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Research Paper

Nutritional Status and its Related Factors in Older People Residing in Nursing Homes in Semnan Province, Iran, 2017

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ABSTRACT

Objectives Older people are a vulnerable group that their undesirable nutritional status makes them susceptible to catch diseases and increase their health costs. This study was conducted to determine the nutritional status of older people in nursing homes of Shahroud and Damghan cities (Semnan Province) and some influential factors in 2017.

Methods & Materials This cross-sectional study (analytical descriptive type) was carried out in nursing homes of Shahroud and Damghan cities using census sampling method. By using a demographic questionnaire, minimal nutrition assessment, and anthropometric evaluation by the researcher, the data of 129 older people were collected. Then the obtained data were analyzed by the Chi-square, 1-way ANOVA, and Independent t-test in SPSS. The significance level was set at 0.05.

Results The Mean±SD age of the participants was 75.44±10.56 years. In terms of nutritional status, (22.5%) of the subjects had malnutrition, (57.4%) malnutrition risk, and (20.2%) a good nutritional status. There was a statistically significant relationship between the nutritional status and variables of sex and age, income, smoking, body mass index, arthritis, urinary problems, and using mass media (P<0.05).

Conclusion The nutritional status of a few participants was desirable. So, today's older people nutritional status is far from acceptable standards and requires planning and serious consideration of relevant organizations, especially the health system.

Extended Abstract

1. Objectives

Aging is a biological process initiating from the third decade of life and gradually limits the biopsychosocial and general function of people. According to international organizations, Iran, as a developing country, is facing rapid population aging. Various international studies have suggested that nutritional status majorly impact the health status of people aged ≥60 years. Furthermore, determining the malnutrition condition is an appropriate health indicator. More than (50%) of the elderly living in hospitals and nursing homes suffer from degrees of malnutrition. Identifying malnutrition in aging people is not easy; because malnutrition is a multifactor problem with an unclear function. The present study investigated the nutritional sta-

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tus and its contributing factors in the elderly residents of nursing homes in Semnan Province, Iran.

2. Methods & Materials

This was a descriptive-analytical study with a cross-sectional design. The study population consisted of all residents of nursing homes in the two counties of Shahroud and Damghan (n=129). All of them were enrolled in the study (census sampling method). Inclusion criteria were the lack of a history of gastrointestinal surgery over the past 6 months, mental problems, dementia according to the report of a psychiatrist, bio-motor limitations disrupting daily activities; and willingness to participate in the study. To collect the required data, a demographic form, and the Mini Nutritional Assessment (MNA) tool was used. The MNA is a standard tool for screening nutritional state and has been used in various studies to assess the elderly. After obtaining informed consent from the study participants, questionnaires were completed for them, and anthropometric measurements were performed.

The body weight was measured by a portable scale with a precision of 0.1kg and with minimum clothing and bare feet. For measuring height, mid-arm circumference, arm circumference, and calf circumference, a non-elastic tape measure was used. The body height was measured in standing position and according to the standards. In case it was not possible to measure it in standing position, the heel-to-knee height was measured and recorded as the body height. Body Mass Index (BMI) was calculated by dividing the weight in kilograms by the height in meters squared. The waist circumference was measured at the midpoint between the last rib and the iliac crest parallel to the horizon and with an accuracy of 0.1. The collected data were analyzed in SPSS and at 0.05 significance level. We used a one-way Analysis of Variance (ANOVA), Chi-squared test, and Fisher's exact test.

3. Results

The Mean±SD age of study participants was 75.44±10.56 years. In total, (45.7%) of the study participants were from Shahroud county and (54.3%) from Damghan county; (60.5%) of the samples were female, and the rest were male; (66.7%) of them were illiterate; (44.2%) were previously employed; most of the subjects were married (47.3%); (36.4%) had 3-person families; (58.9%) were pensioners; (82.2%) were on daily medications, and (9.3%) were smokers. Regarding BIM, (20.9%) were lean, and (14.7%) were obese. The Mean±SD BMI value of the study participants was 24.44±4.9kg/m^2 (24.01±44 for men and 24.84±5.20 for women). The BMI value ranged from 13.6kg/m^2 to 41.42kg/m^2. The Mean±SD values of body weight and height were 61.01±13.9kg and 157.74±12.79cm. Regarding the risk factors of metabolic syndrome, (24%), (34.4%), (49.6%) of the subjects were suffering from diabetes, hyperlipidemia, and hypertension, respectively. Moreover, (41.9%) of the subjects reported no exercise and routine physical activity; (17.1%) reported no daily milk consumption; (7.8%) reported no consumption of snacks, and (89%) reported regularly eating breakfast.

The nutritional status Table 1 was significantly correlated with gender (P=0.33), age (P=0.002), BMI (P=0.022), having a source of income (P=0.029), arthritis (P=0.004), motor disorders (P=0.001), urinary problems (P=0.003), the use of mass media (P=0.001), and smoking (P=0.022).Table 1 presents the nutritional status of the study participants. According to the collected results, (22.5%) of the study participants were suffering from malnutrition, (57.4%) were at risk for malnutrition, and (20.2%) enjoyed an appropriate nutritional status.

4. Conclusion

Nutritional status is among the most important indicators of the elderly's health. The obtained results suggested that the frequency of older people at the risk of malnutri-

Table 1. The nutritional status of study participants

Nutritional Status	No.	%
Improper nutritional status	29	22.5
At risk for malnutrition	74	57.4
Appropriate nutritional status	26	20.2
Total	129	100

tion residing in the nursing homes of Damghan and Shahroud counties was high. Such finding indicates the need for paying more attention to them. The gender ratio trends for people aged ≥60 years indicates that the aging process of the population is generally associated with the feminization of aging. In the present study, the nutritional status of a few samples was desirable. It seems that what older people today experience in terms of nutrition and health in nursing homes are far below acceptable standards; thus, planning and developing health-related organizations are required.

Ethical Considerations

Compliance with ethical guidelines

This dissertation received the Ethics Certificate No. 5279563736. 1986 from the Ethics Committee of Iran University of Medical Sciences on 05.08.2017. In addition, the researchers considered the following points in the research process receiving a written letter from the university to present to the interviewees; maintain the respect and confidence of each research participant; describe the purpose and nature of the research for the participants; not naming participants in the final results and using numerical codes instead of names in the research findings section; maintaining research participants' independence by assuring them of their freedom to participate in or not to participate in or exit from research; ensure the confidentiality of all information obtained from research participants.

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Authors' contributions

Conceptualization & designing: Mehri Delvarianzadeh, and Tahereh Dehdaria; Data collection: Mehri Delvarianzadeh, Aysa Bahar; Analysing: Mehri Delvarianzadeh, Farideh Khosravid; Preparing the first draft of the manuscript: Nahid Ariaeean, Tahereh Dehdari; Advising for the study: Mehri Delvarianzadeh, Nahid Ariaeean. Preparing the final draft of the manuscript: Mehri Delvarianzadeh, Tahereh Dehdari, Aysa Bahar, Farideh Khosravi, Nahid Ariaeean; Supervision: Tahereh Dehdari.

Conflicts of interest

The authors declared no conflict of interest.