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A COMPARATIVE STUDY OF NUTRITIONAL STATUS OF ELDERLY LIVING IN GERIATRIC HOMES VS THOSE LIVING IN THE COMMUNITY

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Abstract

Malnutrition in the elderly is characterised as an imbalance between the organism's demands and nutritional intake, which is followed by changes in the body weight index and muscle atrophy. The aim of the study is to assess and compare the nutritional status of elderly population living in old age homes and the community living. Objectives of this study is to assess the nutritional status and to determine the differences in nutritional status and risk for malnutrition of elderly living in geriatric homes and in community. To compare the depression levels between both the groups. A comparative cross-sectional study was conducted in elderly population living in community and in geriatric homes by using MNA, SGA and GDS tools. Data was analysed using SPSS software. From MNA tool 45% of subjects in old age home and 41% from community living are at risk of malnutrition. 14% and 10% are malnourished from old age homes and community living respectively. From SGA form 32% and 29% from old age homes and community living are moderately nourished and 27% and 22% are severely malnourished from old age homes and community living respectively. From GDS form it is found that old age homes subjects 13%,12%, 12% are mildly, moderately and severely depressed respectively. In community living 13%,3%,7% are mildly, moderately, and severely depressed respectively. From the study it is concluded that Nutritional status of elderly population living in Community is good when compared to Geriatric home living.

Keywords: Elderly, Community Living, Geriatric Home,

Introduction

Ageing is a natural process¹. Ageing should be viewed as a natural, unavoidable biological phenomena². Successful ageing is defined not just by lifespan, but also by a high level of well-being across various dimensions – socially, physically, and psychologically. The three components for successful ageing are avoiding disease and disability, engagement with life and optimising physical and cognitive function³.

Individual health state, medical treatment, treatment, and polypharmacy, physical and spiritual activities, cultural background, and religious attitudes all have an impact on diet and nutritional status⁴.

Malnutrition in the geriatrics is associated with many changes. However, in earlier studies, only the MNA technique was utilised to assess the nutritional condition of the senior population. In the current study, in addition to the MNA tool, the SGA and GDS tools are employed to determine the clinical conditions and depression factor in the individuals.

Materials and methods

A comparative cross-sectional study was conducted among elderly living in village masanpally, kamareddy district and four old age homes of Kamareddy district. A total of 200 subjects above 65 years age was selected. The study subjects were constituted by 100 inmates of geriatric homes living and 100 residing in community.

Inclusion criteria

Individuals aged above 65years and who are willing to participate in the study and their medical conditions in addition to cognitive functions permit their participation.

Exclusion criteria

People who are critically ill bedridden, those who are receiving artificial enteral and parenteral nutrition, those with impaired cognitive functions, subjects with cancer, end stage renal disease or terminal illness.

Methods: Standard questionnaires MNA, SGA and GDS was used in this study.

MNA form: The MNA scale was used to evaluate the nutritional condition of the elderly. It comprises questions and measurements gathered into four areas: Anthropometric measurements: Weight, height, and weight loss. Six questions about lifestyle, medicines, and mobility are included in the general evaluation. Dietary evaluation: Eight questions about the number of meals, food and drink consumption, and feeding autonomy. Self-assessment: Self-perception of health and nutrition.



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According to the acquired score, elderly individuals were divided into three groups: Above 23.5: Satisfactory nutritional status.

- 17 - 23.5– at the risk of malnutrition
- Below 17 – Malnutritions⁵

SGA form: The assessment includes taking a history of recent intake, weight change, gastrointestinal symptoms and a clinical evaluation. It is used to diagnose malnutrition and identify persons in need of nutrition care.

SGA rating

- A -Well-nourished normal
- B – Mildly/ moderately malnourished some progressive nutritional loss
- C – Severe malnutrition There is evidence of wasting and symptoms that are worsening⁶.

GDS form: The GDS consists of questions that assess a person's level of enjoyment, interest, social interactions and more. A score of more than five points indicates depression⁷.

Statistical analysis

The statistical program SPSS for windows version 22.0 is used to analyse the data. Pearson chi square test and likelihood ratio was done and two groups was compared.

Results and discussion

Out of the total studied 200 elderly population. Out of them 62 females and 38 males live in the community. 43 males and 57 females live in old age homes.

According to MNA, those at risk of malnutrition were 46.5% of males and 43.9% of females in old age home residents and 26.3% of males and 50.0% of females in free-living elderly subjects. However, 9.3% of males and 17.5% of females in old age home residents and 12.9% of females and 5.3%of males living in community were malnourished which was close to the findings of similar research conducted at old age homes.44.2% of males and 38.6% of females living in old age homes and 68.4% of males and 37.1% of females living in community are at normal nutritional status.

Table 1: Chi square test for MNA Tool of Community living

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.316 ^a	2	.009
Likelihood Ratio	9.506	2	.009
Linear-by-Linear Association	8.087	1	.004
N of Valid Cases	100		

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.80.

The Pearson chi-square value is 9.36 and the likelihood ratio is 9.506. The asymptomatic significance of Pearson chi square and likelihood ratio is .009 and .009. Values are significant.

Table 2: Chi square test for MNA tool of Geriatric home living

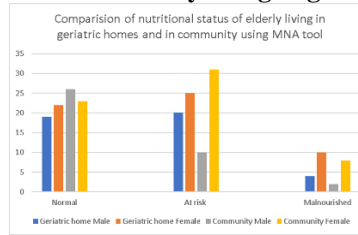
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.414 ^a	2	.493
Likelihood Ratio	1.467	2	.480
Linear-by-Linear Association	.973	1	.324
N of Valid Cases	100		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.02.



The Pearson chi-square value is 1.414 and the likelihood ratio is 1.467. The asymptomatic significance of Pearson chi square and likelihood ratio is .493 and .480. Values are significant

Graph 1: Comparison of nutritional status of elderly living in geriatric homes and in community living.



According to SGA, 68.4% of males and 37.1% of females living in the community and 18.6% of males and 57.9% of females living in old age homes are well nourished.18.4% of males and 35.5% of females were in community and 5.2% of males and 17.5% of females living in old age homes were moderately malnourished.30.2% of males and 24.6% of females living in old age homes and 27.4% of females and 13.2% of males living in community were severely malnourished.

Table 3: Chi square test for SGA tool of Community living

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.261 ^a	2	.010
Likelihood Ratio	9.431	2	.009
Linear-by-Linear Association	7.608	1	.006
N of Valid Cases	100		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.36.

The Pearson chi-square value is 9.261 and the likelihood ratio is 9.431. The asymptomatic significance of Pearson chi square and likelihood ratio is .010 and .009. Values are significant

Table 4: Chi square test for SGA tool of Geriatric home

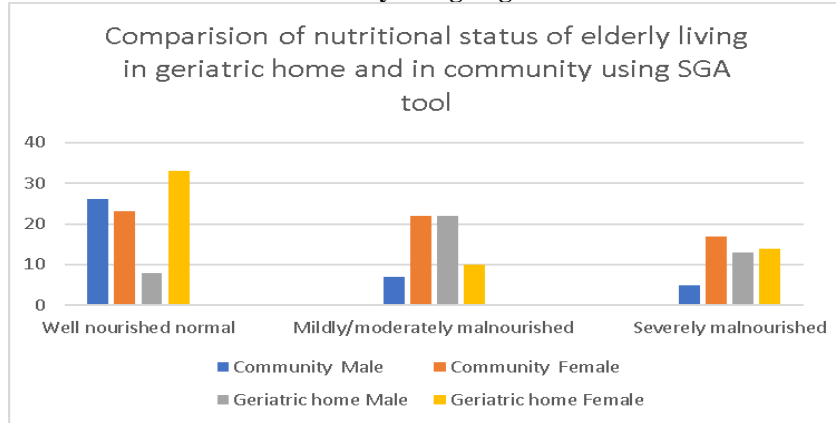
Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	18.177 ^a	2	.000
Likelihood Ratio	19.048	2	.000
Linear-by-Linear Association	7.428	1	.006
N of Valid Cases	100		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.61.

The Pearson chi-square value is 18.177 and the likelihood ratio is 19.048. The asymptomatic significance of Pearson chi square and likelihood ratio is .000 and .000. Values are significant



Graph 2: Comparison of nutritional status of elderly living in geriatric home and in community using SGA tool



According to GDS, 89.5% of males and 69.4% of females living in community and 90.5% of males and 43.1% of females living in old age homes were normal. 20.7% of females and 2.4% of males living in old age homes and 17.7% of females and 5.3% of males living in community were mildly depressed. 119.0% of females and 2.4% of males living in old age homes and 4.8% of females and 0% of males living in community were moderately depressed. 17.2% of females and 4.8% of males living in cold age homes and 8.1% of females and 5.3% of males living in community are moderately depressed.

Table 5: Chi square test for GDS tool of Community living

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.163 ^a	3	.104
Likelihood Ratio	7.584	3	.055
Linear-by-Linear Association	3.025	1	.082
N of Valid Cases	100		

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is 1.14.

The Pearson chi-square value is 6.613 and the likelihood ratio is 7.584. The asymptomatic significance of Pearson chi square and likelihood ratio is .104 and .055. Values are significant.

Table 6: Chi square test for GDS tool of geriatric home

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.704 ^a	3	.000
Likelihood Ratio	26.675	3	.000
Linear-by-Linear Association	16.478	1	.000
N of Valid Cases	100		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.04.

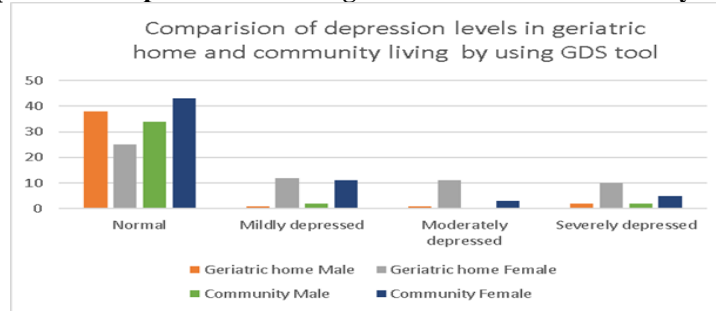
The Pearson chi-square value is 23.704 and the likelihood ratio is 26.275. The asymptomatic significance of Pearson chi square and likelihood ratio is .000 and .000. Values are significant.



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Graph 3: Comparison of depression levels in geriatric home and community living by GDS tool



Conclusion

Malnutrition prevalence (as assessed by MNA and SGA) is substantially higher among nursing home residents than among community residents. More attention should be provided to persons who reside in nursing homes in order to assist them in dealing with their difficulties. It is recommended that basic assessment procedures be used to identify at-risk older persons and that rapid intervention procedures be used. Paying attention helps them. According to the GDS, as compared to community subjects, old age home subjects had a high level of depression. According to the findings, females are sadder than males in both community living and geriatric home living old. According to the findings of this study, women's over thinking contributes to depression. Depression is caused by a variety of factors, including health issues, stress.

Suggestions

- To conduct a research employing meal frequency and 24-hour dietary recall questionnaires to determine the precise pattern of eating habits.
- Diet and exercise awareness can assist a person in living a healthy life.
- Regular counselling, refreshing activities, or awareness initiatives should be performed to lower depression levels.
- Nutritional status is an essential element, particularly for the senior population; it is suggested that Primary Health Care Centres establish a screening centre to detect nutritional deficiencies and counsel patients accordingly.

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