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Evaluating Nurses' Knowledge and Skills for Dealing with Pain

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Αξιολογώντας τη Γνώση και τις Δεξιότητες των Νοσηλευτών Αναφορικά με τον Πόνο

Abstract at the end of the article

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Introduction: Pain is a common symptom in hospitalized patients. **Aim:** to analyze and evaluate nurses' knowledge and skills related to patients' pain management. **Method:** The study was performed with a convenient sample of 70 nurses working in a General Hospital of Elefsina, Greece. The participants were asked to fill the Greek version of Ferrell & Mc Caffery's Knowledge and Attitudes Survey Regarding Pain Questionnaire. **Results:** Research findings indicated that nurses on average did not have the adequate knowledge and skills to manage appropriately their patients' pain. Higher levels of knowledge and skills were correlated with the attendance of seminars and education programs regarding pain management during the last year (p=0.015) and with the years of professional experience (p=0.044). **Conclusion:** The findings of the present study revealed that nurses have insufficient knowledge regarding pain management and suggest that there is an urgent need for further education on pain management. In addition, state and institutional Health Policies should focus on continuous lifelong nursing education to address this problem.

Key-words: ***Pain, chronic pain, acute pain, nurses, nurses' knowledge and competencies, pain management.***

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Introduction

Pain is an undesirable physical and mental state, which is caused by some form of damage of human tissue.[1] It is also the most common reason for which people in developed countries look for medical assistance.[2] Furthermore, pain has a psychological and social effect, in addition to its purely physical one by pointing out that the overall pain experience is determined by the patients' psychological condition, their previous experience of pain and their general lifestyle.[3]

The two main types of pain are acute and chronic pain. Acute pain endures for less than three months and is a sign of possible development of an illness. It is difficult for health care professionals to identify the body areas under pain, as well as the causes of pain,[4] but pain scales are useful tools that are implemented in

practice and have assisted them to better assess and localize pain.[5] As far as chronic pain is concerned, its duration exceeds three months and its causes are less easy to be identified.[6] No matter the type of pain, it leads to patients' withdrawal from certain activities that increase their pain, while at the same time individuals are protecting those areas where pain is located. Often, highly intense pain may cause tachycardia, and even loss of senses.[7] Especially in cases of chronic pain, insomnia, limited physical activity, obesity, anxiety and depression are common consequences.[8]

Managing and dealing with pain is normally determined by pain's intensity, the body area in which it is identified, the clinical history of patient, as well as the results of the latest clinical examination. Usually, pain is treated with medication, namely analgesics, painkillers, steroids, and often insulation. In more severe pain cases, morphine can be administered. Whether patients' pain shall be treated with opioids or not depends on their pain intensity, as this is evaluated via the 0–10 Numeric Pain Intensity Scale.[9] Then, World Health Organization (WHO) has proposed the so-called "Pain Ladder", according to which medication shall be given at three stages. In the first stage, nonopioids, such as aspirin and paracetamol, shall be administered. In the second stage, mild opioids, such as codeine, shall be administered as necessary. In the third stage, whereby pain is very intensed, strong opioids such as morphine shall be administered, until the patient is free of pain.[10] Apart from medication, though, pain is also managed through psychological therapy. In such cases, professional psychologists do not actually treat pain, but help patients to overcome the bad feelings caused by pain, as well as to learn how to live with pain.[11] Social and family support are also very important in the above context. In general, combined interventions (i.e. both medical and non-medical) are considered as the most effective way for dealing with pain.[12]

There is a number of previous studies evaluating the level of nurses' knowledge and skills in pain management. A number of studies have shown that nurses do not have adequate skills to effectively deal with every single case of pain of their patients.[13] The researchers conducted survey with 422 Greek doctors and nurses and found that Greek health professionals do not have adequate knowledge and skills to effectively deal with pain, especially when it comes to evaluating their knowledge of the side effects of various drugs used as painkillers. According to the recent research findings which also carried out research with a sample of Greek nurses (182 nurses and nurse assistants in total), found that nurses cannot adequately deal with all cases of pain, while their personal experience with pain, as well as their educational background, determine to a large extent nurses' knowledge and skills.[14] Other studies have also shown that nurses have knowledge gaps on how to deal with pain, while their age and professional experience have been found to be important determinants of their knowledge.[15–17] In a similar context conducted at a general hospital in Turkey was found that only 40% of the sample had adequate knowledge of dealing with pain, comparing with those having a postgraduate degree and those having attended educational seminars scoring higher[18] in Ferrell & Mc Caffery's questionnaire entitled "Knowledge and Attitudes Survey Regarding Pain".[19] Moreover, one research which found that nurses have adequate knowledge in pain management also it stressed the need for nurses' further education and training on their profession.[20]

On the other hand, there are other studies that reported high knowledge and limited gaps in nurses' knowledge and skills in pain control. For example, the nurses who participated in Breau et al (2006)[21] study, responded correctly to the questions related to pain management; however, there was not found any correlation between age and professional experience with their knowledge. Adequate knowledge regarding pain management was also found in a similar study.[22] Moreover, it was shown the importance of clinical environment, even more than education, in determining the ability of nurses to effectively deal with pain. Additionally, in an original study conducted in 1997 was found that nurses' skills and competencies have been well developed over the last decades, however it was reported that their level of knowledge was still lower than the real needs due to the continuous technological advances and the modern health trends.[19]

The current study aimed to analyze and evaluate nurses' knowledge, skills and competencies in pain management. More specifically, this study had the following research objectives:

To identify whether nurses have adequate knowledge and skills for dealing with pain issues of their patients.

To examine whether the attendance of educational seminars and programs focused on pain management topics, determines nurses' capacity to deal more adequately with pain issues.

To identify whether nurses' knowledge and skills for dealing with pain issuesare influenced by their personal pain experience and their professional experience.

To examine whether nurses' age determines their knowledge and skills for dealing with patient's pain.

According to the theoretical framework on which this study is based, as well as the aforementioned previous findings, it was hypothesized that nurses participating in the current study do not have adequate knowledge and skills for dealing with issues of their patients' pain (H1). It was also hypothesized that the extent to which nurses have attended educational pain management seminars and programs highly determines their capacity to deal with pain issuesadequately (H2). A third research hypothesis which was tested, was that Nurses with personal pain experience have higher level of knowledge and skills for dealing with patients' pain issues (H3). Moreover, it was hypothesized that older nurses have higher knowledge and skills for dealing with pain (H4). Finally, it was hypothesized that nurses with more professional experience have more adequate knowledge and skills for dealing with cases of patients' pain (H5).

Methods

This study was a descriptive cross-sectional study conducted in a General Hospital of Elefsina. A convenient sample of RNs was recruited from ED, ICU. A total of 162 eligible participants were identified. 70 nurses returned the questionnaire (RR 43.2%). Participants were both male and female, belonging to various age groups, having different levels of experience and also differing in other demographic characteristics. Ethical approval was obtained from the Hospital Ethics' Committee .

For the aims of the study, a quantitative research design was applied. It was selected, because it is appropriate for large samples, and it leads to results that are reflective of the wider population under investigation.[23,24] Primary data were collected via a questionnaire, which was personally administered to the participants, in order to reduce non-response rate.[25] The questionnaire consisted of two sections. In the first one, participants were asked to provide their personal and demographic characteristics, namely gender, age, marital status, basic nursing education, postgraduate education, department and job position, as well as their opinion regarding their job position. In the second section, participants were asked to complete the Greek version of Ferrell & Mc Caffery's "Knowledge and Attitudes Survey Regarding Pain". This section of the questionnaire consisted of 39 questions. The 22 questions were "True-False" type and referred to participants' attitudes and knowledge of pain issues. Fifteen items of the questionnaire were multiple choice questions, mainly referring to medication and treatment of pain, while the last two questions were brief pain cases of 2 patients (Patient A and Patient B). Mc Caffery & Ferrell[26] "Knowledge and Attitudes Survey Regarding Pain" is a very reliable tool (Cronbach's Alpha 0.7) (; this was the reason that it was chosen as the research instrument for the current study.

Research data were analyzed with SPSS 19.0. Descriptive statistics and measures of central tendency were calculated. Stepwise linear regression analysis was also held, in order to identify whether the score of participants is influenced by attendance of educational seminars and programs during the previous year, personal experience of pain, professional experience and age of nurses. The level of statistical significance was set at 0.05. The Cronbach's alpha was calculated as α=0.75

Results

Fifty four (77.1%) of the participants working in the study hospital were nurses, 6 were charge nurses (8.6% of the sample) and 10 were matron (14.3% of the sample). According to their gender, 61 of the participants were female and 9 were male. The majority of participants were married, 7.1% of them holded a university degree and 12.9% had attended postgraduated programs. 67% of the sample worked in the hospital on a permanent basis and with a mean duration of 10.7(±..) years. About 71.4% of the questionnaires were collected from surgical wards and 13% from medical units. However the majority of participants worked in ED. 56.5% of the sample would like to change workplace and 53% would change occupation, if they had the opportunity to do so. Demographic and descriptive characteristics of participants are presented in table 1.

In the true-false questions regarding participants' knowledge of dealing with the pain of their patients, the percentages of correct responses ranged from 20% to 89.7%. 20% of participants answered correctly the question-statement "650 mg PO aspirine has almost the same analgesic effect as 50 mg PO meperidine" and "Meperidine IM lasts for 4–5 hours". 25.7% of the sample correctly responded to the question "Non-pharmaceutical interventions are very effective in controlling mild and medium pain, but they are rarely useful for severe pain".

Table 1. *Descriptive and Demographic Characteristics of Participants.*

	N (%)
Gender	
Male	9 (1.9)
Female	61 (87.1)
Age	38,4 (6.7)*
Marital Status	
Single	21 (30)
Married	45 (64.3)
Widowed	1 (1.4)
Divorced	2 (2.9)
Other	1 (1.4)
Basic nursing education	
University Degree	5 (7.1)
Degree from Technical Institution	65 (92.9)
Postgraduate education	
No	61 (87.1)
Yes	9 (12.9)
Nursing activity after basic education (Years) Mean SD	13,2 (6.8)
Nursing activity in the particular hospital (Years) Mean SD	10,7 (6.3)
Employment relationship in the particular hospital	
Permanent	67 (95.7)
Non-specific time contract	1 (1.4)
Specific-time contract	2 (2.9)
Other	0 (0.0)
Department	
Pathological	20 (28.6)
Surgery	26 (37.1)
Emergency	16 (22.9)
Other	8 (11.4)
Job Position	
Nurse	54 (77.1)
Department Head	6 (8.6)
Supervisor	10 (14.3)
Membership in a group	
No	50 (71.4)
Scientific	5 (7.1)
Professional	7 (10.0)
Labour	8 (11.4)
Did you attend seminars or programs associated with dealing with pain during the last year?	
No	60 (87.0)
Yes	9 (13.0)
If yes, for how long? (Days), mean (SD)	22,3 (18.7)
Would you leave for a new workplace if you could	
No	30 (43.5)
Yes	39 (56.5)
Would you change your occupation, if you had the opportunity to do so?	
No	31 (47.0)
Yes	35 (53.0)
Do you face problems with acute or chronic pain?	
No	37 (55.2)
Yes	30 (44.8)

*(Mean, SD)

In contrast, 89.7% of the sample correctly responded to the question-statement "the same stimuli in different people have the same pain results". Similarly, 76.8% of participants responded correctly to the question-statement "Elderly people cannot stand taking opioids", as well as the question-statement "After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with the individual patient's response" (table 2).

In the items of questionnaire section with multiple choice questions, the percentages regarding participants' correct responses ranged from 14.3% to 88.4%. Only 14.3% of the sample responded correctly to the question-statement regarding whether the recommended route of administration of opioid analgesics for patients with persistent cancer-related pain is intravenous, intramuscular, subcutaneous, oral or rectal. The higher score of participants' correct responses was identified in the question regarding the statement concerning the best approach for cultural considerations in caring for patients in pain, with 88.4% of the participants correctly responding that patients should be individually assessed to determine cultural influences (table 3).

Table 2. *Participants' Knowledge of Pain Management Issues (True-False Questions).*

	True	False	Correct answer (%)
	N (%)	N (%)	
Vital signs are always reliable indicators of the intensity of a patient's pain.	33 (48.5)	35 (51.5)	48,5
Because their nervous system is underdeveloped, children under two years of age have decreased pain sensitivity and limited memory of painful experiences.	37 (53.6)	32 (46.4)	53,6
Patients who can be distracted from pain usually do not have severe pain.	27 (38.6)	43 (61.4)	38,6
Patients can sleep despite pain	50 (72.5)	19 (27.5)	27,5
The same stimuli in different people have the same pain results	61 (89.7)	7 (10.3)	89,7
Aspirin and other nonsteroidal anti-inflammatory agents are NOT effective analgesics for painful bone metastases.	21 (30.0)	49 (70.0)	30,0
Non-pharmaceutical interventions are very effective in controlling mild and medium pain, but they are rarely useful for severe pain	18 (25.7)	52 (74.3)	25,7
Breath rarely stops in patients having taken opioids for months	46 (67.6)	22 (32.4)	32,4
650 mg PO aspirine has almost the same analgesic effect as 50 mg PO meperidine	56 (80.0)	14 (20.0)	20,0
POY's pain scale recommends the use of one analgesic, rather than a combination of them	34 (50.7)	33 (49.3)	50,7
Meperidine IM lasts for 4- 5 hours	14 (20.0)	56 (80.0)	20,0
Promethazine is a useful factor for increasing the effect of opioids	26 (44.1)	33 (55.9)	44,1
People with addiction history should not take opioids, because they run the risk of higher addiction	29 (41.4)	41 (58.6)	41,4
After some point, increasing doses of morphine does not lead to reducing pain	38 (54.3)	32 (45.7)	54,3
Elderly people cannot stand taking opioids	53 (76.8)	16 (23.2)	76,8
Patients should be encouraged to endure as much pain as possible before using an opioid.	43 (61.4)	27 (38.6)	61,4
Children less than 11 years old cannot reliably report pain so clinicians should rely solely on the parent's assessment of the child's pain intensity.	44 (63.8)	25 (36.2)	63,8
Patients' spiritual beliefs may lead them to think pain and suffering are necessary	17 (24.6)	52 (75.4)	75,4
After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with the individual patient's response.	16 (23.2)	53 (76.8)	76,8
Patients should be advised to use non-pharmaceutical techniques and not combine them with pharmaceutical solutions	52 (74.3)	18 (25.7)	74,3
Giving patients sterile water by injection (placebo) is a useful test to determine if the pain is real	20 (28.6)	50 (71.4)	28,6
In order to be effective, heat and cold should be applied only in the painful area	24 (35.3)	44 (64.7)	35,3

Table 3. *Participants' Knowledge of Pain Management Issues (Multiple Choice Questions).*

	N (%)	Correct answer (%)
The recommended route of administration of opioid analgesics for patients with persistent cancer-related pain is		
Intravenous	47 (67.1)	14.3
Intramuscular	5 (7.1)	
Subcutaneous	1 (1.4)	
Oral	10 (14.3)	
Rectal	2 (2.9)	
I don't know	5 (7.1)	
The recommended route administration of opioid analgesics for patients with brief, severe pain of sudden onset such as trauma or postoperative pain is		
Intravenous	40 (58)	58.0
Intramuscular	22 (3.,9)	
Subcutaneous	0 (0.0)	
Oral	4 (5.8)	
Rectal	1 (1.4)	
I don't know	2 (2.9)	
Which of the following analgesic medications is considered the drug of choice for the treatment of prolonged moderate to severe pain for cancer patients?		
Brompton's cocktail	3 (4.3)	57.1
Codeine	6 (8.6)	
Morphine	40 (57.1)	
Meperidine	11 (15.7)	
Methadone	1 (1.4)	
I don't know	9 (12.9)	
A 30 mg dose of oral morphine is approximately equivalent to:		
Morphine 5 mg IV	20 (31.3)	40.6
Morphine 10 mg IV*	26 (40.6)	
Morphine 30 mg IV	17 (26.6)	
Morphine 60 mg IV	1 (1.6)	
Analgesics for post-operative pain should initially be given		
Around the clock on a fixed schedule	51 (72,9)	72.9
Only when the patient asks for the medication	14 (20,0)	
Only when the nurse determines that the patient has moderate or greater discomfort	5 (7,1)	
A patient with persistent cancer pain has been receiving daily opioid analgesics for 2 months. Yesterday the patient was receiving morphine 200 mg/hour intravenously. Today he has been receiving 250 mg/hour intravenously. The likelihood of the patient developing clinically significant respiratory depression in the absence of new comorbidity is		
<1%*	19 (27.5)	27.5
1–10%	15 (21.7)	
11–20%	13 (18.8)	
21–40%	14 (20.3)	
>41%	8 (11.6)	
Analgesics for post-operative pain should initially be given		
Around the clock on a fixed schedule	46 (66.7)	66.7

(Continues)

Table 3. *Participants' Knowledge of Pain Management Issues (Multiple Choice Questions).*

	N (%)	Correct answer (%)
Only when the patient asks for the medication	17 (24.6)	
Only when the nurse determines that the patient has moderate or greater discomfort	6 (8.7)	
The most likely reason a patient with pain would request increased doses of pain medication is		
The patient is experiencing increased pain	52 (74.3)	74.3
The patient is experiencing increased anxiety or depression.	4 (5.7)	
The patient is requesting more staff attention.	0 (0.0)	
The patient's requests are related to addiction.	14 (20.0)	
Which of the following is useful for treatment of cancer pain?		
Ibuprofen (Motrin)	3 (4.5)	63.6
Hydromorphone (Dilaudid)	20 (30.3)	
Gabapentin (Neurontin)	1 (1.5)	
All above	42 (63.6)	
The most accurate judge of the intensity of the patient's pain is		
The treating physician	15 (21.4)	60.0
The patient's primary nurse	10 (14.3)	
The patient	42 (60.0)	
The pharmacist	1 (1.4)	
The family	2 (2.9)	
Which of the following describes the best approach for cultural considerations in caring for patients in pain?		
There are no longer cultural influences in the region . due to the diversity of the population	1 (1.4)	88.4
Cultural influences can be determined by an individual's ethnicity (e.g., Asians are stoic, Italians are expressive, etc)	7 (10.1)	
Patients should be individually assessed to determine cultural influences	61 (88.4)	
What do you think is the percentage of patients that overstate the severity of pain they feel?		
0*	4 (5.8)	18.8
10*	9 (13)	
20	6 (8.7)	
30	13 (18.8)	
40	5 (7.2)	
50	13 (18.8)	
60	11 (15.9)	
70	4 (5.8)	
80	4 (5.8)	
How possible is it for addiction to opioids to result from the use of opioids to treat pain?		
<1%*	10 (14.5)	14.5
5%	13 (18.8)	
25%	19 (27.5)	
50%	17 (24.6)	
75%	9 (13)	
100%	1 (1.4)	

As far as clinical case studies are concerned, 17.65% of the sample responded correctly regarding Patient A's pain intensity, while 22% gave the correct answer regarding what should be the clinical intervention in that case. Moreover, 34.3% of the sample gave the correct answer regarding pain intensity of Patient B, and 20.9% gave the right answer regarding what should be done to deal with this case. Overall, knowledge scores of participants regarding pain management in the three main sections of the questionnaire ranged from 17.9% to 94.9%, with the mean percentage being 49.3% (SD=14.3).

The regression analysis that was carried out showed that the higher scores, i.e. better knowledge and higher skills for dealing with pain issues, were reported by nurses that had attended educational seminars and programs during the last years (β=11,97; SE=4,74; p=0,015). The more experienced the nurses were, the better they knew how to deal with their patients' pain issues (β=0.31; SE=0, 14; p=0,044). Last but not least, it was clearly stated that personal experience with pain was positively associated with knowledge about how to deal with pain (table 4).

Discussion

The main research finding deriving from research results is that the nurses that participated in the study have moderate knowledge regarding adequate pain management. The above finding is consistent with two previous studies which also have reported that Greek nurses need to be better trained in managing their patients' pain.[13,14] Also this finding is supported by another study which has found that nurses do not have adequate knowledge and skills to be able to treat human pain effectively.[15]

The aforementioned , of course, does not mean that all nurses in our study did not know how to adequately deal with their patients' pain. It rather shows that the average knowledge of the hospital's nurses is less sufficient, so as to effectively deal with all issues of pain. This is very important, given the very important contemporary nursing roles.[27,28] Indeed, the aim of nurses' profession is to take care of patients, in order to improve their health and quality of life.[29] Modern nurses have to perform multiple tasks, thereby constituting their occupation as highly demanding, difficult and challenging. The importance of nursing derives not only from the multifunctional role of nurses, but also from their limited number worldwide. The lack of nurses has led them to be more tired and stressed in their workplace, and consequently being prone to injuries, illnesses, and even psychological distress.[30] In the above context, the quality of healthcare provided by nurses, at least in terms of managing pain, which was examined in this study, shall be lower than necessary and expected.

Following the theoretical framework developed by Vadivelu & Sinatra,[31] better education of nurses is even more important, if it is taken into account that the most important treatment of pain is pharmaceutical treatment. At the moment, nurses in Greece acquire secondary and tertiary education, with the latter being provided by technical and higher educational institutions. Every year, 1000 to 1500 nurses graduate from such institutions, while those graduating from secondary education institutions acquire the title of "Nurse Assistant". Apart from the above, private nursing schools also operate in Greece, the graduates of which, are considered nurse assistants. As far as research hypotheses 2, 3, 4 and 5 are concerned, these can also be accepted, given the research findings. Taking H2 into consideration, it can be accepted, since it was found that attending educational seminars and programs associated with pain management highly determines nurses' capacity to deal with issues of pain adequately. This finding is highly consistent with previous studies which also stressed the need for nurses to attend educational and training programs on a regular basis, in order to refresh and

Table 4. *Results of regression analysis.*

		β*	SE**	P
Did you attend seminars or programs associated with dealing with pain during the last year?	No	0,00+		
	Yes	11,97	4,74	0,015
Nursing activity after basic education (Years)		0,31	0,14	0,044

*Coefficient of dependability **Coefficient of dependability standard error, +Category of reference

mostly update their knowledge and skills regarding pain management.[14,18,20,22]

Additionally, regarding H3, this can also be accepted, since it was found that personal pain experience adds to nurses' higher knowledge and skills for dealing with issues of pain. The same correlation between personal pain experience and pain management, in Greek nurses, was also found in previous studies.[14,32,33]

According to H4, it was hypothesized that older nurses have higher knowledge and skills for dealing with pain. This hypothesis can also be accepted, since it was found that the age is positively correlated with nurses' knowledge and skills in dealing with pain. This result is supported by other studies.[15,17]

It was also hypothesized that nurses with more professional experience have more adequate knowledge and skills for dealing with cases of patients' pain (H5). This hypothesis can also be accepted, since professional experience was found to be positively correlated with nurses' adequacy in dealing with issues of acute and chronic pain. It was also found in the current study that older nurses, and thus more experienced, have higher knowledge regarding patients' pain issues. In any case, the findings verify those of other authors, who also studied the relationship between nurses' experience and their knowledge and skills regarding pain management.[16,34]

Taking the research outcomes analyzed so far, it would be inadequate to state that research findings are in contrast with previous reports like those of Breau et al,[21] who stated that nurses' skills and knowledge of dealing with pain have well developed during the last decades.[21,35] However, although nurses' skills and knowledge have been advanced in contemporary years, they still need to be further improved, so that experience dealing with patients that suffer from various types of pain also improves. Even though McCaffery & Ferrell, acknowledge that from 1988 to 1995 nurses reported considerable improvements in how to deal with their patients' pain, it is still necessary for nurses to further improve their knowledge and skills of dealing with pain.[19]

Apart from the factors analyzed in terms of their influence in effectively dealing with pain, research findings also revealed that nurses do not evaluate their workplace as one that offers them sufficient clinical and technological assistance, so that they could perform their profession even more effectively. In addition to the above, the findings of Kiekkas et al[14] as also, the results of the current study verify that Greek nurses, work in demanding clinical environments. It seems that although education and experience are very important, it is also important for nurses to be provided with the appropriate technologies and to work in a sufficient clinical environment.[36]

Finally, this study had some limitations, such as the recruitment from 1 center and convenient sample. Although the sample size of 70 nurses was adequate enough to provide statistically significant results, however, these cannot be generalized to the entire population of Greek nurses. A larger randomly selected sample is needed for more accurate results that could be generalized to and could reflect the state and opinions of the entire Greek nurses population. Moreover, researchers could conduct future research with nurses working in more than one public and private hospitals in Greece.

Conclusion

According to research findings, participants' average knowledge and skills concerning pain management were not found to be adequate enough for dealing with less or more complex issues of acute and chronic pain of their patients. The research also indicated that professional experience, personal experience of pain, nurses' age and the attendance of educational seminars regarding pain are important determinants of the level of knowledge about pain management issues .

Research findings have important implications for both study's hospital and the Greek Health Care and Education System. From the hospital's perspective, it becomes highly evident that the hospital's managers need to provide more adequate training to staff nurses, as well as a better clinical environment and up-to-date technologies and equipment, in order to upgrade the nursing services offered by the hospital, regarding pain management. Also the Greek state, should give more emphasis on nurses' education, considering the very important contemporary nurses' role ,not only in Greece, but also globally. Further research should be held, so that generalizable conclusions are reached. In any case, this research's findings are highly indicative of the level of knowledge regarding pain management in Greek nurses, as well as of the problems they face while performing their job tasks. Finally they reflect the importance of implementation of lifelong education and training programs for nurses in Greece.

Appendix
Case Studies

Patient A: Andrew is 25 years old and this is his first day following abdominal surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor. Your assessment reveals the following information: BP=120/80 , HR=80, R=18, on a scale of 0 to 10 (0=no pain/discomfort, 10=worst pain/discomfort) he rates his pain as .

A. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Andrew's pain.

0 1 2 3 4 5 6 7 8 9 10
No Pain/discomfort Worst Pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1–3 mg q1h PRN pain relief." Check the action you will take at this time.

1. Administer no morphine at this time.
2. Administer morphine 1 mg IV now.
3. Administer morphine 2 mg IV now.
4. Administer morphine 3 mg IV now.

Patient B: Robert is 25 years old and this is his first day following abdominal surgery. As you enter his room, he is lying quietly in bed and grimaces as he turns in bed. Your assessment reveals the following information: BP=120/80; HR=80; R=18; on a scale of 0 to 10 (0=no pain/discomfort, 10=worst pain/discomfort) he rates his pain as 8.

On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Robert's pain:

0 1 2 3 4 5 6 7 8 9 10
No Pain/discomfort Worst Pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. Half hourly pain ratings following the injection ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2/10 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1–3 mg q1h PRN pain relief." Check the action you will take at this time:

1. Administer no morphine at this time.
2. Administer morphine 1 mg IV now.
3. Administer morphine 2 mg IV now.
4. Administer morphine 3 mg IV now.

ΠΕΡΙΛΗΨΗ

Αξιολογώντας τη Γνώση και τις Δεξιότητες των Νοσηλευτών Αναφορικά με τον Πόνο

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Εισαγωγή: Ο πόνος είναι ένα κοινό σύμπτωμα στους νοσοκομειακούς ασθενείς. **Σκοπός:** Να αναλύσουμε και να αξιολογήσουμε τη γνώση και τις δεξιότητες των νοσηλευτών στη διαχείριση του πόνου των ασθενών. **Μέθοδος:** Η μελέτη διεξήχθη με ένα επαρκές δείγμα 70 νοσηλευτών που εργάζονται σε ένα Γενικό Νοσοκομείο στην Ελευσίνα, Ελλάδα. Ζητήθηκε από τους συμμετέχοντες να συμπληρώσουν το ερωτηματολόγιο των Ferrell και Mc Caffery για την έρευνα αναφορικά με τον πόνο σχετικά με τη γνώση και τις προσεγγίσεις, στην ελληνική του εκδοχή. **Αποτελέσματα:** Τα ευρήματα της έρευνας υπέδειξαν ότι κατά μέσον όρο οι νοσηλευτές δεν είχαν την επαρκή γνώση και τις δεξιότητες για να διαχειριστούν κατάλληλα τον πόνο των ασθενών τους. Η πιο εξελιγμένη γνώση και οι δεξιότητες συσχετίστηκαν με την παρακολούθηση σε σεμινάρια και σε εκπαιδευτικά προγράμματα σχετικά με τη διαχείριση του πόνου κατά τη διάρκεια του τελευταίου έτους (p= 0,015) και κατά τη διάρκεια ετών επαγγελματικής εμπειρίας (p= 0,044). **Συμπέρασμα:** Τα ευρήματα της παρούσας μελέτης απεκάλυψαν ότι οι νοσηλευτές έχουν ανεπαρκή γνώση αναφορικά με τη διαχείριση του πόνου. Επιπρόσθετα, οι πολιτικές Υγείας ή οι θεσμοί θα πρέπει να εστιάσουν στη συνεχή εκπαίδευση για να διευθετήσουν το πρόβλημα.

Λέξεις-κλειδιά: *Πόνος, Χρόνιος πόνος, οξύς πόνος, νοσηλευτές, γνώση, ικανότητες νοσηλευτών, διαχείριση πόνου.*

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