

Research Paper**Comparing the Structural Standards of Nursing Homes in Markazi Province, Iran With International Standards****Masoud Khodaveisi¹**, **Ali Faal Araghi Nejad¹**, **Afsar Omid¹**, ***Ali Esmaeili Vardanjani²**, **Leili Tapak³**

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Nursing Home, Nursing standards, Structural standards, Environmental standards, Nursing staff standards

ABSTRACT**Objectives** In the recent years, the elderly pollution has increased; therefore, the availability of centers that meet their physical and emotional needs has become extremely important. Standardization is one of the approaches to improve the quality of these centers. The purpose of this study was to compare the status of structural standards in nursing homes with international standards.**Methods & Materials** In this descriptive, cross-sectional study, three nursing homes in Markazi Province were studied in 2017. To investigate the status of structural standards, a researcher-made checklist was used, which consisted of the staff standards, physical environment standards, and equipment standards. The validity of this checklist was confirmed using expert panel and its reliability was confirmed by parallel forms reliability. The collected data were analyzed by SPSS 23.**Results** Overall, the centers were in moderate situation in terms of structural standards with average score of 83.29% (mean: 674 [out of 810]). The scores of Imam Javad Nursing home, Ebrahimabad Nursing home, and Meisam Nursing home were 88.40%, 88.64%, and 72.84% (mean: 716, 718, and 590), respectively.**Conclusion** Considering that the structural condition of nursing homes in Markazi Province is lower than international standards, nursing home officials are recommended to improve the quality of their centers to achieve the levels of international standards, especially structural standards.**Extended Abstract****1. Objectives**

According to the World Health Organization, older people are those aged 60 years and over, and their population has grown significantly in recent years [1]. Considering the physical and mental conditions of the elderly, the need for nursing homes

is essential. Therefore, ensuring the quality of care in these centers is very important. One of the most effective methods for improving the quality of nursing centers, especially nursing homes, is the use of standards [2]. Standards are descriptions of the status and desirable level of performance based on which quality can be judged [3]. Based on Donabedian model, to determine the quality of health care centers, three standard categories are needed: "structure," "process," and "outcomes." In this regard, this study aimed to investigate the struc-

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tural quality of nursing homes in Markazi Province of Iran and its comparison with international standards.

2. Methods and Materials

In this descriptive cross-sectional study, all nursing homes in Markazi Province (three centers in Arak city and Ebrahim Abad village) were selected by total enumerative method. The data collection tool was a researcher-made checklist. This study was conducted in three stages with one-month interval. In the first step, the checklist was created by reviewing published papers on the structural standards of the developed countries [5-8]. The final version of the checklist contains 162 items in three dimensions of manpower (n=33), physical space (n=99), and supplies and equipment (n=30). It was based on 5-point scale from 1=non-observed to 5=completely observed where the lowest possible score was 162 and the highest 810.

The quality scores were divided into three levels of weak (162-635), moderate (635-730), and good (735-810). In the second stage, the validity and reliability of the checklist were investigated and the face validity was determined by 12 faculty members of the Nursing and Midwifery at Hamadan University of Medical Sciences. Parallel forms of the test were used to measure the reliability of the checklist. In this method, the nursing homes were examined by two observers using the checklist, and then the correlation between their observations was examined. In the third step, the data were collected by using the checklist, and then the collected data were analyzed using descriptive statistics such as mean and standard deviation and performing inferential statistics of Spearman and Pearson correlation tests in SPSS V. 23.

3. Results

Results showed that the study nursing homes had met 82.29% of the standards and achieved an average score of 674 out of a total score of 810. The Ebrahim Abad Nursing home earned 88.64% of scores (718 points), Iman Jawad Nursing home 88.40% (716 points), and Meysam

Nursing home 72.84% (590 points). In terms of manpower, Ebrahim Abad Nursing home ranked first with 88.67% followed by Iman Jawad (87.33%) and Meysam nursing homes (83.33%). In terms of physical space, Iman Jawad Nursing home ranked first with 88.69% followed by Ebrahim Abad (88.28%) and Meysam nursing homes (69.68%) and finally, with respect to supplies and equipment, Ebrahim Abad Nursing home ranked first with 89.70% followed by Iman Jawad (88.48%) and Meysam nursing homes (75.76%) (Table 1).

The results indicated that all study nursing homes were at poor level in terms of using skilled manpower, and although the number of caregivers was at the optimal level, the number of nursing staff was lower than the standard level. The strength of nursing homes was training during work and at the beginning of staffing which was in the correct and standard manner in accordance with the existing rules.

Regarding the physical space standards, nursing homes did not have a favorable status in terms of safety, especially in the corridors and flooring, although they had obtained a satisfactory score. Also, the results showed that the most of study nursing homes had hospital-like design. This can have a direct negative effect on the privacy and independency of the elderly; and since one of the basic structural standards in nursing homes is the resemblance of the nursing homes to a home, it can be said that it has not been met. In terms of supply and equipment, the nursing homes earned acceptable scores in the field of welfare equipment, but in the field of healthcare tools, they failed to achieve acceptable scores, because most of the nursing homes were only well-equipped for normal healthcare supply.

4. Conclusion

Standard structural quality of nursing homes investigated in this study was at moderate level. Due to the situation and conditions of the residents of these centers, these centers must be improved, because indepen-

Table 1. Structural qualities of the study nursing homes.

| Nursing Homes | Manpower | | Physical Space | | Supplies and Equipment | | Total | |
|---------------|----------|-------|----------------|-------|------------------------|-------|-------|-------|
| | Score | % | Score | % | Score | % | Score | % |
| Ebrahim Abad | 133 | 67.88 | 438 | 28.88 | 148 | 70.89 | 718 | 64.88 |
| Iman Jawad | 131 | 33.87 | 439 | 69.88 | 146 | 48.88 | 716 | 40.88 |
| Meysam | 125 | 33.83 | 340 | 69.68 | 125 | 76.75 | 590 | 84.72 |

gency and security and having an active life are among the main rights of the elderly. Moreover, it is necessary to increase the adaptability of the elderly by improving the quality of nursing homes and bringing them closer to international standards and eliminating existing gaps. The existence of rules and standards consistent with international standards for the quality of care and structure of nursing homes can help improve the conditions of the nursing homes and its elderly residents in Iran. So the authorities should work on drafting laws and regulations, especially structural standards.

Ethical Considerations

Compliance with ethical guidelines

This study has been approved by the Ethics Committee of Hamadan University of Medical Sciences (code: IR.UMSHA.REC.1395.589).

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Conflict of interest

All authors certify that this manuscript has neither been published in whole nor in part nor being considered for publication elsewhere. The authors declare no conflict of interest.

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