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Survey on Pain Management Knowledge and Attitude among Emergency working Nurses in Iran

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ABSTRACT

Aim: Pain is a common phenomenon among emergency patients which may lead to chronic pain conditions and alteration of physiological function. However, it is widely reported that proper pain assessment and management, which is often accomplished by adequately trained nurses, reduce the suffering of patients. Therefore, this study aimed to assess the knowledge and attitude of the nurses towards pain management.
Method and Materials: This study has been performed among 187 nurses who working in emergency wards of hospitals affiliated to Tehran University of Medical Sciences (TUMS). Data has been gathered via the Knowledge and Attitudes Survey Regarding Pain (KASRP) tool. Descriptive and inferential statistics were used to analyze data through SPSS software version 16.
Findings: Totally, 187 emergency nurses including 91 female (48.7%) and 96 male (51.3%) entered into the study and completed the questionnairethe study findings showed that most of the nurses (about 57.2%) had low average knowledge and attitude towards pain management. The relationship between knowledge/attitude of nurses with number of assigned patients (p=0.028) and the gender of nurses (P=0.034) were significant.
Conclusion: The study results demonstrate that nurses have low average knowledge and attitude towards pain management which is one of the most important obstacles for efficient pain management.

Keywords: Pain management, Emergency cares, Nurse, Knowledge and Attitude.

Introduction

Pain is the most common complaint of the patients in Emergency Departments (ED) throughout the world [1, 2] It is an unpleasant experience companied with probably tissue damage. Non-pharmacological approach for management of pain uses different methods such as psychosocial therapy, counseling, physical and occupational therapy to reduce pain without using medication [3, 4]. Traditionally, pain management was occurred through using pharmacological agents. However, increased analgesics usage could affect negatively on physiological functions, cause drug dependency ,increased health care costs [5]. Poor managed pain may affects patients' quality of life, increased visits, longer hospitalization, increased and also increased stress and anxiety for the patient [6, 7].

It is widely argued that pain is a major problem that the ED nurses' were faced [8, 9]. However, studies has revealed that acute pain is inadequately managed because of delayed treatment and drug administration[8, 9]. Additionally, it has been verified that patients in the ED maybe poor assessed for pain because paying attention only to the primary disease[8]. In some cases like emergency patients with low oxygen saturation and blood pressure were less likely to be assessed for pain diagnosis[10]. The knowledge and attitude of the ED nurses may effect on quality of care which patients receive[11]. In previous research it was reported that nurses who

obtained higher educational and training scored had higher knowledge level [12]. Relationship between nurses' knowledge regarding pain management and overall patient outcomes has been reported in previous study[13].

However, it has been discussed that nurses'knowledge and attitude increasingly affect the non-pharmacological use for pain management [14]. Previous studies have verified that there are no evidence about using non-pharmacological interventions to relieve pain[15]. This gap influences on many hospitalized patients, and its effects on the patients'spiritual, emotional and physical health, decreasing the quality of life, increasing postoperative complications and finally increased health care cost[5]. However, deficient pain management has been directly correlated to the passive nurses'participation in assessing patients'pain managing [16]. Nurses tend to underestimate patients' degree of suffering believing that patients self-reports about pain are exaggerated [17, 18]. Accordingly, forpatients'suffering, nurses should have adequate knowledge and improved attitude towards pain management [19]. For this reason, this study aimed to assess the knowledge and attitude of nurses towards pain management in emergency wards of Iran.

Method and Materials

This descriptive study was performed among 187 emergency department nurses of Tehran University of Medical Sciences (TUMS). The aim of this study was to evaluate the knowledge and attitudes of nurses about pain and its management in some emergency departments of Iran. This study was approved by the ethics committee of the Nursing and Midwifery Research Center.

After explaining the aim and procedure of the study and obtaining the satisfaction of the participants and signing the consent form by the potential participants, they entered into the study and completed the Knowledge and Attitudes Survey Regarding Pain (KASPR) tool,. Descriptive and inferential statistics and SPSS software version 16 were used to analyze the data.

The approach for data gathering was self-report. Researcher referred to the corresponding wards and after taking permission from research units, explained the aim of research and afterwards nurses filled the questionnaires. Demographic data such as age, sex and marital status and work-experience, work experience at emergency ward, ward shifting rotation were included at the beginning of questionnaire. Through applying the validated Knowledge and Attitudes Survey Regarding Pain(KASRP) tool of Ferrell and McCaffrey -knowledge and attitude of nurses regarding pain was studied. The original KASRP tool -with 41 items was established on 1987[20], and the updated one with 38 items was established on 2008 and had been practiced until present [21]. The tool consists of true/false and multiple choices questions as well as 2 case reports. The total number of questions is 38 where 22 questions are true/false form, question 23 to 36 are multiple choices, and questions 37and 38 are case reports. With some modifications and updates, this tool is being used for psychometric analysis in different educational programs. Over several years the validity and reliability of this tool had been examined [22-24]. The content validity was performed by pain specialists. The content is derived from standards of several sources such as American Pain Association, WHO, and Institute for health and care policy making. The structure validity was accomplished through comparison of nurses' grades with different work experience including nursing students, fresh graduates, oncology nurses, bachelor students, and pain specialists. After assigning the appropriate codes,

Table 1) Demographic characteristics of the participants

Variable	N (%)	Variable	N (%)
Gender		**Marital status**	
Female	91 (48.7%)	single	84 (44.9%)
Male	96 (51.3%)	Married	103 (55.1%)
Number of children		**Education level**	
0	111 (59.4%)	Paramedics	4 (2.1%)
1	44 (23.5%)	BSN	170 (90.9%)
2	28 (15%)	MSN	12 (6.4%)
3	4 (2.1%)	PhD	1 (0.5%)
Work experience		**The nurses' number of assigned patients**	
Less than 1 year	22 (11.8%)	1-3	4 (2.1%)
1-10	98 (52.4%)	4-6	20 (11.2%)
11-20	54 (28.9%)	7-9	97 (51.9%)
21-25	9 (4.8%)	10-12	65 (34.9%)
26-30	4 (2.1%)	forgot	0.5%))1
Emergency work experience		**Shift assignments**	
Less than 1 year	6 (27.3%)	Morning	39 (20.9%)
1-5	67 (35.8%)	Evening	15 (8%)
6-10	43 (23%)	Evening and Night	34 (17.1%)
11-20	25 (13.4%)	Night	42 (22.5%)
26-30	1 (0.5%)	Rotated shift	99 (53.1%)

Table 2) Nurses' knowledge and attitude regarding pain management in terms of gender

Gender / KASRP response (%)	Male (N=96)		Female (N=91)	
	Numbers	Percent (%)	Numbers	Percent (%)
21-30 %	24	25	19	20.9
31-40 %	47	49	60	65.9
41-50 %	21	21.9	12	13.2
51-60 %	4	4.2	0	0
61-100 %	0	0	0	0
Test Result	Fisher's Exact Test (P=0.034)			

Table 3) Nurses' knowledge and attitude regarding pain management in terms of number of assigned patients

Assigned Patients (N)	1-3		4-6		7-9		10-12	
KASRP Response (%)	N	(%)	N	(%)	N	(%)	N	(%)
21-30	0	0	8	38.1	14	14.48	21	32.8
31-40	2	50	12	57.1	60	61.9	32	50
41-50	2	50	1	4.8	19	19.6	11	17.2
51-60	0	0	0	0	4	4.1	0	0
Total	4	100	21	100	97	100	64	100
Test Result	Fisher's Exact Test (P=0.028)							

the data were entered into SPSS software and analyzed. In descriptive statistics, for continuous quantitative data, mean and standard deviation, and for qualitative and nominal data, the frequency percentage was reported in the form of tables. Statistical tests such as Chi Square and Fisher were also used to examine the correlation. P value less than 0.05 indicates a significant difference.

Findings

Totally187 nurses including 91 female (48.7%) and 96 male (51.3%) entered into the study and completed the questionnaire. Table 1 shows the rest demographic characteristics of the participants. There was no relationship between knowledge and attitude of nurses regarding pain and its management with marital status, employment types (P=0.44), nurses university degree (P=0.53), shift arrangements (P=0.34), number of children (P=0.43), age (P=0.537), work experience (P= 0.577), and emergency related experience (P=0.99) . Table 2 shows the percent of correct response regarding KASRP. Accordingly.

there was a significant relationship betweennurses' knowledge and attitude regarding pain and its management with gender (p=0.034). According this table, the knowledge an attitude regarding pain and its management is difference between male and female nurses.

Table 3 shows that there was a significant relationship betweennurses' knowledge and attitude regarding pain and number of their patients (P=0.028).

Discussion

This study findings shows that more than half of the emergency department nurses were males which is contradictory to other section and wards of hospital. Nevertheless, nature of emergency department requires more males to be working there than females. Meanwhile, more than half of the nurses were married with majority of the participants having no children. The majority of nurses were BSN graduates which was not unexpected due to the high number of BSN students and graduates. Findings confirmed that minority of nurses(less than 7%) have over 20 years of experience. The number of patients need for quick and fast reactions require young nurses to work at emergency wards. Moreover, findings approve that more than half of the nurses, work with variable shifts which is the general norm in governmental hospitals. Over half of the nurses had 7-9 patients where only 2% had 1-2 patients. Nurse shortage in Iran and rapid changes of

patients and their conditions at emergency wards prevent low patient assignments for nurses. Additionally, over one third of nurses were fixed and official employees. Findings of main variables confirm that nurses have low average knowledge and attitude regarding pain and its management. While none of the nurses had remarkable knowledge regarding pain and its management, only less than one fourthof nurses had an acceptable knowledge regarding this issue. Findings show that, although emergency nurses work with wide range of patients, they have poor pain management due to inadequate knowledge. The previous study revealedthat the studied nurses had suboptimal attitude but sufficient knowledge towards non-pharmacological pain management [15].The existed study reported prior training regarding pain management caused higher knowledge level of nurses in this regard [25, 26]. Previous studies showedthat pain management training program couldpromote both the knowledge/ attitude of the studied nurses regarding pain management [27, 28]. These researches recommended on nursing curriculums revision regarding pain management programs [27, 28] and conducting evidence-based programs and guidelines regarding pain management [29].

In previous study it has been shown that pain management has low priority[30]. One of the most effective ways for knowledge improvement is education. According the existed study, one approach for achieving desirable pain management is over effective education and this issue must be considered in medical school's curriculum and training courses [31]. This study is in accordance with most of study results worldwide. For instance, a study about nurses' knowledge and attitude regarding pain management was performed among 295 nurses at 8 hospitals. This mentioned study showed that majority of the participants were able to achieve the average grade of the test[32]. Another study among 287 Italian nurses at 21 oncology wards suggests that out of 39 questions the average of correct answers was 21.4% with domain of 35-6. Variable analysis in this study confirms that 50% of oncology nurses estimate pain less than actual rate and don't manage it accordingly and properly. Additionally, they have poor self-evaluation about pain management knowledge[33]. Results of another study of same topic in Shiraz has confirmed the concerns about insufficient knowledge regarding chronic pain management[34]. Another study that considered attitude and performance as main variables has proved that each of these variables independently can anticipate the quality of nurses' pain management. The knowledge of pain management was better predictor. In addition, researchers have realized that about 69% of pain management variance is explainable with knowledge, attitude and practice factors. Therefore, it has been suggested that nurses' knowledge and attitude regarding pain management should be improved in order to promote their practical performance[35]. In this regard, a systematic study in 2016 that had inspected over 3500 articles with 26 articles having inclusion criteria, had shown that among 14 tools that were used in these studies, KASRP was the main tool in 9 articles. Various tools had different questioning format including multiple choices, true/false, and 3-7 point Likert scale. Practical skills were included in 4 articles for pain management evaluation. This study shows that there is no standard tool for studying knowledge, perception, and attitude regarding pain management. This systematic study has proved that despite too many standardized tools that are available for pain management study, texts had been reported that knowledge regarding pain management among nursing and medical students is poor[36]. Another study suggests that although

nurses have crucial role in improvements of pain management strategies, inability to alleviate suffering leads to lack of knowledge about pain examination and its management, development of narcotic addictions, and negative perspective towards narcotic treatment potentiality. For these reasons, patient experience of pain and its severity increase[37]. Researchers have proved that between 35-55% of nurses estimate pain less than actual intensity and most of the patients do not receive any sedative prior to painful procedures Meanwhile, pain alleviation is a human right and pain mistreatment is immoral, unprofessional, and illegal[38]. Pain mismanagement does not only increase patient and the family sufferings but also puts a financial burden on the patients, family, and society. Pain mistreatment and management have broad range of consequences including decline in quality of life, pain related mental disorders, depression, poor cognitive function, sleep disorders, drop in functional abilities, anti-socialization, increase of dependency, increase of caring costs, increase of hospitalization period, and increase of health care costs[37, 39]. Findings of present study about demographic variables related to knowledge and attitude regarding pain management showed that there is not meaningful relationship among age, marital status, work experience, emergency related experience, university degree, shifts, number of children, and employment type. On the other hand, there is a clear correlation between number of assigned patients and knowledge and attitude regarding pain. Additionally, sex has correlation with knowledge and attitude of nurse in which men had higher knowledge and attitude. In contrast with this result, previous study reported, female nurses had more positive attitude towards pain management[40]. Furthermore, a result of connection between variables in present study does not comply with other previous studies. For example, in a study the new graduates (0-2 years of experience) had weaker knowledge/attitude regarding pain management than experienced nurses and also nurses who participated in professional nurses organizations had higher scores in this regard than others who did not participate. Nursing education, professional performance, and duration of practical experience were determinant for appropriate pain management, as results of this study suggest[32, 41]. Results of regression study among 287 Italian nurse at 21 oncology ward proved that nurses who participated in pain educational courses had higher scores for pain management knowledge [33]. Moreover, another study demonstrated that evidence based education for nurses has improved the overall nursing staff knowledge regarding pain management[42]. Additionally, a study among 200 nursing students suggested that there was a strong correlation between willingness for pain management, readiness for cultural pain management, and beliefs with proper cultural pain management[43].

According to this study result, nurses had low average knowledge and attitude regarding pain and its management. Meanwhile, some nurses had a better knowledge and attitude regarding pain management than the rest of nurses. However, nursing ethics entails trusting patient regarding pain and treating it accordingly and states that respecting a person having pain is a human right. Although, there is so many strong points for this study, it should be mentioned that questions of KASRP were designed collectively and nurses were obliged to choose from the presented choices. Furthermore, there were no separations between knowledge and attitude questions in this survey and all the data were gathered through self – reporting that may made information bias.

Conclusion

As a conclusion, it should be mentioned

that knowledge and attitude of the nurses regarding pain management was lower than optimal level. This study suggested that the emergency ward nurses should be educated in order to improve their knowledge and attitudes regarding pain management.

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Author Contribution: SM was the main researcher and conducted all parts of the study. NDN was supervisor of the study. FA was advisor of the study. NE has conducted some parts of the study. FM has revise the data analysis and revised the manuscript. All authors have written and approved the manuscript.

Conflict of Interests: There is no conflicts of Interest for this study.

Ethical Permission: In this study all ethical principals were considered. All participants were satisfied to be studied. This study approved in Ethics committee of Nursing/ Midwifery school of TUMS with number of 26394.

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