ASSESSMENT OF NUTRITIONAL STATUS OF ELDERLY IN SELECTED PAID AND DESTITUTE HOMES IN CHENNAI, INDIA

G. Vani Bhushanam¹, K. Sreedevi² and Janaki Kameshwaran³
Research Associate, All India Coordinated Research Project on Home Science, Acharya NG Ranga Agricultural University, Hyderabad¹
Lead interventionist, Behavioral Science Unit, National Institute of Nutrition, Hyderabad, India ²
Lecturer, SG., Department of Home Science, Women’s Christian College, Chennai ³

Abstract: The transition from the traditional pre-industrial to modern phase of development of society in India has in many ways changed the social context of the adjustment of the aged. In India, the elderly population depends heavily on the family for economic and emotional support. With joint family system, slowly diminishing the elderly are now being placed in ‘Homes’ and left to the care of such Organizations. This study was designed to assess the nutritional status of the elderly in selected paid and destitute homes in Chennai, India. The nutritional status of one hundred and forty elderly from paid and destitute homes was assessed using subjective, anthropometric and clinical parameters. The BMI of the elderly in destitute homes was within the normal range of 17.5 to 24.9kg/m². It was found that the women in the age group of 52 to 64 years had higher BMI than their older in both the sexes. The women in the 75+ age group range were malnourished while the rest were normal in paid homes. The clinical signs of nutritional disorders were, in general, not specific and mostly associated with old age. The awareness levels of elderly in nutrition knowledge revealed a mean 36%. However, individual differences were observed within the homes in all the criteria assessed.

Key words: Paid Homes, Destitute Homes, Nutritional Status, Elderly, Organization

I. INTRODUCTION

The population of the aged is on the increase the world over as never before and holds a serious social and economic implication. India is a ‘mature’ community and with the population above 60 years increasing steadily, by the turn of the century it will become an ageing society.

People over 54 constitute about 12.4% of the Indian population. According to the United Nation’s Population Fund (UNPF) and Help Age International, India has around 100 million elderly at present and the number is expected to increase to 323 million constituting 20% of the total population, by 2050⁴. Irudaya Rajan and Kumar (2003) analysed the National Family Health Survey (1992 – 93) data and found that a large majority (88%) of the older persons in India live with their kin⁵. Despite the belief that children are the security of the aged, institutions for the aged are mushrooming since the 1990’s. In 1998, India has 728 old age homes⁶ while the recent statistics reveal that there are 1281 old age homes in India⁷.

These demographic changes has been accompanied with a fast changing family structure due to forces like urbanization and migration which are not quite conducive to the welfare of the elderly⁸. The institutionalization of the elderly which began as early as 1901 still remains inadequate when compared to the structured institutions of the West.

The trend clearly reveals that ageing has become a major social challenge and vast resources will be required towards support, care and treatment of the older persons ⁹.

Many factors are likely to influence the levels of institutionalization among the old. These include the availability of family support for old people who are no longer able to maintain full independence, income, housing, provision of health and welfare services and prevalence of mental and physical disability.

Among the numerous environmental / external factors that modulate ageing, nutrition plays a significant role. The inseparable triad of nutrition, ageing and health is the logical basis for appropriate management of problems that arise and interfere with the interdependent factors.
Malnutrition is known to be very common in institutionalized elderly. Although it may be relatively easy to diagnose overt malnutrition, the identification of marginal or subclinical malnutrition is beset with difficulties.

In India, this section of the population depends on their children for physical, moral and financial support. However, owing to the socio-cultural changes occurring in India and the joint family system slowly diminishing the emergence of institutional homes is on the rise with steady increase in the number of inmates joining institutions.

This study was designed to assess the nutritional status of elderly in paid and destitute homes in Chennai, India.

II. METHODOLOGY

Study design:

Selection of Homes: Two paid and two destitute homes in the city of Chennai were selected based on purposive sampling from the list of homes published by “Vishranthi Charitable Trust”.

Selection of sample: All the inmates aged >52 years willing to respond to the investigator, having no physical disabilities like being stone deaf, dumb, lame and not bedridden were selected from two paid and two destitute homes. A total of 140 participants formed the study group out of which 68 and 72 inmates were from paid and destitute homes respectively.

Tools for Data Collection: A pre-tested Interview Schedule; Knowledge Assessment Questionnaire (KAQ); Observation Schedule and Clinical assessment schedule published by NAC ICMR was used to elicit information from the inmates on the a) General information b) Anthropometric measurements which includes Height, Weight, Mid–Arm Circumference and c) Nutritional Knowledge.

III. RESULTS AND DISCUSSION

The nutritional status of one hundred and forty elderly from paid and destitute homes was assessed using subjective, anthropometric and clinical parameters. The sanitary conditions in and around the four homes were also observed.

General Information

Age: The age of the respondents was found to range from 52 to 85 years. 18% belonged to 52-64 years, 37% belonged to 65-74 years and 45% of them were 72 years and beyond.

Sex: 41% men and 59% women were institutionalized in both paid and destitute homes.

Life style pattern

Education: A majority (61%) of inmates in destitute homes were high school dropouts in destitute homes followed by illiterates (24%), higher secondary school education (11%) and graduates (4%). A majority (40%) of inmates in paid homes were high school dropouts followed by inmates having higher secondary school education (32%), graduates (18%), and illiterates (10%).

Occupation: 84% in paid homes had been sedentary workers, 15% heavy workers and 1% moderate workers while 64% in destitute homes had been sedentary workers, 32% heavy workers and the rest moderate workers. One out of every two women in paid homes had been working before being institutionalized and 59% in destitute homes had been employed.

Family Type: All the respondents had come from nuclear families in destitute homes while 71% in paid homes had come from nuclear families.

Nutritional parameter

Anthropometry:

The respondent’s height & weight were measured, based on which BMI was calculated for each subject. The mean height of the male inmates in paid and destitute homes were observed to be 158.6±3.7 and 156.5±1.4 cm respectively. The mean height of the female inmates in paid and destitute homes were observed to be 151.8±3.0 and 142.0±3.4cm respectively.
The mean weight of the male inmates in paid and destitute homes were observed to be 55.5 ± 3.3 and 49.9 ± 1.9 cm respectively. The mean weight of the female inmates in paid and destitute homes were observed to be 58.8 ± 2.1 and 46.4 ± 1.2 cm respectively.

The mean heights and weights of the selected subjects are presented in (Table 1 & 2).

**TABLE 1: MEAN HEIGHTS OF ELDERLY IN PAID AND DESTITUTE HOMES**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>PAID HOMES</th>
<th>DESTITUTE HOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>52-64 years</td>
<td>153.4</td>
<td>156.2</td>
</tr>
<tr>
<td>52-64 years</td>
<td>162.4</td>
<td>149.3</td>
</tr>
<tr>
<td>52-64 years</td>
<td>160.0</td>
<td>150.0</td>
</tr>
<tr>
<td>Mean ± SD</td>
<td>158.6 ± 3.7</td>
<td>151.8 ± 3.0</td>
</tr>
</tbody>
</table>

The mean height of women of age-group 52-64 years were taller than women of the 65 years and beyond. The mean height of men of age group 65 – 75 years was taller than men of other age groups in both paid and destitute homes. It was observed that women tend to stoop more and this could lead to an apparent reduction in their heights.

**TABLE 2: MEAN HIEGHTS OF ELDERLY IN PAID AND DESTITUTE HOMES**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>PAID HOMES</th>
<th>DESTITUTE HOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>52-64 years</td>
<td>51.6</td>
<td>55.8</td>
</tr>
<tr>
<td>52-64 years</td>
<td>58.4</td>
<td>50.0</td>
</tr>
<tr>
<td>52-64 years</td>
<td>56.5</td>
<td>44.0</td>
</tr>
<tr>
<td>Mean ± SD</td>
<td>55.5 ± 3.3</td>
<td>49.9 ± 1.9</td>
</tr>
</tbody>
</table>

The mean height of women of age-group 52-64 years were taller than women of the 65 years and beyond. The mean height of men of age group 65 – 75 years was taller than men of other age groups in both paid and destitute homes. It was observed that women tend to stoop more and this could lead to an apparent reduction in their heights.

**TABLE 3: MEAN BODY MASS INDEX OF ELDERLY IN PAID AND DESTITUTE HOMES**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>PAID HOMES</th>
<th>DESTITUTE HOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>52-64 years</td>
<td>22.0 ± 6.2</td>
<td>22.6 ± 4.2</td>
</tr>
<tr>
<td>52-64 years</td>
<td>21.8 ± 3.2</td>
<td>20.6 ± 3.5</td>
</tr>
<tr>
<td>52-64 years</td>
<td>21.8 ± 3.8</td>
<td>16.5 ± 5.0</td>
</tr>
<tr>
<td>Mean ± SD</td>
<td>21.9 ± 1.6</td>
<td>19.9 ± 0.8</td>
</tr>
</tbody>
</table>

The BMI of all the age groups was well within the normal range except for women in the 75+ age group who were malnourished even extending to the severe malnourished stated of body mass index ≤ 11.5. Maximum deviation was found in men in the 52-64 years age group.
The Mid-arm circumference was found to be higher in men. There was little difference within the age group of both men and women in paid and destitute homes.

**Clinical assessment:**

The clinical signs of nutritional disorders were, in general, not specific and mostly associated with old age.

**Nutritional knowledge**

The Knowledge Assessment Questionnaire (KAQ) developed to assess the knowledge levels on food and its functions; balanced diet; nutrients and its sources; role of nutrients in the human body; common nutritional deficiencies revealed a mean score of 22 against a maximum score of 50. 35% of the subjects scored 22, 27.5% scored 16, 22.5% scored 28 and 15% scored 26.

The knowledge levels of the subjects on disorders due to certain nutrients and therapeutic importance of food was the least followed by role of nutrients in the human body.

**IV. SUMMARY & CONCLUSION**

The nutritional status of the elderly is an interdependent factor relying more on the psycho-social implications. Health problems due to aging may play havoc when integrated with the other factors. Hence care of the elderly on all the fronts is of utmost importance.

**REFERENCES**


