Knowledge and Practice Situations of Nurses on Non-pharmacological Methods and in Pain Management

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Abstract

This research was carried out to determine the knowledge and practice situations of nurses on non-pharmacological methods of pain management. The research was carried out at Gumushane State Hospital, Kelkit State Hospital and Siran State Hospital between June 2014 and May 2015, together with the Gumushane Public Hospitals Association. It involved 224 nurses, who worked in hospitals connected to Gumushane public hospitals unity. The research was completed with 181 nurses. The data were obtained between December 2014 and January 2015 and on weekdays by the relevant face-to-face interview technique. The number, percentage, arithmetic mean, chi-square, standard deviation, Pearson Chi-square, *t*-test and Mann Whitney-*U* test were used for analysis of data. It was determined that 62.4% of the nurses used the pharmacological and non-pharmacological methods together for pain management and were mostly informed about the methods of massage, hot–cold application, nutritional therapy, music therapy and prayer and healing methods.

Keywords: Pain management, knowing, nursing, non-drug methods, practice.

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1.Introduction

Pain is a health problem that is becoming increasingly common and is often inadequately treated worldwide. The pain that every human being experiences at some point in his life is now regarded as the fifth living finding [1, 3].

It is a question that affects a person's daily life, psychosocial status and quality of life to a great extent, including a large part of the pain society. It has been shown that individuals experience pain, change of sleep patterns, loss of role or role change due to family relationships, decrease in work productivity, productivity and loss of self-esteem, together with despair [4, 5].

The concept of pain, one of the common experiences of people, has been described by the International Association for the Study of Pain as 'sensory and emotional experience associated with or associated with tissue damage or potential tissue damage' [6, 7].

Today, drugs are widely used in pain management. Analgesic treatment is the most preferred method of relieving pain due to its rapid action and easy accessibility and applicability.

Non-drug-based methods are also used to improve the effectiveness of drug treatment in situations where drug treatment is not used in pain management. Non-drug methods include reducing the rate of use of analgesics for use during pain, relieving the pain of the individual and increasing the quality of life. The advantage of this method is that it is easy to apply by the individual, the side effects of analgesics are absent and the individual is not loaded in the economic direction [8].

Nowadays, the importance of pain management by a multidisciplinary team approach is immense. There are patients, nurses, physicians and other health personnel in this team. The nurse has an important role in pain management. This role distinguishes from the other team members and is important: providing the patient with strategies for coping with pain, guiding the patient, applying the planned medication, monitoring the results, establishing empathy and sympathy, as well as having the nurse to stay longer than the patient and the other team members to learn the patient's previous pain experiences and coping methods and use them when necessary [9].

Effective assessment of pain is a prerequisite for pain management and one of the important elements of nursing care. The nurse, who assumes important responsibilities in the care of the pain patient, needs to know the pain behaviours of the patients and how the other team members describe the pain patient so that they can take part in pain management. For this reason, nurses should have sufficient knowledge and experience of pain [3, 10].

2.Materials and Methods

This study was conducted as a descriptive study to determine nurses' knowledge of non-drug methods for pain management and their application. The research was carried out between June 2014 and May 2015 at Gumushane State Hospital, Kelkit State Hospital and at Siran State Hospital, affiliated to the Gumushane Province Public Hospitals Association. 'The universe of your research'; Gumushane State Hospital, Gumushane State Hospital and 224 nurses working in the clinics of Kelkit State Hospital and Siran State Hospital. The entire universe was sampled without using any sampling method. The survey was completed with 181 nurses (response rate: 80.8%).

In gathering the data, the Personal Information Form created by the researcher and the non-drug methods form in pain management were used. The data were collected by the researcher from December 2014 to January 2015. On weekdays, the data were collected by face-to-face interview technique. The Personal Information Form and the Non-Drug Methods of Pain Management Form were used for the collection of data. The first part of the questionnaire form created by the researcher consists of a 12-item personal information form questioning the introductory characteristics of the nurses and information about pain management (age, gender, education status, interest in education). The second part of the questionnaire consists of a 20-item form of non-drug methods that identify

nurses' non-drug methods and their application status. In the form of these medicines, there are complementary and supportive care practices which are frequently preferred (massage, hot–cold application, music therapy, nutritional therapy, aromatherapy and imagination) for pain relief [11].

Permission for research was obtained in written form from Gumushane Provincial Public Hospitals Association and the Malatya Clinical Investigation Ethics Committee. In addition, information was given to all nurses about the research and the volunteer information form was read to include those who volunteered to participate in the survey.

Statistical program for the social sciences 17.0 was used for the analysis of data. In evaluating the data, Pearson chi-square, t-test and Mann Whitney-U test were used to evaluate the relationship between introductory features and non-drug methods in terms of number, percentage, arithmetic mean, chi-square and standard deviation in evaluating the descriptive characteristics of nurses.

3.Results

The distribution of the descriptive characteristics of the nurses is shown in Table 1. It was determined that the average age of the nurses included in the study was 28.01 ± 6.48 (18–55 years), 83.4% were women, 42.5% were undergraduates, 61.9% were working in Gumushane State Hospital and 27.1% were working in the internal clinics.

Table 1. Distribution of descriptive characteristics of nurses (Q: 181)

Introductory characteristics of nurses	S	%
Gender		
Woman	151	83.4
Male	30	16.6
Education level		
High school	61	37.3
Associate	38	21.0
License	77	42.5
MSc	5	2.8
Working hospital		
Gumushane State Hospital	112	61.9
Kelkit State Hospital	54	29.8
Siran State Hospital	15	8.3
Working clinic		
In-person clinic	49	27.1
Surgical clinic	40	22.1
Emergency	29	16.0
Intensive care + Operating	37	20.4
Room	14	7.7
Paediatric clinics	12	6.6
Female birth + Delivery room		
Age	28.01 ± 6.48	

Table 2. Distribution of some situations of nurses related to pain management (*S* = 181)

Education participation status	*S*	%
Participants	76	42
Not participating	105	58
Tracking status	*S*	%
Followers	23	12.7
Not following	158	87.3
Pain scale	*S*	%
Those measuring	153	84.5
Measuring only	28	15.5
Methods used	*S*	%
Pharmacological methods	65	35.9
Non-pharmacological methods	3	1.7
Pharmacological + Non-pharmacological methods	113	62.4

The distribution of some situations related to nurses' pain management is shown in Table 2. It was determined that 58% of the nurses did not participate in any training with pain management, 87.3% did not follow the publication of pain management, 84.5% of them rated the pain levels of the patients in pain management and 62.4% of them used pharmacological and non-pharmacological methods in pain management.

Table 3. Distribution of nurses' knowledge and practice status of non-drug methods (*S* = 181)

Non-drug treatment methods	Knowing situation				Application status			
	Yes		No		Yes		No	
	S	%	*S*	%	*S*	%	*S*	%
Massage and manipulation	145	80.1	36	19.9	103	56.9	78	43.1
Aromatherapy	22	12.2	159	87.8	5	2.8	176	97.2
Hot–cold application	172	95.0	9	5.0	158	87.3	23	12.7
Meditation	53	29.3	128	70.7	0	0	181	100
Nutritional therapy	109	60.2	72	39.8	87	48.1	94	51.9
Plant treatment	68	37.6	113	62.4	38	21	143	79
Art therapy	31	17.1	150	82.9	7	3.9	174	96.1
Colour therapy	15	8.3	166	91.7	3	1.7	178	98.3
Bioenergy	21	11.6	160	88.4	2	1.1	179	98.9
Dreaming	85	47.0	96	53.0	45	24.9	136	75.1
Biofeedback	17	9.4	164	90.6	8	4.4	173	95.6
Dance therapy	29	16	152	84.0	1	0.6	180	99.4
Music therapy	91	50.3	90	49.7	39	21.5	142	78.5
Healing with prayer	124	68.5	57	31.5	97	53.6	84	46.4
Hypnosis	42	23.2	139	76.8	0	0	181	100
Reiki	4	2.2	177	97.8	0	0	181	100
Acupuncture	51	28.2	130	71.8	0	0	181	100
Spa	103	56.9	78	43.1	2	1.1	179	98.9
Siropraks	2	1.1	179	98.9	1	0.6	180	99.4
Yoga	45	24.9	136	75.1	0	0	181	100

In the study, 80.1% of the nurses reported massage and manipulation and 56.9% applied massage and manipulation, 95% of them knew hot–cold applications, 87.3% used hot–cold applications, 60.2% knew nutritional therapy, 51.9% did not use nutritional therapy, 50.3% knew music therapy but 78.5%

68.5% of them knew the method of healing with prayer, 53.6% applied this method and 56.9% knew the spa method but did not apply this method completely.

Table 4. Comparison of nurses' age averages and non-drug recognition and implementation situations

Non-drug methods	Age	Test and significance
Massage and manipulation		
Knowledge		
Yes	27.76 ± 6.67	*t* = −1.02
No	29.00 ± 5.61	*p* = 0.30
Application status		
Yes	27.64 ± 6.53	*t* = −0.86
No	28.49 ± 6.41	*p* = 0.38
Hot–cold application		
Knowledge		
Yes	91.05	MWu = 766
No	90.11	*p* = 0.95
Application status		
Yes	91.15	MWu = 1793
No	89.96	*p* = 0.91
Dreaming		
Knowledge		
Yes	27.88 ± 5.94	*t* = −0.24
No	28.11 ± 6.95	*p* = 0.81
Application status		
Yes	28.22 ± 6.21	*t* = 0.25
No	27.93 ± 6.58	*p* = 0.79
Music therapy		
Knowledge		
Yes	27.63 ± 6.61	*t* = −0.79
No	28.39 ± 6.35	*p* = 0.43
Application status		
Yes	28.00 ± 6.60	*t* = −0.00
No	28.01 ± 6.47	*p* = 0.99
Healing with prayer		
Knowledge		
Yes	28.00 ± 6.89	*t* = −0.01
No	28.02 ± 5.53	*p* = 0.98
Application status		
Yes	27.42 ± 6.36	*t* = −1.30
No	28.68 ± 6.59	*p* = 0.19
Hypnosis		
Knowledge		
Yes	29.76 ± 7.28	*t* = 2.02
No	27.47 ± 6.15	*p* = 0.04
Reiki		
Knowledge		
Yes	38.25 ± 8.50	*t* = 3.28
No	27.77 ± 6.26	*p* = 0.00

The comparison of the knowledge of non-drug methods in the management of pain among the nurses covered by the research and comparison of their application statuses and age averages is

shown in Table 4. From non-drug methods, hypnosis and knowledge of the method of reiki were statistically significant.

4.Discussion

Pain, one of the common experiences of people, is a very common, growing and often medically treated health problem. The rapid onset of drug treatment, the ease with which it can be achieved and its feasibility increases with the use of drugs. However, unfavourable conditions such as the burden, unconscious use and side effects that the country brings to the economy increase the use of non-drug methods in pain management. It is also effective in cases such as easy application of non-drug methods, lack of side effects and non-economic burden on the individual [6, 7]. The data of this study which was done to know nurses' non-drug methods of pain management and to determine the application cases are discussed with the related literature.

Nurses with sufficient knowledge and experience in pain management are important to fulfil their independent roles. In this regard, it was determined that 58% of the nurses included in our study did not participate in any training related to pain management and 87.3% of the nurses did not follow any publication related to pain management. In a study conducted by the Lake and Restorer, it was determined that 90% of the nurses did not receive education about pain and 75% did not follow publications about pain [12]. The results of this study are similar to the results of the research. It is considered that nurses do not have enough information on this issue because of the lack of information about pain management during nursing education. It is also thought that today nurses are not willing to reach information about pain management.

The easiest way to evaluate pain is to ask if the patient has pain and use the scale to assess the pain level. It was determined that 84.5% of the nurses included in our study measured the pain levels of the patients in pain management. In the study conducted by Akdemir *et al.* [13], 70.4% of the nurses measured the level of patients' pain. In the study conducted by Yılmazer and Bilgili [14], it was determined that nurses measured the pain level of 54% of patients. There is a similarity between the results of the research and the study done. It is considered that nurses know the importance of pain assessment in the management of pain and use of the scale is high because they are sensitive about this issue.

The use of non-drug methods as well as drug treatment in pain management is great, and the use of non-drug methods has become more prevalent in recent times. It was determined that 62.4% of the nurses included in our study used pharmacological and non-pharmacological methods for pain management together. In the study conducted by Akdemir *et al.* [13], it was determined that 90% of the nurses used non-pharmacological and pharmacological methods together. Ozveren and Ucar [15] found that 92.6% of student nurses used pharmacological and non-pharmacological methods together. It has been determined that the results of these studies are consistent with the results of the research. This result is thought to be associated with nurses' awareness of both dependent and independent roles in pain management and their use of independent roles in pain.

Most of the nurses who are included in our research know the hot and cold application, massage and manipulation, nutritional therapy, music therapy, healing with prayer and spa method from non-drug methods in pain. In the study performed by Lafcı and Kara Kasıkcı [16], it was determined that the health personnel were most informed about music therapy, massage, religious practices and diet support. The results of this study support the results of our research. This result is thought to be related to nurses choosing non-drug methods that do not require special education or are easy to apply in pain management.

Nurses use hot–cold application, massage and manipulation, prayer and healing, nutritional therapy and imagination the most, all the way around the patients' aches. In the study by Bulluce *et al*. [17], 96% of the healthcare workers were performing hot–cold application to the pain area, and 85.9% of them were massaging to accelerate circulation, to provide comfort and to reduce pain. In Jacop and

Puntilla's study [18], it was found that 66.5% of the nurses used other withdrawal methods of attention from the non-drug methods in order to relieve the pain of the children.

It is often seen that nurses have chosen methods that will not cause discomfort to the people that they receive, and that they can easily apply. Gatlin and Schulmeister's work [19] emphasises that nurses can use simple invasive and non-drug pain relief methods such as positioning, hot–cold application, massage therapy and aromatherapy. It has been determined that nurses frequently choose methods of positioning, taking care of the patient, applying hot/cold massage and massaging [20]. It may be a reason for nurses to choose these methods, as people often use these methods at home. In addition, some methods like acupuncture, reiki, meditation, hypnosis, chiropractic and yoga require special training. In our study, it was determined that the knowledge of the nurses related with mostly non-drug methods (massage and manipulation, hot–cold application, music therapy, religious practices, nutrition therapy) was better. Therefore, it can be said that having information about the methods influences the use of the method.

It has been determined that the methods of aromatherapy, art therapy, colour therapy, bioenergy, biofeedback and dance therapy are rarely used by nurses and meditation, hypnosis, reiki, acupuncture, chiropractic and yoga methods are not used except for the methods mentioned above. Little use of these methods by nurses may be due to insufficient knowledge of them. The use of some other methods requires special training.

It was found that the difference between the mean age only knowledge of hypnosis and reiki method was significant ($p < 0.05$) on the statistical evaluation in terms of knowing and applying the non-drug methods according to the average of the nurses included in the study. This result shows that the age of nurses influences some non-drug-related knowledge situations. In the early studies, it was stated that the variable age affected nurses' knowledge of the pain method. Studies conducted by Niekerk and Martin [21] have shown that age influences the knowledge of pain management and that nurses in the 20–29 age group are more informed than those aged 40 and over.

5. Conclusion

In the research, we conducted to determine nurses' knowledge of non-drug methods in pain management and their application, most of the nurses were informed about the methods of massage and manipulation, hot–cold application, nutritional therapy, music therapy, healing with prayer and spa therapy from non-drug methods in pain management. Some had applied drugs, and usually preferred drug treatment for pain management.

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