



Assessment of Nutritional and Psychological Status for Geriatric Community and Imparting Nutrition Education

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Abstract : The elderly population may be defined as those populations whose age is greater than 60 years of age. Aging is often accompanied by physiological changes, including decreased lean body mass, altered metabolism, and impaired immune function, which can increase the risk of malnutrition and its associated health complications among older adults. Psychological factors such as depression, social isolation, and cognitive decline significantly influence nutritional intake and overall well-being in this demographic. This review explores the sociodemographic profile, dietary and lifestyle pattern and clinical and psychological condition by the survey taken for the geriatrics in home and household and by imparting nutrition education.

Keywords- Geriatrics; Nutrition; Psychological; Dietary; Cognition

I. INTRODUCTION

WHO defined that, the biological level, ageing results from the impact of the accumulation of a wide variety of molecular and cellular damage over time. This leads to a gradual decrease in physical and mental capacity, a growing risk of disease and ultimately death

A nutritional assessment includes four main components. summarised as "ABCD": Anthropometric Measures, Biochemical and laboratory measures.

Geriatric nutrition is the nutrition that helps to minimize the effects of aging and diseases as well as it helps to manage the physical, psychological and psychosocial states of the elderly population. The elderly population may be defined as those populations whose age is greater than 65 years of age. The elderly can be classified into two types such as early elderly (between 65 to 74 years of age) and late elderly (above 75 years of age).

Cena H *et al.*, stated that Quetelet index relates weight (kg) to the square of the height (m²), which enables calculation of body mass index (BMI). It predicts disease risk in those termed underweight and in those who are obese. The World Health Organization categorizes underweight as BMI is 18.5, normal 18.5 to 24.9, overweight 25 to 29.9 and obese 30 to 39.9, and extreme obesity 40.

The prevalence of multiple chronic conditions and disability increases with age, older respondents who live at home may suffer from limitations in the physical, cognitive, psychological, social and/or environmental domains of life. (Hoogendijk *et al.*, 2014; Lette *et al.*, 2017).

Cognitive function was measured by a self or proxy-report at follow-up using a culturally adapted, Chinese version of the Mini-Mental State Examination (MMSE) that had been translated from the international standard of the MMSE questionnaire and carefully tested via pilot survey interviews. (Folstein, M.F *et al.*).

Wiltjer H, Kendall N (2019) stated that the assessment of older respondents needs to cover the psychological domain of health, with a focus on the individual's behaviour and mind. The main health problems affecting older respondents in this domain are cognitive impairment, depression and delirium.

The purpose of the review is to obtain data in nutritional assessment(ABCD) and psychological assessment by the structured interview method to the geriatrics by offline data collection in both home and household.

II. OBJECTIVES

- To assess the nutritional and psychological status of the selected geriatric community.
- To study the physiological status of the elderly respondents.
- To elicit background information and dietary pattern of selected geriatric community.
- To create awareness by imparting nutrition education and to impart the food to reduce the stress level and cognitive level.

III. MATERIALS AND METHODS

Study design:

A cross-sectional study was conducted to describe the nutritional status and common health complications among elderly individuals (60 years old or older) living in coimbatore city under randomly selected villages kalapatti & RS Puram.

Population:

The study was carried out through the inclusion of individuals aged 60 years or older that lived in the above-mentioned villages. Moreover, 200 elderly individuals were included in this study from the home and household.

Eligibility criterias:

Those eligible to participate in the study were individuals of both sexes, aged 60 years and above living under the above-mentioned villages of coimbatore city who agreed to participate in the research. The exclusion criteria comprised: those who disagreed to give consent; geriatric individuals who were not willing to give an interview; seriously ill people and <60 years old people.

Data collection techniques:

The study was conducted from December 2023 to February 2024 through a simple random sampling method. The study was conducted using the direct survey method PAPI (Paper and Pen Personal Interview). An instrument was developed by the researchers to collect the socio-economic, socio-demographic, anthropometric, and dietary history data. Weight was measured using a digital scale and height was measured using a stadiometer. The questionnaire was prepared in English version and it was translated into local language (Tamil version) so that the respondents could easily understand all the questions. Before the start of the interview all the questions were described properly to the respondents by the interviewers as majority of the study participants were illiterate.

Variables:

The socio-demographic features (such as age, sex, educational level, occupation, marital status, monthly family income level, family type), anthropometric measurements (height, weight, body mass index, waist hip ratio), mini nutritional assessment score (MNA), dietary history and habits of elderly (milk intake, legumes, and egg, meat and fish, fruits and vegetables, meals, fluid intake, drug intake) and clinical (diabetes mellitus, hypertension, cardiovascular disease, mobility state, digestive problem) and psychological conditions (cognition, stress, loneliness) were assessed to investigate the research objective.

Nutrition Education Tools (Pamphlets):

Nutrition education is a concise, informative document designed to educate readers, in this case, geriatric individuals, about the importance of nutrition for their health and well-being. It typically includes information on dietary guidelines, nutrient needs, meal planning tips, and the benefits of a healthy diet for older adults. The goal is to provide easily digestible information that motivates readers to make positive changes to their diet and lifestyle.

The pamphlet has been developed for the geriatrics to provide knowledge and give information about their nutrients intake, meal panning, antioxidants, hydration, physical activities, stress management, food intake. It makes use for the proper nutrient intake and healthy lifestyle pattern of the elderly respondents.

In this study, subjects are allowed to look at the pamphlet. Through nutrition sources the subjects are allowed to gain knowledge about the source deficiency, toxicity, sources and daily requirement. It is crucial for promoting healthy aging and improving overall well-being. As elderly respondents lack in the knowledge and education, by giving the nutrition education help in the health and disease control and prevention of the geriatrics.

Statistical Analysis:

From the data collected, the statistical analysis was done on One-way ANOVA was used to analyse the Nutritional and Psychological Status for Geriatric Community among different categories of home and household respondents using Microsoft Excel. The results were analysed by One-way ANOVA, considering statistical significance value, $p < 0.05$ with a confidence level of 95%. When testing the hypotheses, if the value of p is below a significant level, the null hypothesis was rejected, and the alternative hypothesis was confirmed.

IV. RESULT:

The present study entitled "assessment of nutritional and psychological status for geriatric community and imparting nutrition education" was undertaken with the objectives to assess the nutritional and psychological status of the selected geriatric community, study the physiological status of the elderly respondents, elicit background information and dietary pattern of selected geriatric community and to create awareness by imparting nutrition education and to impart the food to reduce the stress level and cognitive level.

In this study, assessment of geriatric respondents was done on the basis of home and household. the sample size of 200 has been taken. the survey includes framing of questionnaire, data collection and imparting nutrition education to the elderly.

the collection of data from the respondents was done in the coimbatore district in the area (kalapatti) and in eldercare home (eera nenjam- rs puram). the data was collected at the age group of above 60 and in offline survey mode by the interview schedule method. the study was conducted among the geriatric and is done by the interview schedule method, by the willing respondents of the geriatric individual. by the study, it is being found about the demographic factors, lifestyle activities, dietary pattern and psychological assessment.

From the present study it is found that the BMI of the respondents in home are majority in healthy and overweight range and in household it is found that the BMI of the respondents majority has a healthy weight range.

the dietary assessment of the geriatrics in home and household has the major consumption of fruits and vegetables and lack of the protein in their diet. the intake of water is high in the household and there is a less consumption of water in the geriatric home. the vitamin/mineral supplements are mostly taken in home than household due to lack of nutrition and deficiency. as ages, due to the

health condition most of the individual restrict the food and beverages. majority of the food avoid is sugary food and drink in home and household. geriatric individual mostly prefer the home cooked meals.

In this study it is found that, most of the individual has difficult in chewing or swallowing the meat and tough foods and few has difficult in solid foods. majority of the respondents eat freely without monitoring the portion sizes in home in household. the occurrence of digestive issues majority in home than the household respondents and the change in appetite or taste preference occurs mostly in the household. most of the geriatric individual is unaware of the balanced diet.

By the distribution of food in weekly basis, the consumption of cereal, milk is majority in twice a day and pulses, fruit, vegetables once a day. other vegetables, meat, sugar in a weekly basis. in 24-hour food period, the majority of the consumption of food is cereals, vegetables, milk and few in pulses and fruits.

In this study about lifestyle factor it is found that the geriatric individual majorly does not exercise in home and household. majority of the individual in home do not engage in social activities and in household. it is found that the dietary habits of the geriatric in home and in household is neutral. the respondents in home has some mobility changes and the home and household respondents use mobility aids like cane, walker.

In this study by clinical assessment it is found that majority of them has diabetes and hypertension and few has arthritis conditions. the symptoms majorly occur in the geriatric is found that muscle cramps and backache and few has numbness and tingling in hands & feet. it is found that few respondents have the history of heart attack and stroke and majority of elevated cholesterol in the blood. the geriatric has the regular intake of medication for various reasons in both. most of the individual in home and household is living with pain and discomfort and has the difficulty in breathing and in vision. in home few of respondents has undergoing treatment for physical condition like stroke and leg operation.

It is found that the respondents from home has the symptoms of anxiety compared to the household. the majority of the respondents have symptoms of difficulty completing familiar task as ages and have suffering from memory loss and confusion. it is found that as ages most of the individual has osteoporosis. it is found that out of 200 respondents none of them have cancer. in this study the major condition seen is cognition and osteoporosis.

In the psychological assessment, cognition status of the geriatrics were seen. in this study it is found that severe cognition in home and in household respondents has moderate cognition. stress status of the geriatric individual is found that the respondents in household has high stress and respondents in home has moderate stress. the stress is due to the loneliness and health condition. loneliness status of the geriatrics is found that most lonely respondents are in the home than household. majority of the respondents in home has sometimes and frequent lonely.

From the statistical analysis, using MS Excel by One Way ANNOVA it is found that BMI, Dietary pattern and lifestyle pattern (common foods, vitamin supplementation, water intake, difficult to chew, digestive issues, sleep, mobility level), Clinical conditions (chronic medical condition, history, symptoms, osteoporosis, pain/ discomfort) and Psychological assessment (Cognition & Loneliness) has the P value of 1 and it is not significant and stress has the P value of 0.05 and it is significant.

VI. CONCLUSION

From this study it is found that the geriatric respondents face many health conditions and psychological problems. Due to the aging inadequate intake of food result in the nutritional problems and deterioration in the health. On the average most of the geriatric in home is facing lot of issues and the insufficient intake of foods, lack of physical activity and this leads to stress and loneliness. Most of the geriatric has cognition problem due to degenerative disease and deficiency. It is the most common factor occurs. From this study, it is concluded that the nutrition education program helps the geriatric individual know about the balanced diet, importance of intake of fruits and vegetables, proteins, physical activity and stress management etc., and has a greater impact on the experimental group of sample who were given the education.

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