

The Fear of Pain in Hospitalized Patients in Medical and Surgical Departments

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ABSTRACT

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Keywords:

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Purpose: This study was conducted to determine the fear of pain in hospitalized patients in medical and surgical departments.

Method: This descriptive study was conducted on 302 hospitalized patients in the medical and surgical departments of a public hospital from 15 September to 30 November 2018. The data were collected using "Patient Identification Form" and "Fear of Pain Questionnaire-III". Mean, standard deviation, percentage, Pearson correlation test, independent samples t-test, and one-way ANOVA were used for statistical analysis.

Results: The mean age of the patients was 46.12±1.05 years. 58.3% of them were women. Their average scores of fear of pain were 76.72 ± 20.61. This average was 76.66±20.10 in the medical department and 76.82±21.61 in the surgical department. There was no significant difference between the scores of fear of pain and its subscale in the two departments (p>0.05). We found a significant negative correlation (r=-0.124; p<0.05) between age and the fear of pain. Also, it was found that the fear of pain in women was higher than the fear of pain in men (p<0.05).

Conclusion and Suggestions: Our study showed that there was no significant difference between the mean score of fear of pain in internal and surgical departments. However, our result confirmed that the fear of pain level was different according to gender. In addition, as the age of the patients increase the level of fear of severe pain decrease. So, it is recommended to conduct this study on different sample groups.

Dahili ve Cerrahi Kliniklerinde Yatan Hastaların Ağrı Korku Düzeylerinin Belirlenmesi

Makale Bilgileri

ÖZ

Makale Geçmiş

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Anahtar Kelimeler:

Ağrı,
Korku,
Hasta.

Amaç: Bu çalışma, dahiliye ve cerrahi kliniklerinde yatan hastaların ağrı korku düzeylerinin belirlenmesi amacıyla yapıldı.

Yöntem: Tanımlayıcı tipteki araştırmanın örneklemini, 15 Eylül-30 Kasım 2018 tarihleri arasında bir devlet hastanesinin dahiliye ve cerrahi kliniklerinde yatarak tedavi olan 302 hasta oluşturdu. Veriler, "Hasta Tanıtım Formu" ve "Ağrı Korku Ölçeği-III" ile toplandı. Verilerin değerlendirilmesinde, ortalama, standart sapma, sayı-yüzde dağılımları, pearson korelasyon testi, cronbach alpha, independent samples test (T-testi), one-way ANOVA, post hoc multiple comparisons testleri kullanıldı.

Bulgular: Araştırmaya katılan hastaların yaş ortalaması 46.12±1.05 yıl, %58.3'ü kadın ve Ağrı Korku Ölçeği-III toplam puan ortalaması ise 76.72±20.61'dir. Ölçek toplam puan ortalaması dahiliye kliniklerinde yatan hastalarda 76.66±20.10; cerrahi kliniklerinde yatan hastalarda ise 76.82±21.61 olarak belirlendi. Hastaların tedavi aldıkları kliniğe göre ağrı korkusu ölçeği-III toplam ve alt boyut puan ortalamaları arasında anlamlı farklılık bulunmadı (p>0.05). Hastaların yaşı ile şiddetli ağrı korkusu arasında negatif yönde anlamlı korelasyon bulundu (r=-0.124; p<0.05). Ayrıca, kadın hastaların ağrı korku düzeyleri erkek hastalardan daha yüksek saptandı (p<0.05).

Sonuç ve Öneriler: Çalışmamız dahili ve cerrahi bölümlerde ağrı korkusu puan ortalamaları arasında anlamlı bir fark olmadığını göstermiştir. Ancak, araştırmamızın bulguları, cinsiyete göre ağrı korku düzeylerinin farklı olduğunu doğruladı. Ayrıca, hastaların yaşı arttıkça şiddetli ağrı korkusu düzeyleri de azalmaktadır. Bu araştırmanın farklı örneklem gruplarında yapılması önerilmektedir.

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INTRODUCTION

The International Association for the Study of Pain (IASP) defines pain as “an unpleasant emotional sensation associated or not associated with tissue damage in a particular area of the body that can be related to one's past experiences” (International Association for the Study of Pain, 2019). Pain is perceived by nociceptors in the skin as a result of the interaction of the individual's environment and nervous system (Aslan & Arli, 2017; Willens, 2010), and is transmitted correctly in the upper centers of the brain (Melzack, 1996; Willens, 2010).

If the individual's experience of pain in the past was positive, the sense of pain may be less, and if it was negative, the individual may perceive it more intensely (Melzack, 1996; Willens, 2010). Perceive of pain depend on physical, emotional, and social factors (Craven et al., 2015; Eti Aslan & Badir, 2005; Yucel & Ozyalcin, 2002). Experience of worst pain can adversely affect an individual's daily and social life, and it may cause anxiety, worry, anger, and fear (Vlaeyen et al., 1995).

It is stated that factors such as fear may occur and increase existing pain (Asmundson et al., 2012; Meulders et al., 2015; Simons & Kaczynski, 2012). Especially, in an individual with recurrent and non-coping pain, the sense of fear can develop (Willens, 2010). Fear of pain is associated with the development of pain and pain-related disability as well as the continuation of existing pain (Nees & Becker, 2017; Turk & Okifuji 2002). It also leads to avoiding physical activities and limiting participation in daily living activities (Ay & Alpar, 2010; Erdil, 2012; Keefe et al., 2004).

Pain is a common symptom in patients hospitalized in internal and surgical departments (Pasero, 2003), and nurses reported that the highest pain score was 34.8% in internal and 30.4% in surgical departments (Ozveren et al., 2018). Patients with chronic diseases usually receive treatment in internal medicine departments and they usually experience chronic pain. Therefore, these patients may experience many problems such as anxiety and fear related to pain (Black et al., 2015; Carpino et al., 2014; Vlaeyen et al., 1995).

Fear of pain is often seen in patients who undergo surgery (Cimilli, 2001; Doganer et al., 2015) and before the surgical initiative (Unver & Turan 2015). However, this pain can affect the duration, degree, and extent of surgical intervention (Kilic & Oztunc, 2012).

Pain and fear of pain are a threat, especially for a patient in the surgical departments; and when it is felt, stress emerge. If the pain and fear of pain do not relieve and the stress prolonge, physiopathologic responses may develop (Faydali, 2010). As a result of this physiopathological response, many complications in different systems may develop. For example, atelectasis and hypoxemia in the respiratory system, increasing catecholamine and blood sugar in the endocrine system, hypertension, and tachycardia in cardiovascular system, decreasing stomach and intestinal motility in the gastrointestinal system, increasing the tendency to infection and delayed wound healing in the immune system, and muscle spasm, inactivity, and urine retention in the urinary system (Cambitzi et al., 2000). Furthermore, failure of pain management and inability to overcome the fear of pain can lead to a prolonged hospital stay, increased health care costs,

mortality and morbidity, decreased quality of life and patient satisfaction, and loss of labor (Carpino et al., 2014, Hirsh et al, 2018; McNeil & Rainwater, 1998; Osman et al., 2002 ; Zale et al., 2013).

Therefore, besides the assessment of the patients' existing pain, the determination of the level of fear of pain is very important (Unver & Turan 2018). In this regard, nurses are the primary health care personnel responsible for pain management in the clinics they work (Ferrell et al., 2000). Nurses' assessment of patients' pain and their fear of pain is very important and can help to protect their health, inform the patients, manage the pain and reduce its complication rates (Unver & Turan, 2018). So, this

study aims to determine the fear of pain in hospitalized patients in medical and surgical departments.

Research Questions

- What is the level of pain fear in medical departments?
- What is the level of pain fear in surgical departments?
- Is there any differences between the levels of pain fear in medical and surgical departments?
- Is there any difference between the levels of pain fear in medical and surgical departments according to sociodemographic characteristics?

METHOD

Research Design

This was a descriptive study that was conducted in medical and surgical departments at one State Hospital from 15 September to 30 November 2018.

Participants

The population of the study consisted of patients hospitalized in Medical and Surgical Clinics between 15 September – 30 November 2018. In the study, no sampling method was used, and the study was conducted with 302 patients who met the inclusion criteria. The data were collected in clinics with inpatients, because the hospital is small and some departments have no hospitalized patients. 23 people who refused to participate in the study were not included in the study. The patients in the internal department were 7 from the chest diseases department and 188 from the internal medicine department. The patients in the surgical department were 79 from the general surgery department and 28 from the orthopedics and traumatology department.

Inclusion criteria:

- 18 years and older,
- Being in internal medical and surgical clinics,
- Conscious and able to communicate,
- Willing to participate in the study.

Research Instruments and Processes

“Patient Identification Form” and “Fear of Pain Questionnaire-III” were used to collect the research data.

Patient Identification Form: The relevant literature was reviewed to create this form (McNeil et al., 1998, Osman et al., 2002; Unver & Turan 2018). In this form, seven questions were used to determine the sociodemographic characteristics of the patients (age, gender, marital status, educational level, income level, clinical setting, and diagnosis).

Fear of Pain Questionnaire-III: This scale was developed by McNeil and Rainwater (1998). The validity and reliability study of the scale on Turkish society was conducted by Unver and Turan (2018). This scale is 5-point Likert type and consists of three sub-dimensions (fear of severe pain, fear of medical pain, fear of mild pain) and a total of 30 items. A minimum score of 30 to a maximum score of 150 can be obtained from the scale. A higher score indicate a higher fear of pain. The Cronbach alpha value was 0.938 (Unver & Turan 2018). In this study, the Cronbach alpha reliability coefficient for the overall scale was found to be 0.910.

The data were collected face to face by the clinical nurse at the bedside and at the available time of the patients. Each questionnaire took 15 minutes.

Data Analysis

The data were analyzed using SPSS version 24.00. The significance level was considered at $p < 0.05$. Parametric tests were used because the data of the study were normally distributed. While determining the conformity of the data to normal distributed, the decision was made according to the result of “mean \pm 2. Standart deviation”. It was considered to have a normal distribution, because %95.44 of the data were in this range. Descriptive findings of the study were presented with mean, standard deviation, number, and percentage. Pearson correlation test, independent samples t-test, and one-way ANOVA tests were used to evaluate the data.

Ethic

The necessary permission was obtained from the Ethics Committee of Gümüşhane University (2018/7 issue and dated 13/09/2018) one State Hospital where the research was conducted. In addition, informed consent was obtained from patient by explaining the aim of the study.

RESULTS

The mean age of the participants was 46.12 ± 1.05 years. 58.3% were women, 62.9% were married, 62.9% had primary and lower education levels, and 63.9% had an income equivalent to expense. 64.6% of the patients were hospitalized in the medical departments and 22.5% had a problem in the endocrine system (Table 1).

Table 1. Sociodemographic Characteristics of Patients in Medical and Surgical Departments (n=302)

Variable	n	%
Gender		
Women	176	58.3
Men	126	41.7
Marital Status		
Married	190	62.9
Single (divorced / widowed)	112	37.1
Education Level		
Primary school and below	190	62.9
Middle School	34	11.3
High School and above	78	25.8
Income perception level		
Income less than the expense	61	20.2
Income equivalent to the expense	193	63.9
Income more than the expense	48	15.9
Hospitalized department		
Medical department	195	64.6
Surgical department	107	35.4
Diagnosis		
Endocrine disease	68	22.5
Gastrointestinal disease	40	13.2
Hernia, appendectomy, etc.	36	11.9
Respiratory disease	35	11.6
Urinary disease	32	10.6
Musculoskeletal disease	32	10.6
Cancer	31	10.3
Cardiovascular disease	28	9.3
The Average age (Mean±SD)	46.12±1.05 (Min:27-Max:90)	

The mean score of fear of pain was 76.72 ± 20.61 . The fear of severe pain was 27.98 ± 7.60 , the fear of mild pain was 23.837 ± 6.80 , and the fear of medical pain was 24.89 ± 8.67 . The mean score of fear of pain was 76.66 ± 20.10 for hospitalized patients in medical and 76.82 ± 21.61 for hospitalized in surgical departments (Table 2).

Table 2. Mean and Total Dimension Scores of Patients' Fear of Pain Questionnaire-III (n=302)

Scale sub-dimensions	Mean ± Standard Deviation		
	Medical and Surgical Departments	Medical Departments	Surgical Departments
Fear of severe pain	27.98±7.60	27.84±7.61	28.25±7.61
Fear of mild pain	23.83±6.80	23.82±6.55	23.86±7.26
Fear of medical pain	24.89±8.67	25.00±8.48	24.70±9.01
Total Scores	76.72±20.61	76.66±20.10	76.82±21.61

As table 3 showed, there was no significant correlation between the mean age and total scores fear of pain. But, there was a negative correlation between age and severe fear of pain subscale ($p < 0.05$) (Table 3).

Table 3. Correlation Between Age and Fear of Pain Questionnaire-III Total and Subdimension Mean Scores (n = 302)

Scale sub-dimensions	Age	Fear of severe pain	Fear of mild pain	Fear of medical pain	Total scores
Fear of severe pain					
r / p	0.124/0.032	-	-	-	-
Fear of mild pain					
r / p	0.025/0,659	0.625/0,000	-	-	-
Fear of medical pain					
r / p	0.078/0.178	0.714/0,000	0.739/0.000	-	-
Total scores					
r / p	0.087/0.133	0.875/0.000	0.871/0.000	0.927/0.000	-

Significance: $p < 0.05$, Pearson correlation test were used.

The mean score of fear of pain was 79.25±20.60 for women and 73.18±20.18 for men. There was a significant difference between the mean score of the fear of pain in men and women (p<0.05). The mean score of the fear of pain was 75.40±19.71 for married patients and 78.95±21.97 for single patients. There was a significant difference between the mean score of the fear of severe pain in married and single patients (p<0.05) (Table 4).

Table 4. Mean and Total Dimension Score of Fear of Pain Questionnaire-III According to Sociodemographic Characteristics of the Patients (n = 302)

	Fear of severe pain	Fear of mild pain	Fear of medical pain	Total Score
Gender				
Women	28.81±7.67	24.65±6.76	25.78±8.82	79.25±20.60
Men	26.82±7.37	22.69±6.71	23.65±8.32	73.18±20.18
Significance*	t=2.261 p=0.024	t=2.484 p=0.014	t=2.114 p=0.035	t=2.547 p=0.011
Department				
Medical Clinics	27.84±7.6	23.82±6.55	25.00±8.48	76.66±20.10
Surgical Clinis	28.25±7.61	23.86±7.26	24.70±9.01	76.82±21.61
Significance*	t= -0.449 p= 0.654	t= -0.059 p= 0.953	t= 0.291 p= 0.771	t= -0.063 p= 0.950
Marital Status				
Married	27.20±7.33	23.50±6.27	24.70±8.59	75.40±19.71
Single	29.31±7.89	24.41±7.60	25.23±8.81	78.95±21.97
Significance*	t=-2.344 p=0.020	t=-1.124 p=0.262	t=-0.515 p=0.607	t=-1.448 p=0.149
Education level				
Primary school and below	27.83±7.71	24.21±6.90	24.82±8.74	76.86±21.10
Middle School	28.41±7.14	24.08±6.64	26.52±8.92	79.02±20.25
High School and above	28.17±7.59	22.82±6.58	24.35±8.38	75.35±19.70
Significance**	F=0.117 p=0.890	F=1.182 p=0.308	F=0.759 p=0.496	F=0.387 p=0.680
Income level				
Income less than th eexpense	30.54±7.14	25.72±6.49	27.42±8.10	83.68±18.95
Income equivalent to the expense	27.37±7.57	23.26±6.68	23.93±8.78	74.57±20.71
Income is more than the expense	27.20±7.75	23.75±7.34	25.54±8.33	76.50±20.70
Significance***	F=4.421 p=0.013	F=3.070 p=0.048	F=3.991 p=0.019	F=4.642 p=0.010
Diagnosis				
Cancer	28.71±7.87	24.23±8.00	24.23±10.48	77..6±23.96
Urinary disease	30.00±7.04	23.78±7.29	26.13±9.39	79.91±20.60
Respiratory disease	26.97±7.11	24.40±7.45	25.31±9.62	76.69±22.60
Cardiovascular disease	28.18±8.05	23.43±5.70	24.46±7.56	76.07±18.97
Musculoskeletal disease	28.91±9.10	23.63±7.04	25.38±8.93	77.91±22.60
Endocrine disease	26.22±6.24	23.94±6.24	24.18±8.18	74.34±18.25
Gastrointestinal disease	29.32±8.52	23.53±6.67	25.85±8.38	78.70±20.80
Hernia. Appendectomy, etc.	27.44±7.60	23.57±6.91	24.19±7.2	75.31±19.56
Significance**	F=1.254 p=0.273	F=0.084 p=0.999	F=0.319 p=0.945	F=0.332 p=0.939

* independent samples test (t-test), ** one-way ANOVA test, *** one-way ANOVA ve post hoc multiple comparisons test, ****p<0.05

There was a significant difference between the mean score of fear of pain in men and women patients in surgical departments. Also, there was a significant difference between the mean of total and sub-dimensions' scores at different income levels (p<0.05) (Table 5).

DISCUSSION

This study aimed to determine the fear of pain in hospitalized patients in the medical and surgical departments. Our result showed that there was no significant difference between the fear of pain in hospitalized patients in internal and surgical departments. As most participants in this study were treated in the internal medicine department and most of them had gastrointestinal diseases (stomach bleeding etc.) and cancer. Especially, cancer pain is chronic pain, terrible, and unbearable. In research, it was determined that most of the patients who applied to the pain clinic were cancer patients (Pirbudak-Cöcelli et al., 2009). Therefore, this result can be controversial as there was no significant difference between the fear of pain in hospitalized patients in internal and surgery departments.

Our results showed that the mean total score for fear of pain was moderate. Contrary to the results, Unver and Turan (2018) found that the total mean score of fear of pain was higher (82.38 ± 16.74). This is thought to be due to the higher mean age in our study. In another study (Vambheim et al., 2017), the total means score of fear of pain was found to be 77.60 ± 14.30 , which is similar to the results of this study. This is thought to be due to the younger and healthy participants in the study of Vambheim et al (2017). Because, young people could be afraid of being patient and suffering according to older people.

Table 5. Score of Fear of Pain Questionnaire-III According to Sociodemographic Characteristics of Inpatients in Internal Medicine and Surgical Departments (n = 302)

	Fear of severe pain		Fear of mild pain		Fear of medical pain		Total	
	Surgical Departments	Internal Medical Departments	Surgical Departments	Internal Medical Departments	Surgical Departments	Internal Medical Departments	Surgical Departments	Internal Medical Departments
Gender								
Women	29.70±7.14	28.39±7.91	25.22±6.65	24.37±6.82	26.91±9.13	25.24±8.65	81.84±20.43	78.01±20.65
Men	26.60±7.86	26.97±7.08	22.32±7.67	22.94±6.04	22.18±8.27	24.63±8.26	71.10±21.69	74.55±19.14
Significance*	t=2.138 p=0.035	t=1.273 p=0.204	t=2.100 p=0.038	t=1.491 p=0.138	t=2.793 p=0.006	t=0.90 p=0.625	t=2.636 p=0.010	t=1.175 p=0.242
Marital Status								
Married	27.20±7.22	27.20±7.41	23.47±6.49	23.51±6.18	24.34±8.08	24.87±8.86	75.03±19.64	75.59±19.82
Single	29.75±7.97	29.02±7.88	24.43±8.28	24.39±7.20	25.20±10.28	25.25±7.79	79.38±24.16	78.67±20.61
Significance**	t=-1.716 p=0.089	t=-1.601 p=0.111	t=-0.668 p=0.506	t=-0.898 p=0.370	t=-0.481 p=0.632	t=-0.294 p=0.769	t=-1.026 p=0.307	t=-1.022 p=0.308
Educational level								
Primary school and below	27.31±7.86	28.06±7.66	23.62±7.61	24.46±6.58	24.05±9.35	25.16±8.47	74.98±23.02	77.69±20.23
Middle School	31.75±6.06	26.59±7.15	26.33±5.56	22.86±6.97	28.75±8.03	25.31±9.33	86.83±16.17	74.77±21.30
High School and above	28.59±7.47	27.80±7.78	23.45±7.18	22.24±6.01	24.40±8.66	24.31±8.22	76.45±20.44	74.36±19.20
Significance***	F=1.774 p=0.175	F=0.350 p=0.705	F=0.780 p=0.461	F=2.091 p=0.126	F=1.390 p=0.254	F=0.172 p=0.842	F=1.517 p=0.224	F=0.537 p=0.585
Income level								
Income less than the expense	29.33±7.50	31.32±6.89	24.91±6.69	26.22±6.40	27.00±8.33	27.70±8.06	81.25±19.72	85.27±18.53
Income equivalent to the expense	28.26±7.63	26.93±7.53	23.79±7.38	23.00±6.32	24.53±9.60	23.64±8.36	76.59±22.69	73.57±19.67
Income is more than the expense	26.84±7.85	27.44±7.82	22.78±7.72	24.37±7.14	22.36±7.38	27.62±8.37	72.00±20.01	79.44±20.95
Significance***	F=0.563 p=0.571	F=5.035 p=0.007	F=0.458 p=0.634	F=3.746 p=0.025	F=1.438 p=0.242	F=5.114 p=0.007	F=0.979 p=0.379	F=5.431 p=0.005

* independent samples test (t-test), ** one-way ANOVA test, *** one-way ANOVA ve post hoc multiple comparisons test, ****p<0.05

Being men or women has significant effect on pain and fear of pain. (Belfer, 2017; Ustunel & Erden, 2022). In this study, we found that the fear of pain in women was significantly higher than the men. It is reported that women have fear of pain (Albaret et al., 2004; Roelofs et al., 2005) and their pain sensitivity is higher than men, and they are less sensitive to pain inhibition than men (Aslaksen et al., 2011; Bartley & Fillingim, 2013; Fillingim et al., 2009; Lyby et al., 2011). In another study, it was found that the mean fear of pain in women were higher than in men, but this difference was not significant (Osman et al., 2002). The results of this study are in agreement with the results of the study of Albaret et al. (2004) in which the level of pain fear in women was higher than that of men. In another study (Di Tella et al., 2019), no significant difference was found between pain fear levels of men and women. These results show that although women are more likely to fearfully respond to painful stimuli, cultural and individual characteristics may play an important role in individuals' pain fears. Horn et al (2014) investigated whether sex differences in reported pain intensity were mediated by fear of pain and showed that the number of female patients reporting a higher fear of severe pain was significantly higher (Horn et al., 2014). This can be attributed to the physiological and psychological state of females. The fact that the production of inflammatory response is higher in women results in a more intense nociception in a hormone-dependent manner and a more severe perception of pain in this population (Belfer, 2017).

In this study, we found that the fear of pain in women in hospitalized surgical departments was higher than men. Different from this study, it was found that it was no different according to gender in a study (Ustunel & Erden, 2022). Whereas, fear of pain may be more evident in women, because they are emotionally more expressive (Belfer, 2017).

CONCLUSION AND SUGGESTIONS

Our study showed that fear of pain in hospitalized patients in medical and surgical departments was moderate, fear of pain of elderly patients was less and fear of pain of women were higher. Therefore, in line with the findings obtained from this study it is recommended to;

- Women and the elderly should be thoroughly researched about the fear of pain,
- Before any painful intervention to be applied to the patients, the nurses should provide psychological support to the patient and comfort the patient,
- Qualitative researchs should be planned to determine the causes of fear of pain in patients.

LIMITATIONS

This study was conducted in a sample and a public hospital. So, the results of the study were valid only for the patients in this hospital. Therefore, this result can not be generalized to all patients.

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Conflict of Interest

No conflict of interest.

Author Contributions

Design: H.D., S.H., Data collection or processing: M.F.U., H.D., Analysis or interpretation: E.S.D., S.H., Literature search: H.D., E.S.D., Writing: H.D., E.S.D., S.H.

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