

Iranian Nurses' Knowledge of Pain Management in Elderly Patients

İranlı Hemşirelerin Yaşlı Hastaların Ağrısını Değerlendirme Bilgisi

HOSSEİN RAFİEİ¹
 MOHAMMAD HASHEM REİSİ²
 HEDAYATOLLAH LALEGANİ¹
 MASOUD AMİRİ³
 MOHAMMAD RAHİMİ MADİSİH⁴
 ALİ HASSANPOOR DEHKORDİ¹
 ALİ AKBARİ⁵
 MOHAMMAD ESMAELİ ABDAR⁶

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ABSTRACT

Objective: Pain is the most common reason for seeking health care and it does not often receive enough attention in older patients. The purpose of this study is to examine the level of knowledge that Iranian registered nurses have about assessing and managing pain in elderly patients.

Methods: In this cross-sectional study carried out between September 2012 and January 2013, the Pain in the Elderly Questionnaire (PEQ), was used to gather data and examine the level of knowledge that Iranian nurses had concerning pain management for older patients.

Results: Of the 518 nurses who participated in this study, 83.8% (n=434) was women and 16.2% (n=84) was men. The mean correct score for the 14 items was 46.4% (range=7.1% to 85.7). No relationship was found between levels of knowledge and nurses' years of experiences or gender (p>0.05).

Conclusion: Registered nurses in Iran were not sufficiently knowledgeable about pain management in older patients. Nursing education administrators should consider including more training for nurses in caring for the elderly population.

Key words: Nurses; knowledge; pain management; elderly patients.

ÖZET

Amaç: Ağrı, sağlık kuruluşlarına en sık başvuru nedenidir; ancak yaşlılarda bu kimi zaman göz ardı edilmektedir. Bu araştırmanın amacı, İranlı hemşirelerin yaşlılarda ağrıyı değerlendirme ve yönetmeye ilişkin bilgi düzeylerini değerlendirmektir.

Yöntem: Eylül 2012-Ocak 2013 tarihleri arasında gerçekleştirilen bu kesitsel araştırmada, veri toplama formu olarak "Yaşlı Hastalarda Ağrı Soru (Pain in the Elderly Questionnaire=PEQ) Formu" kullanıldı ve İranlı hemşirelerin yaşlı hastalarda ağrı yönetimine ilişkin bilgi düzeyleri değerlendirildi.

Bulgular: Araştırmaya katılan 518 hemşirenin %83.8'i (n=434) kadın ve %16.2'si (n=84) erkektir. Soru formunda yer alan 14 madde için ortalama doğru yanıt durumu %46.4 (%7.1 ile %85.7) bulundu. Hemşirelerin bilgi düzeyleri ile deneyim ve cinsiyetleri arasında fark saptanmadı (p>0.05).

Sonuç: İran'da hemşirelerin yaşlı hastalarda ağrı yönetimine ilişkin bilgileri yeterli değildir. Hemşirelik eğitiminin yönetimini üstlenenler hemşireler, yaşlı popülasyona bakım verme konusunda hemşirelerin daha fazla eğitim gereksinimi olduğunu göz önünde bulundurmalıdır.

Anahtar kelimeler: Hemşire; bilgi; ağrı yönetimi; yaşlı hasta.

1 H Rafiei, H Lalegani, A Hassanpoor Dehkordi
 School of Nursing and Midwifery, Shahrekord
 University of Medical Sciences, Shahrekord, Iran.

2 MH Reisi
 Hajar Hospital, Shahrekord University of Medical Sciences,
 Shahrekord, Iran.

3 M Amiri
 Social Health Determinants Research Center, Shahrekord
 University of Medical Sciences, Shahrekord, Iran

4 M Rahimi Madisih
 Medical Plants Research Center, Shahrekord University of
 Medical Sciences, Shahrekord, Iran

5 A Akbari
 Emergency Department, Ali Ebn Abitaleb Hospital, Rafsanjan
 University of Medical Sciences, Rafsanjan, Iran.

6 M Esmaeli Abdar
 School of Nursing and Midwifery, Kerman University of Medical
 Sciences, Kerman, Iran
 Tel: 983413205219 Fax: 983413205218
 e-mail: Mesmaeli87@gmail.com

Introduction

Pain as the fifth vital sign^[1,2] is the most common reason for seeking health care.^[1] It has often not received enough attention in older adults^[3] although the incidence of pain among older patients is high.^[4,5] For relieving patients' pain, nurses have an important role^[6,7] by administering pain-relieving interventions (pharmacologic or non-pharmacologic), monitoring the effectiveness of those interventions, recognizing the adverse effects of drugs, and supporting patients when the prescribed intervention is not enough for relieving pain.^[1,6,8] Because of nurses' responsibility in pain assessment and management, they need to have enough knowledge of pathophysiology of pain, the physiologic and psychological consequences of pain, and the latest methods being used to treat and relieve pain.^[1]

There are few studies on nurses' knowledge of pain management in older patients. In 2007, Yu and Petrini^[9] examined Chinese nurses' knowledge of pain in older people. They reported that Chinese registered nurses did not have enough knowledge about pain management in older people, and suggested that pain management education programs in this area should be enhanced and that active participation of nurses in these programs could be encouraged. In another study, Sloman et al.^[10] surveyed knowledge of Australian nurses on the pain management in older patients. Similar to Yu's study,^[9] they reported that nurses did not know enough about pain management in older patients.^[10] They also reported that due to high number of older patients visiting hospitals, not only nurses in aged care units but also nurses in all areas of care need to increase their knowledge of pain management in this group of patients.^[10] Bergh and Sjöström^[11] compared the elderly patients' and nurses' ratings of pain and pain tolerance with use of visual analog scale (VAS). They reported that most of the time, nurses tend to overestimate mild pain and underestimate severe pain in older patients. They also reported that nurses rated pain tolerance significantly lower than patients.^[11] In a study using an ethnography method, Brown and McCormack^[12] determined factors that have an impact upon effective evidence-based pain management for older people after colorectal surgery. They reported that holistic pain assessment for older patients is deficient in the acute surgical setting. They also concluded that comprehensive pain assessment, improved documentation, and proficient communication are necessary to improve pain management practices for older patients.^[12] In 2008, Zhang et al.,^[13] surveyed the outcomes of a pain education program on pain knowledge, attitudes, and pain assessment practices of 196 nurses. They reported that use of the education program improved nurse's knowledge of pain management significantly. They also reported that correct use of pain assessment scales by nurses increased significantly after the pain education program.^[13] Recently Efe et al.^[14] examined pediatric surgical nurses' knowledge and attitudes regarding pain assessment and non-pharmacological and environmental

methods in 15 teaching hospitals in Turkey. They concluded that Turkish pediatric nurses need more education about pain management.

Since persistent pain in older patients poses a substantial burden to the patients, their family, healthcare team members, and society,^[15,16] one of the most common barriers in managing and treating pain in older patients is inappropriate attitudes and inadequate knowledge of nurses about pain.^[12] Therefore, nurses need more awareness of pain management in older patients. In the Iranian context, no study was found to examine nurses' knowledge of pain management in older patients. This study was thus designed to fulfill this gap.

Methods

In this cross-sectional study conducted from September 2012 to January 2013 in four hospitals in Kerman and Shahrekord (in the southeast and southwest of Iran, respectively), 518 qualified registered nurses (RN) working in these hospitals and involved in the care of elderly patients were studied.

Nursing, as a general practice, can be studied in universities; however, unlike some western countries, Iran does not differentiate by rank within licensed nursing personnel, and RN is the only professionally recognized rank. Upon successful completion of nursing education programs, graduates are automatically granted the status of RN, which is the minimum legal and educational requirement for professional nursing practice. RNs must complete a four-year bachelor's degree at a nursing college.^[17-19] Currently there are no nurses that are specialists in caring for older patients in Iran. Three years ago the Iranian Ministry of Health & Medical Education initiated an education program for a master's of nursing in geriatrics. In Iranian nursing education programs, training in the assessment and management of pain is very limited and does not receive enough attention. Also, in hospital settings, pain management protocols and pain assessment scales are rarely used by Iranian nurses.

The written permission was obtained from the deputy of research, the Ethics Board of the Kerman University of Medical Sciences, and Shahrekord University of Medical Sciences, and all respondents gave written permission to participate in the study. In addition, all participants were promised that all data would remain anonymous, kept confidential and be stored safely. Participants answered individually and returned the tests to the researcher. Data were collected using an instrument with items related to demographic data and a knowledge test called Pain in the Elderly Questionnaire (PEQ). This questionnaire was originally developed by Sloman et al.^[10] in 2001 and includes 14 questions. For the translation of the questionnaire from English into Farsi, the standard forward-backward procedure was applied. The translation of the items and the

response categories was independently performed by ten professional translators and then temporary versions were provided. Later, they were back translated into English and after a careful cultural adaptation, the final versions were provided. The translated questionnaire went through pilot testing. Suggestions by nurses were combined into the final questionnaire versions.

The validity of both the scale and the questionnaire was assessed in a discussion on content validity. Experts in both statistics and nursing care reviewed the content of the questionnaire. In order to reassess the reliability of the translated questionnaire, alpha coefficients of internal consistency and 3-week test-retest coefficients (n=60) of stability were computed. The alpha coefficient for questionnaire was 0.82. The 3-week test-retest coefficient of stability for questionnaire was 0.78. Therefore, in total, the translated scale revealed acceptable reliability.

Continuous variables were presented by mean and standard deviation. Pearson's correlation coefficient, independent t-test and one way ANOVA were applied for correlation and comparison. SPSS software (version 18.0) was used and p-value less than 0.05 were considered as statistically significant.

Results

Of the 518 nurses who participated in this study, 83.8% (n=434) was women and 16.2% (n=84) was men. The mean age of the participants was 32.9±7.9 years and mean years of work experience was 9.3±7.5 years. The mean correct score for the 14 items was 46.4% (range=17.4% to 79.5%) (Table 1). Question 11 (It is better to administer opioid analgesia on a Prn basis rather than as a fixed schedule) had the lowest rate of correct answers, (17.4%, n=90) and question 5 (Cultural factors influence the expression of pain symptoms) had the highest rate of correct answers, (79.5%, n=412). Most nurses worked in emergency department (30.3%, n=157). 48% (n=249) nurses worked in acute care (emergency, ICU and CCU) and 58% (n=268) worked in general wards (neurology, neurosurgery, urology, medical surgical and orthopedic). Although the percentage of correct answers was higher among acute care nurses (47.8%) than general nurses (45.7%), this difference was not significant (p>0.05). According to the results, no significant correlation was found between nurses' years of experience and knowledge about pain management in older patients (p>0.05). Although the percentage of correct answer were higher among men nurses (47.1%) compared to women nurses (46.4%), the results of independent t test failed to show a significant difference between the mean score of pain management and nurses' gender (p>0.05).

Discussion

This study was conducted to determine Iranian RNs' knowledge about management of pain in older patients. We found that the level of Iranian nurses' knowledge about pain management in

older patients was insufficient.

We used the same questionnaire as Sloman et al.^[10] on Australian nurse's knowledge about pain management in the elderly patient. They reported that nurses have a significant knowledge deficiency in this area, which is the same as our results.^[10] However, some differences exist between Iranian and Australian nurses' knowledge. For example, while the overall mean of correct responses by Australian nurses was 71% (ranging from 41.1% to 92%), the mean of correct answers in the present study of Iranian nurses was found to be lower at 46.4% (ranging from 17.4% to 79.5%). In the present study, RNs have the lowest number of correct responses to question number 11 (It is better to administer opioid analgesia on a Prn basis rather than as a fixed schedule). In contrast, Australian nurses obtained a lower score from Item 10 (It is best to avoid giving strong opioids for pain to frail elderly patients because it can cause respiratory depression). A higher number of correct scores given by Iranian RNs were related to item 5 (Cultural factors influence the expression of pain symptoms). However, in contrast to Iranian RNs, Australian nurses obtained a higher score from item 2 (Elderly people experience pain less intensely than young adults). Based on these results, Australian nurses have more knowledge about pain in older patients in comparison to Iranian RNs. A high number of Australian nurses who participated in Sloman's et al.^[10] study, worked in aged care and palliative care wards. Because this group of nurses have more experience caring for older people, it is logical that this group of nurses had a higher level of knowledge in managing pain in older patients. However, Iranian hospitals do not have aged care, palliative care wards, or nurses who specialize in caring for older patients. Similar to the findings in the present study, Yu and Petrini,^[9] who used a different questionnaire from the one used in this study, reported that Chinese RNs had insufficient knowledge of pain management in older people.

In 2011, Kipkorir^[20] examined Finnish nurses' knowledge and attitudes toward pain management for the elderly. For assessing this, Kipkorir used a modified version of McCaffery & Ferrell's "Knowledge and Attitudes Survey Regarding Pain Questionnaire". The level of Finnish nurses' knowledge reported by Kipkorir was acceptable. Their findings are in contrast with the findings in the present study. This difference could be related to differences in the sample sizes of the two studies (518 versus 56) or different types of instruments used in the two studies. Kipkorir^[20] also omitted some questions from the original version of the questionnaire. This action may have affected the reliability of questionnaire and their findings negatively.

Based on our findings, no relationship was found between nurses' years of experiences and their level of knowledge regarding pain management in older patients. Zwakhalen et al.^[8] surveyed nursing staff's knowledge and beliefs about pain in elderly with dementia in the Netherlands. Similar to our

Table 1. Items Used in the Questionnaire to Test the Nurses' Knowledge of Pain in the Elderly

QUESTION NUMBER	FALSE	TRUE	CORRECT RESPONSES
1- Pain is a natural accompaniment of the aging process.	266 (51.4%)	252 (48.6%)	266 (51.4%)
2- Elderly people experience pain less intensely than young adults.	294 (56.8%)	224 (43.2%)	294(56.8%)
3- Elderly people report pain more often than young adults.	206 (39.8%)	312 (60.2%)	312 (60.2%)
4- Research literature suggests that pain in the elderly is commonly under treated.	190 (36.7%)	328 (63.3%)	328 (63.3%)
5- Cultural factors influence the expression of pain symptoms.	106 (20.5%)	412 (79.5%)	412 (79.5%)
6- The demented elderly patient experiences more pain than the lucid elderly patient.	242 (46.7%)	276 (53.3%)	242 (46.7%)
7- The assessment and diagnosis of pain in the elderly is primarily the role of the doctor.	281 (54.2%)	237 (45.8%)	281(54.2%)
8- The goal of pain management for the elderly is to maintain the patient in a pain-free state.	303 (58.5%)	215 (41.5%)	215 (41.5%)
9- Strong opioids used for pain control, e.g. morphine, are likely to produce addiction in elderly patients if administered in large amounts.	123 (23.7%)	395 (76.3%)	123 (23.7%)
10- It is best to avoid giving strong opioids for pain to frail elderly patients because it can cause respiratory depression.	129 (24.9%)	389 (75.1%)	129 (24.9%)
11- It is better to administer opioid analgesia on a Pm basis rather than as a fixed schedule.	428(82.6%)	90 (17.4%)	90 (17.4%)
12- Analgesic medication is more effective in controlling pain in young adults than in elderly patients.	269 (51.9%)	249 (48.1%)	269 (51.9%)
13- The duration of a given analgesic medication is greater in an elderly person than in a young adult.	178 (34.4%)	340 (65.6%)	178 (34.4%)
14-The potency of the pain relief measure selected for the patient should be based on the source of the pain rather than on the patient's report of pain intensity.	155 (29.9%)	363 (70.1%)	155 (29.9%)

finding, they also reported no association between years of experience and nurses' knowledge about pain management.^[8] In addition, in the study of Katsma and Souza^[21] on the level of knowledge of long-term care nurses about elderly pain assessment and management, nurses who have many years of experience are less likely to believe or document their patient's self-report of pain in comparison to nurses who have fewer years of experience.

Conclusion

The results of the present study show that Iranian nurses have insufficient knowledge about pain management in older patients. Enhancing nurses' knowledge about pain management in older patients requires continuous training and education, providing new information and techniques about management of pain in older patients, and facilitating the provision of evidence-based care. A lack of trained and knowledgeable healthcare personnel in care of older patients, especially nurses, can raise some challenges in Iranian hospitals. Training personnel for elder care should be considered by nursing educational programs in Iran with special consideration of training personnel on the management of pain in older patients, which in turn could lead to the development of nurses specializing in elder care. Pain assessment and management in

older patients should be discussed and implemented by Iranian nursing educational programs in geriatric nursing course curriculums which started three years ago in Iran.

Limitations

The respondents were predominantly female, which limits the generalizability of the results for male nurses. Furthermore, use of the self-reported questionnaires may have led to an overestimation of some of the findings due to the variance of different methods.

Key points

- Inadequate knowledge of registered nurses about pain management in older patients may be affecting their practice.
- Registered nurses in Iran had insufficient knowledge about pain management in older patients.
- Nurses' years of experience and nurses' clinical areas did not affect their level of knowledge regarding pain management in older patients.
- Training personnel in elder care should be considered by nursing programs in Iran.

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