

Assessment of Cognitive Status of Elderly People Living in Nursing Homes in Larestan, 2018

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Abstract

Background: Since the elderly are more susceptible to cognitive impairment than other age groups, this study aimed to investigate the assessment of cognitive status of the elderly living in nursing homes in Larestan city and the relationship between cognitive status of the elderly people and some demographic variables.

Methods: This research was a cross-sectional study conducted on all the elderly living in a nursing home in Larestan city. Sampling was done by census method and 54 elderly people were selected according to the inclusion criteria. Demographic characteristics questionnaire was used to assess general information of the elderly, and standard mini mental state examination questionnaire was used to assess the elderly people's cognitive status.

Results: The mean age of the males was 69.44 ± 5.83 years with a range of 60-78. Mean and standard deviation of cognitive status were 25.28 ± 2.15 for males and 24.82 ± 2.54 for females, respectively. Also, 5 (9.30%) had moderate cognitive impairment, 24 (44.40%) had moderate cognitive impairment and 25 (46.30%) had normal cognitive status. There was a significant relationship between marital status and cognitive status in the elderly ($P=0.012$). The mean cognitive status of the married and single elderly was 24.10 ± 2.51 and 25.54 ± 2.13 , respectively.

Conclusion: Cognitive disorders are more prevalent among the elderly married couples, which can improve the adverse effects of these cognitive disorders by strengthening family relationships and caring.

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Introduction

Medical and health advances have led to a relative increase in human life expectancy¹ and a progressive increase in the elderly population in many developed countries has shifted attention to the health of this age group.² Studies show that the world's population is aging and it is reported that the number of the world's elderly will reach 1.5 billion in 2025 and more than 2 billion in 2050.³ This increasing trend in the aging population also includes Iran and it is one of the major health issues in the country.^{4,5} However, physical and mental health in old age is at greater risk than other periods of life. On the one hand, the changes in social structures in recent decades and the transformation of the traditional family system

into nuclear families have led to the increasing prosperity of nursing homes and the culture of keeping the elderly in retention centers.^{6,7} Providing adequate preparation for old age can reduce the complications.⁸ In old age, the elderly are exposed to potential threats such as increased risk of chronic illness, loneliness and isolation and lack of social support and are threatened because of their physical and mental disability.^{9,10} Cognitive impairment is one of the most common problems in old age.¹¹ Increasing age can cause cognitive deficits in older people and interfere with their health. Among the deficiencies that have already attracted the attention of many professionals are cognitive impairments among the elderly.¹² Cognitive impairments not only decrease one's cognitive function, but also gradually increase

depression and social isolation and exert a lot of stress on the elderly and their families.¹³ However, changes in cognitive functioning may be seen as an early sign before behavioral manifestations. As a result, elderly people at risk should be identified and taken into account to avoid cognitive deficits and disabilities resulting from reduced life expectancy and the need for caregivers to be reduced.¹⁴ Considering the above-mentioned points, the importance of aging in developing societies, the features of this era and its impact on life, the importance of cognitive functions at this stage of life, focus on the processes of empowering the elderly, improvement in the health status, prevention of the onset of chronic diseases, and prevalence of certain elderly diseases, further studies are needed to identify different aspects of the elderly issues and challenges in order to take effective steps to improve the cognitive health of the elderly. One of the most effective steps in this field is to identify the cognitive status of the elderly.¹² The aim of this study was to investigate the cognitive status of the elderly people in Larestan city.

Methods

This research is a cross-sectional study approved by the Ethics Committee of Larestan University of Medical Sciences (IR.LARUMS.REC.1397.001). The study population consisted of all the elderly living in one of the elderly nursing homes in Larestan in 2018. Participants were provided with necessary explanations about the aims and importance of the study, and after obtaining written consent, they completed the questionnaires. 54 subjects were selected through census method and according to the inclusion criteria. The inclusion criteria were willingness to participate in the research, age of at least 60 years, ability to answer the questions and familiarity with the Persian language. The elderly were excluded if they were not willing to continue their research. Demographic characteristics questionnaire was used to collect the general information of the elderly, and

mini mental state examination standard questionnaire was used to assess their cognitive status. This tool was developed by Folstein et al. (1975),¹⁵ and is the most commonly used cognitive screening tool worldwide. The questionnaire consists of 30 questions and 6 cognitive domains consisting of Time and Place orientation (each one 5 points), Registration (3 points), Attention and Calculation (5 points), Recent Memory (3 points), Language tests (8 points), and Creativity or Copying (1 point). Each correct answer in this questionnaire receives a score of 1. Overall, the maximum score is 30, and scores less than 9 indicate severe cognitive impairment; 10 to 20, moderate cognitive impairment; more than 21, a mild cognitive impairment score; and 25 or higher above the normal cognitive status. In a study conducted in Iran, the reliability was shown to be 0.73. The content validity of the questionnaire was confirmed by 5 experts. The results also showed that this cognitive screening tool can differentiate dementia from normotensive patients with a sensitivity of 0.95 and specificity of 0.97.¹⁶ The data were analyzed by SPSS software version 25 using Spearman, Mann-Whitney U and Kruskal-Wallis tests. Non-parametric tests were used because the continuous variables were not normal. Significance level was considered 5%.

Results

The mean age of the male subjects was 69.44 5.83 with a range of 60-78 years and that of the female participants was 70.97 5.38 with a range of 61-79 years. Mean and standard deviation of cognitive status were 25.28 2.15 for males and 24.82 2.54 for females, respectively. The demographic characteristics of the units under the study are summarized in Table 1. Also, 5 subjects (9.30%) had moderate cognitive impairment, 24 (44.40%) had mild cognitive impairment, and 25 (46.30%) had normal cognitive status. Frequency distribution of cognitive status of the studied units according to demographic characteristics is shown in Table 2.

Table 1: Demographic characteristics of the participants

Variable	No	Percent	P value
Gender	Man	25	46.3
	Woman	29	53.7
Marital Status	Married	19	35.20
	Single	35	64.80
Education	Illiterate	15	27.80
	Reading and writing	27	64.80
	Diploma and higher	12	7.40

Table 2: Cognitive status of the studied units according to demographic characteristics

Variable	Test	P value
Age	Spearman	0.210
Gender	Mann-Whitney U	0.372
Marital Status	Mann-Whitney U	*0.012
Education	Kruskal-Wallis	0.322

Discussion

As the growing population of the elderly increases, the need to provide care services in the elderly population increases and the cognitive status of the elderly is one of the most important clinical cases in the elderly.^{17, 18} The mean and standard deviation of cognitive status were 25.28 2.15 for males and 24.82 2.54 for females, respectively. In a study conducted in 2019 by Kim et al., cognition was reported 23.60±5.10 for men and 25.30 4.60 for women at.¹⁹ Also, 5 (9.30%) had moderate cognitive impairment, 24 (44.40%) had mild cognitive impairment, and 25 (46.30%) had normal cognitive status. The results of this study are consistent with those of Masoumi et al. (2013). In Masoumi et al.'s study, a small percentage of the elderly were cognitively impaired (0.8%), 17.20% had moderate cognitive impairment and most of the elderly as in the present study had normal cognitive status (82%).²⁰ The findings of this study are inconsistent with those of Joghataei, Nejati (2006) in Kashan.²¹ According to the findings, 5% of the elderly had severe cognitive impairment, 47.5% moderate cognitive impairment, 30% mild cognitive impairment, and 17.5% had no cognitive impairment. Perhaps the most important reason for this difference is in the cognitive status of the elderly with high degrees of cognitive impairment in the study center. There was no significant statistical difference between age, gender, level of education and cognitive status of the elderly, which is not in agreement with the findings of other researchers.^{19, 20, 22} A study carried out by Arab-zozani et al. showed that the prevalence of elderly abuse and neglect is substantial in the Iranian population aged 60 years and over.²³ The researchers concluded that one of the most important reasons for this difference was in the cognitive status of the elderly with high degrees of cognitive impairment in the study center. In this study, there was a significant relationship between marital status and cognitive status in the elderly (P=0.12). The mean cognitive status of the married elderly was 24.10±2.51 and 25.5±2.13 in single women. The findings of this study are not in the same line with those of Masoumi et al. (2013).²⁰ Researchers indicate that seniors who are single for any reason, such as losing a spouse due to being uninsured, are sent to a nursing home, regardless of aging problems, such as the presence or absence of cognitive impairment. Elderly people who are married should be placed in a nursing home if the family is unable to care for him/her and is more likely to have cognitive impairment.

One of the limitations of the present study was its low sample size; it is recommended that future studies should use larger sample size to understand the relationships.

Conclusion

According to the results of this study, it can be concluded

that cognitive status screening by nurses can help identify the elderly at risk, improve the level of care and health of the elderly and assist in the implementation of programs to delay the onset and progression of pathology in this vulnerable group, especially the elderly.

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Conflict of Interest: None declared.

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