

Research Paper

## Nutritional Status and Related Factors in the Elderly Hospitalized in a Psychiatric Hospital

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### Abstract

**Introduction:** The prevalence of aging and chronic psychiatric disorders is increasing. Older people hospitalized are at risk of malnutrition. In this study, the nutritional status of the elderly living in a psychiatric hospital was investigated, and also related factors were extracted.

**Methods:** This descriptive cross-sectional study was conducted in 2018. One hundred and one older adults over 60 years old in Razi Psychiatric Hospital in Tehran were selected using convenience sampling. Data were collected using a demographic information questionnaire and the Mini Nutritional Assessment (MNA). SPSS software version 21 and Chi-square test were used to analyze the data.

**Results:** Most of the elderly were in the age range of 60 to 75 years, and 51.5 percent were female. At-risk and malnourished status, the average prevalence was 22.8%, 59.4%, and 17.8%, respectively. There was a significant relationship between education level, dental status, aspiration, balance status, the experience of an acute disease or stress in the last three months, and the level of physical activity with the nutritional status of the elderly ( $P < 0.05$ ).

**Conclusions:** More than three-quarters of the elderly were malnourished or at risk of malnutrition. Therefore, it is necessary to take appropriate measures to improve the situation. In this regard, the formulation and implementation of interventions following the associated factors extracted in this study will be helpful.

## Extended Abstract

### OBJECTIVE

Aging is associated with physical and psychological changes that increase healthcare services [8, 9]. Psychological disorders are among the most common chronic conditions in old age that increase

hospitalization risk [15]. One of the factors affecting the physical and mental health of the elderly is the nutritional status [20, 21]. Nutritional status in older people, especially among the elderly in care centers, are

faced with the challenge. Loss of appetite, weight loss, and malnutrition are common among hospitalized elderly [22]. The rate of malnutrition increases by 22, 18, and 29 percent with hospitalization, attending daycare centers, and living in long-term care facilities, respectively [23]. In Iran, 68.8% of the elderly living in long-term care centers were at risk, and 10.3% were malnourished [26].

Male gender, higher depressive symptoms, and cognitive disability were associated with malnutrition [27]. The possibility of malnutrition among institutionalized elderly was 63 percent more than the elderly living in the community. Also, dementia and depression have increased the risk of malnutrition by more than 65 percent [25]. The study of hospitalized elderly in Iran showed that age, sex, educational level, marital status, occupational status, source of income, body mass index (BMI), chronic disease, and more than three drugs were significantly related to nutritional status [29]. Due to the importance of nutrition in the elderly hospitalized, this study was conducted to investigate the nutritional status of the elderly hospitalized in Razi Psychiatric Hospital in Tehran and related factors.

## MATERIALS AND METHODS

This descriptive cross-sectional study was conducted in Razi Psychiatric Hospital in Tehran, 2018. One hundred and one older people aged 60 years and over were selected using convenience sampling to participate in the study after obtaining the individual's consent, family, and the treating physician. Demographic information questionnaire and MNA were used to collect data. The demographic information questionnaire included variables of age, sex, educational level, dental status, balance status, physical activity, aspiration status, neurocognitive disorders, acute illness or stress experienced in the last three months, and length of hospital stay. MNA has been used in various studies to assess the nutritional status of the elderly, and its validity and reliability have been confirmed in Iran and other countries [24, 25, 28, 31, 32]. Data were collected through the patient's clinical record, observation and examination, and interview with the patient, nurse, or physician. Data were analyzed using SPSS version 21, and descriptive statistics were used to summarize the findings. Also, Chi-square was applied to examine the association between demographic variables and nutritional status at a significance level of 5 percent.

## RESULTS

People aged 60 to 75 years, women, and illiterates were the most common. The share of people with a poor dental condition, no history of aspiration, and proper balance was 56.4, 51.5, and 71.3 percent, respectively. About half of the elderly had a hospital stay of 21 to 40 years, and 52.5 percent had severe dementia. Also, 59.4 percent of the elderly were without a history of acute

illness and stress in the past three months, and about half of them had regular daily activity.

The prevalence of ordinary, at-risk, and malnourished status was 22.8, 59.4, and 17.8 percent, respectively. The findings of the Chi-square test showed a significant relationship between education level, dental status, aspiration status, balance status, the experience of acute illness or stress in the last three months, and the level of physical activity with nutritional status ( $P < 0.05$ ). In this regard, the prevalence of at-risk and malnutrition statuses was higher among literate elderly (91.4%) than illiterate (69.7%). Also, most normal nutritional status among individuals with appropriate and inappropriate dental levels was 45.5 and 5.3 percent, respectively. Elderly with aspiration experience, unbalanced, and experienced acute illness or stress in the last three months had a more inferior nutritional status than others. Finally, the prevalence of malnutrition was higher among bedridden elderly and participants with limited physical activity.

## CONCLUSION

More than three-quarters of the elderly in Razi Psychiatric Hospital in Tehran were at risk or malnourished. Therefore, taking appropriate measures to improve the nutritional status of the elderly is inevitable. In this regard, the development and implementation of interventions about the associated factors extracted in this study include educational level, dental status, aspiration status, balance status, acute illness or stress experienced in the past three months, and the level of physical activity will be beneficial.

## Ethical Considerations

All ethical requirements of this study have been reviewed in the ethics committee of the University of Social Welfare and Rehabilitation Sciences and have been approved (IR.USWR.REC.1395.159). The elderly and their family were free to choose whether or not to participate in the study, and based on the physician's opinion, the principle of non-harm was ensured. Also, confidentiality was guaranteed.

## Findings or Supports

This study was conducted with the financial support of the University of Social Welfare and Rehabilitation Sciences.

## Author's Contribution

Study concept and design OR, FR, SB, and LFM. Data collection, analysis, and interpretation: FR, PM, DAGh, HAZ, and LFM. Drafting the manuscript: LFM, PM, SB, and FR. Critical revision of the manuscript: OR, HAZ, and DAGh. All authors read and approved the final manuscript.

## Conflict of Interest

The authors declare no conflict of interest.

## Applicable Remarks

Since the nutritional status of the elderly hospitalized in Razi Psychiatric Hospital in Tehran is not favorable, there is a need for appropriate measures. In this regard, the treatment team, with the participation of nutrition experts, should formulate and implement interventions to improve the nutritional status of the elderly.

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