly[2]census2011. Socio economic status is a significant factor influencing lifestyles and religiosity among the elderly in India.[3] In particular, the impact of economic Independence and living arrangements on wellbeing and Health status of elderly is an area that has generated considerable interest among researchers.

One of the major disorders from which the elderly suffer are nutritional disorders particularly PEM. This mostly manifests as CED of (Chronic Energy Deficit). The elderly are usually assessed in their functional impairment by assessing the Activities of Daily Living (ADL).Nutritional Status can deteriorate in elderly who are physically dependent. Hence assessment of PEM in the elderly is of significance. This is done most easily by BMI measurement.In the study BMI method was used to assess nutritional status.

Aims and objective: To study the health and nutritional Status amongst Elderly in Lucknow.

MATERIALS AND METHODS

This study was a community based cross sectional study carried out in two suburban neighbourhoods of Lucknow city. This included elderly persons of both sexes from all socioeconomic strata of society. Elderly (>60 years of age) were identified by house to house survey in two neighbourhood of Lucknow city as well as those attending OPD in primary health care setting. Interviewing, Observation, Clinical Examination and Anthropometric measurements were the main methods for this study.

Tools of Data Collection

A pretested and predesigned interview schedule was prepared after reviewing the available literature for the elderly. Two types of schedule Family interview Schedule and Individual Interview Schedule were used. Inter the Family interview Schedule, various details regarding the family were noted particulary per capita income of family. In the Individual Interview Schedule, Literacy status and occupation were noted.

Physical Examination

A thorough General and Physical Examination was done especially regarding Nutritional Status, Clinical Anemia, Vitamin Deficiency and other Common disease.

Anthropometic Examination :

Measurement of height and weight was carried out.

Nutritional Status of the elderly using Body Mass Index (BMI) Classification has been categorized.

1. Normal Nutrition(NN): BMI values between 18.5 and 25.0
2. Chronic Energy Deficiency (CED) : BMI values less than 18.5
3. Obese : BMI values > 25.0.

RESULTS AND DISCUSSION
Results

Distribution of subjects according to age is given in Table-1. It was found that the elderly aged 60-64 years had the most no. of Normal Nutrition(NN) .Persons aged 65-69 were in between.Persons aged more than 70 years had the most number of persons in the Chronic Energy Deficit(CED) Category. After application of significance test it was found that this pattern was significant. (X^2=13.5, p < 0.001, df=4)

Age Versus NN, X^2 = 4.59, p < 0.05, df=2

Age Versus CED X^2 = 7.08, p,< 0.01 df = 2

Age Versus obese X = 2.90,p > 0.05, df = 2.

The distribution of subjects according to sex is given table – II. It was found that males were 74 in all and females were 68. The association between sex and nutritional status was not found to be significant. (X^2 = 0.19, p .0.05 df =2)

Table III shows the association between Socioeconomic status and Nutritional status. It is seen that the highest number of subjects will chronic Energy Deficit is seen in Lower Income Group whilst the largest number of Normal elderly were found to be in High Income Group. The association was found to be statistically significant. (X^2 = 21.31, p < 0.001, df = 4)

Type Versus NN = X^2 = 14.28, p < 0.0001, df = 2

Type Versus CED = X^2 =14.13, p < 0.001, df =2

Types Versus Obese = X^2 = 1.7, p < 0.05, df = 2

Table IV shows the association between Literacy status and Nutritional status among the elderly.It is seen that the Illiterate had the highest number of persons in the CED category.

The lowest number of CED persons were found among the Graduates. The association was found to be statistically significant. (X^2 = 44.01, p < 0.0001, df = 6)

Education Versus NN = X^2 = 23.94, p < 0.0001, df = 3

Education Versus CED = X^2 = 30.24, p < 0.0001, df = 3

Education Versus Obese = X^2 = 5.98, p < 0.05, df =3

Discussion:

The above data indicate that among both men and women of the Geriatric age group socio-economic factors exert a profound influence on diet, Nutrition and health status. Income level is the most important determinant of Nutrition. Better Nutritional status among elderly can be attributed to consciousness and better awareness also.

There is a strong relationship between self-health assessment and income in an American Study Eg. 80% of those with income more than 15,000 Dollars rated that their health as good or excellent (Harris 1978)[4].As far as the association of Literacy status with Nutrition is concerned that data indicate that with increasing levels of education, in capacitating Chronic conditions go down. The reverse is also true (Wilder 1973)[5].

The level of Education and Income may correlate indirectly with health of the aged. Those with higher levels of education and income mentioned fewer health problems (Havighurst 1976)[6].In a wide ranging study which compared data from 22 countries, it was observed that income inequality was strongly and negatively associated with life expectancy (p=0.001) (Joceline Promerleau & Martin Mckee. Eds)

Table-1: Age-wise distribution of Elderly

Age	Total	NN NORMAL NUTRITION	CED	OBESE	
60-64	49 (34.5)	27 (47.3)	20 (24.0)	2	100%
65-69	46 (32-3)	18 (31.5)	28 (33.7)	0	%
> 70	47 (33.0)	12 (21.0)	35 (42.1)	0	%
Total	142(100%)	57(100%)	83(100%)	2(100%)	

X^2 = 13.5, p < 0.001, df =4

Age Versus NN, X^2 = 4.59, p > 0.05, df = 2

Age Versus CED, X^2 = 7.08, p > 0.01, df =2

Age Versus Obese, X^2 = 2.90, 0 > 0.05, df =2

Table-2: Association Between Sex and Health and Nutritional Status of Elderly

Sex	Total	NN NORMAL NUTRITION	CED	OBESE	
Male	74 (52.1)	31 (54.3)	42 (50.6)	1	50%
Female	68 (47.8)	26 (45.6)	41 (49.3)	1	50%
Total	142(100%)	57(100%)	83(100%)	2(100%)	

X^2 = 0.19, p > 0.05, df = 2

Table 3: Distribution of Eldery according to SES, Health and Nutritional status

Type	Total	NN	CED	OBESE	
HIG	37 (20.6)	26 (45.6)	10 (12.0)	1	50 %
MIG	55 (38.7)	17 (29.8)	37 (44.5)	1	50%
LIG	50 (35.2)	14 (24.2)	36 (43.3)	0	
Total	142(100%)	57(100%)	83(100%)	2(100%)	

*HIG= High income group, MIG = Medium Income Group, LIG= Low Income Group

X^2 = 21.31, p < 0.001 (df = 4)

Type Versus NN, X^2 = 14.28, p > 0.001, df =2

Type Versus CED, X^2 = 16.13, p > 0.0001, df =2

Type Versus Obese, X^2 = 1.7, 0 > 0.05, df =2

Table- 4: Distribution of Elderly according to Education

Education	Total	NN	CED	OBESE	
Illiterate	68 (47.8)	11 (19.2)	57 (68.6)	0	
Primary	36 (25.3)	22 (38.5)	14 (16.8)	0	
Secondary	29 (20.4)	18 (31.5)	10 (12.0)	1	50%
Graduates	9 (6.3)	6 (10.5)	2 (2.4)	1	50%
Total	142(100%)	57(100%)	83(100%)	2(100%)	

X^2 = 44.01, p < 0.001, df =6

Education Versus NN, X^2 = 23.94, p > 0.001, df =3

Education Versus CED, X^2 = 30.24, p > 0.0001, df = 3

Education Versus Obese, X^2 = 5.98, p < 0.05, df = 3

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