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ORIGINAL ARTICLE

Factors Affecting Students' Nursing Profession Preference During the Pandemic Period

Pandemi Döneminde Öğrencilerin Hemşirelik Mesleği Tercihini Etkileyen Faktörler

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Abstract

Objective: In this study, it was aimed to determine the factors that affect the nursing profession preference of the first-year nursing students during the Coronavirus disease-2019 (COVID-19) pandemic.

Method: This cross-sectional and descriptive study was conducted between March-June 2021 with first-year nursing students studying. Student information form, the fear of COVID-19 scale, and vocational choices in entering the nursing scale were used to collect data.

Results: 75.4% of the students stated that the COVID-19 pandemic did not affect their career choice, 46% reported that they planned to choose the nursing profession before the pandemic, and 52.1% of the students preferred the nursing profession because they liked it. As a result of multiple regression analysis, factors including fear of COVID-19, presence of chronic disease in family members, choosing the profession because they like it, choosing the profession because of its place and importance in society, choosing the profession because it is an ideal profession, choosing the profession under the influence of family/friends, and choosing nursing because it is seen as an indispensable profession during the pandemic were found to have a significant effect on the total scores of the vocational choices in entering nursing scale ($p<0.05$).

Conclusion: Although the pandemic has caused nurses to work under very difficult conditions, it has once again revealed how important the nursing profession is for society. Despite seeing the difficulties experienced in this process and being afraid of COVID-19, the students chose the nursing profession because they loved it and saw it as indispensable.

Keywords: Nursing profession, vocational choices, nursing student, COVID-19 pandemic

Öz

Amaç: Bu çalışmada, Koronavirüs hastalığı-2019 (COVID-19) pandemisi sürecinde birinci sınıf hemşirelik öğrencilerinin hemşirelik mesleği tercihini etkileyen faktörlerin belirlenmesi amaçlanmıştır.

Yöntem: Kesitsel ve tanımlayıcı olarak plnlanan bu çalışma, Mart-Haziran 2021 tarihleri arasında öğrenim gören hemşirelik birinci sınıf öğrencileri ile gerçekleştirildi. Verilerin toplanmasında öğrenci bilgi formu, COVID-19 korkusu ölçeği ve hemşirelikte meslek seçimi ölçeği kullanılmıştır.

Bulgular: Öğrencilerin %75,4'ü COVID-19 pandemisinin meslek seçimlerini etkilemediğini, %46'sı hemşirelik mesleğini pandemiden önce seçmeyi planladığını ve öğrencilerin %52,1'i hemşirelik mesleğini sevdiği için tercih ettiğini belirtti. Yapılan çoklu regresyon analizi sonucunda, COVID-19 korkusu, aile üyelerinde kronik hastalık varlığı, mesleği sevdiği için seçme, mesleği toplumdaki yeri ve önemi nedeni ile seçme, idealindeki meslek olduğu için seçme, aile/arkadaş etkisinde kalarak seçme, pandemi sürecinde hemşireliği vazgeçilmez bir meslek olarak gördüğü için seçme durumlarının, hemşirelikte meslek seçimi ölçeği toplam puanları üzerinde anlamlı etkiye sahip olduğu bulundu ($p<0,05$).

Sonuç: Pandemi süreci hemşirelerin çok zor koşullar altında çalışmasına neden olmakla birlikte, hemşirelik mesleğinin toplum için ne kadar önemli olduğunu bir kez daha gözler önüne sermiştir. Bu süreçte yaşanan zorlukları görmelerine ve COVID-19'dan korkmalarına rağmen öğrenciler hemşirelik mesleğini sevdikleri ve vazgeçilmez olarak gördükleri için seçmişlerdir.

Anahtar Kelimeler: Hemşirelik mesleği, meslek seçimleri, hemşirelik öğrencisi, COVID-19 pandemisi

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Introduction

The Coronavirus disease-2019 (COVID-19) pandemic, which has caused the most serious health crisis of the century globally, has been reported as an urgent public health problem by the World Health Organization (1). In this pandemic, the urgent need for health and hospital resources has increased significantly, and countries have had difficulties in meeting the increasing demands for health services. In a very short time, a large number of patients were infected and their treatment and care needs increased. This situation once again revealed the importance of the nursing profession and the concept of “care”, which is the main purpose of nursing (2,3).

During the pandemic, nurses worked devotedly in the delivery of health care services (4), and served on the frontline to meet the care needs of patients, to restore their optimum well-being and to prevent their deaths (2). In this process, some nurses who had to work long hours and were in close contact with patients infected with COVID-19 became infected, risking the health of themselves and their relatives, and some of them lost their lives and family members (5). Despite all difficulties they experience and being aware of the risks they may face; nurses continue their struggle during the pandemic with a sense of duty and great sacrifice (6).

Choosing a profession is one of the most important decisions that can affect a person’s entire life. In this respect, nurses should have chosen their profession voluntarily to fulfill the duties and responsibilities required by the profession, even in extraordinary situations such as pandemics that pose a serious threat to all humanity. The willingness of nurses to choose their profession increases the satisfaction of the individuals they care for in terms of nursing, which positively affects the professional and life satisfaction of nurses. For this reason, it is of great importance for students who prefer the nursing profession to be aware of the difficulties related to the working conditions and working areas of the profession and to choose the profession consciously (7,8). When the studies on the career choice of nursing students before the pandemic were examined, it was seen that most of the students chose the nursing profession voluntarily and were satisfied with their departments. It has been found that factors such as job guarantee, sense of helping people,

and providing a good career opportunity are effective in choosing a profession (9,10). In the studies conducted with nursing students during the COVID-19 pandemic, it has been reported that, with the increase in the need for health care professionals during the pandemic, British students think that nurses have a new opportunity, that nurses will be a part of history and that the professional value of the profession will increase, and that they have positive feelings for the profession. However, it was determined that some students felt anxiety or fear about the nature of nursing care during the pandemic and were afraid of working with severely and terminally ill patients and of harming patients (11). In a study conducted in Japan, it was reported that the COVID-19 pandemic increased nursing students’ sense of belonging and collectivism, as well as the sense of serving their own country and hopeless patients, increasing the satisfaction levels of students (12).

It is thought that the pandemic, which makes the risks and difficulties of the nursing profession visible, may have an impact on individuals’ nursing profession preferences. There is no study in the literature examining the effect of the COVID-19 pandemic on career choice. For this reason, this study aimed to examine the factors effective in the career preference of the first-year students who choose the nursing profession during the COVID-19 pandemic.

Material and Methods

Design

The study had a cross-sectional and descriptive design. Research data were collected online between March-June 2021 via “Google Forms”.

Participants and Sampling

The study was conducted with first-year nursing students (n=402) in the nursing department of the faculty of health sciences in a university, during the 2020-2021 academic year in the spring semester. This study was aimed at the universe population and so a sample size was not calculated. The STROBE cross-sectional reporting guidelines were used. The inclusion criteria were as follows: The students (1) were aged 18 years or older, (2) were enrolled in the first year of the nursing program, (3) were willing to participate in this study, and (4) answered the questionnaires completely. A total of 378 nursing students (constituting 94.02% of the universe) who could be reached between the dates of the research and met the study criteria, were included in the research.

Data Collection

The data of the study were collected using student information form, the fear of the COVID-19 scale (FCS), and vocational choices in entering nursing scale (VCENS).

Student information form, prepared by the researchers, includes the socio-demographic characteristics of the students (age, gender, presence of a relative working as a

Main Points

- It is of great importance for students who prefer the nursing profession to be aware of the difficulties, especially in the pandemic period, related to the nurses’ working conditions and working areas of the profession and to choose the profession consciously.
- It was found that despite the difficulties nurses experienced during the pandemic and the fear of Coronavirus disease-2019, first-year nursing students preferred the nursing career because they liked the profession, and they found the profession suitable for them.
- Although the pandemic process is challenging for the nursing profession, the devoted work of nurses has revealed the indispensability of the profession for the society and has positively increased the image of the nursing profession.

nurse, presence of chronic disease in themselves and family, COVID-19 infection in themselves and family members, loss of a relative due to COVID-19, etc.), the factors that may be related to career choice and that may affect their career choice.

VCENS was developed by Zysberg and Berry (13) to determine the reasons affecting the career choice of nursing students, and its validity and reliability in Turkey were made by Önlü and Saraçoğlu (14). The Likert-type scale (between 0% and 100%) consists of 17 items and two sub-dimensions (vocational congruency, survival motivations). Each item is rated between 0% (it was not effective in my choice of profession) and 100% (the most important factor in my choice of profession). The highest score that can be obtained from the scale is 100, and the lowest score is 0. The total scale and subscale scores are obtained by dividing the sum of the scores given to the scale by the number of questions in the scale. The Cronbach's alpha internal consistency coefficient of the scale was calculated as 0.79 in the study of Önlü and Saraçoğlu (14), and 0.73 in this study.

The FCS was developed by Ahorsu et al. (15) to determine the level of fear of COVID-19 experienced by the individual, and the Turkish validity and reliability of the scale was conducted by Satici et al. (16). The 5-point Likert type scale consists of one dimension and seven items (1: Strongly disagree and 5: Strongly agree). The scores that can be obtained from the scale vary between 7 and 35. A high score means that the individual's fear of coronavirus is at a high level. The Cronbach's alpha internal consistency coefficient of the scale was determined as 0.82 in the study of Ahorsu et al. (15), and 0.84 in the study of Satici et al. (16). In this study, it was determined as 0.83.

Ethical Aspects of Research

Ethics Committee approval and necessary institutional permissions were obtained from the Faculty of Medicine Scientific Research Ethics Committee of a Trakya University (TÜTF-BAEK 2020/403 protocol code) to conduct the research. The access link of this research conducted online was shared with the students. On the first page of the questionnaire, the students were informed that participation was voluntary, their personal information and confidentiality would be protected, and an informed consent page was presented. The students who gave consent answered the questionnaire form.

Statistical Analysis

The IBM SPSS 22.0 (Statistical Package for Social Sciences 22.0) package program was used for the evaluation of the data. The conformity of the data to the normal distribution was evaluated with the Kolmogorov-Smirnov test to avoid a lower limit for the expected frequencies and thus to prevent information loss. The number and percentage distribution were used in the evaluation of categorical data and mean-standard deviation was used in continuous data. Multiple linear regression, the "backward" method was used to define the explanatory variables on the nursing career choice

scale (NCCS), and $p < 0.05$ was accepted as the statistical significance limit.

Results

The mean age of the first-year students participating in the study was 18.82 ± 0.98 years, and 70.9% of them were females. 44.7% of the students reported that they had a relative working as a nurse, 6.1% reported that they had a chronic disease, and 45.5% reported that their family members had a chronic disease. 25.9% of the students reported that they/family members were infected with COVID-19, and 4% reported that they lost a relative due to COVID-19 (Table 1).

75.4% of the students reported that the COVID-19 pandemic did not affect their career choice, and 46% reported that they planned to choose the nursing profession before the pandemic. 52.1% of the students preferred the nursing profession because they liked it, and 50% because they thought that they would not have any difficulties in employment after graduation (Table 2).

It was found that the "FCS" total mean score of the first-year nursing students participating in the study was 16.81 ± 5.20 , and the total mean score for the "VCENS" was 65.44 ± 11.49 . The mean score of the students in the "vocational congruency" sub-dimension of VCENS was 74.43 ± 15.70 , and the mean score they received from the "survival motivations" sub-dimension was 48.96 ± 15.80 (Table 3).

In the multiple linear regression analysis, it was determined that factors including the fear of COVID-19 ($p = 0.004$; B: 0.308), presence of chronic disease in family members ($p = 0.031$; B: -2.401), choosing the nursing profession because they like it ($p = 4.500$; B: 0.000), choosing the nursing profession because it is an ideal profession ($p = 4.288$; F: 0.019), choosing the profession under the influence of family/friends ($p = -4.777$; F: 0.004), choosing the nursing profession for its place and importance in society ($p = 3.154$; B: 0.018), and choosing nursing because it is seen as an indispensable profession during the COVID-19 pandemic ($p = 7.749$; B: 0.000) had a significant effect on students' total scores of the NCCS. Adjusted R^2 values were found as 19.7. Accordingly, the increasing fear of COVID-19, the absence of chronic diseases in family members, liking the nursing profession, seeing the nursing profession as the ideal profession, not being under the influence of family/friends when choosing the nursing profession, the place and importance of the nursing profession in society and seeing nursing as an indispensable profession during the COVID-19 pandemic has been effective in choosing a nursing profession (Table 4).

Discussion

It is reported that the career choice, which is one of the most important decisions in an individual's life, is affected by many factors, and that the career choice is also related

Table 1.
Socio-demographic Characteristics of the Students (n=378)

Variables	n	%
Age (Mean ± SD=18.82±0.98)		
Gender		
Female	268	70.9
Male	110	29.1
Presence of nurses in the family		
Yes	169	44.7
No	209	53.3
Presence of chronic disease		
Yes	23	6.1
No	355	93.9
Presence of chronic disease in family members		
Yes	172	45.5
No	206	54.5
Infection of themselves/family members with COVID-19		
Yes	98	25.9
No	280	74.1
Experiencing the loss of a relative due to COVID -19		
Yes	15	4.0
No	363	96.0

SD=standard deviation, COVID-19=Coronavirus disease-2019

to the standard of judgments of individuals, their interest in the profession, their beliefs and their expectations from the profession. Making a career choice of profession with a conscious awareness will enable the individual to adapt to the profession more easily and get satisfaction from the profession (9). In the study conducted by Alkaya et al. (17) with American and Turkish nursing students, it was reported that 99.4% of American nursing students and 54.6% of Turkish nursing students chose the profession consciously. In other studies conducted in Turkey, it has been found that students choose the nursing profession willingly (18). In this study, conducted during the COVID-19 pandemic, it was found that the students willingly preferred the nursing profession for themselves and their loved ones, without being affected by the COVID-19 pandemic. Despite the difficult conditions that nurses had to struggle with during the pandemic, the students were not affected by this negative situation and preferred the nursing profession willingly.

Uncertainty regarding the COVID-19 pandemic has had widespread and serious impacts on people's daily lives around the world. To control the pandemic, countries have taken several decisions to reduce human mobility within and outside their borders, this has caused the restriction of economic activities, and our lives have changed radically, rapidly, and abruptly. During the pandemic, many people experienced economic difficulties, while some workplaces were downsizing, some were closed temporarily or permanently, the demand for labor decreased and individuals began to experience obstacles in maintaining their working life. Healthcare service sectors were also widely affected by the COVID-19 crisis (19). The increase

in the urgent need for health care services during the pandemic has caused a demand beyond the limited capacity, leading to financial insufficiency as well as health care professionals (20). During this process, newly graduated nurses have been employed in specialized units such as intensive care without being subjected to orientation programs to meet the increasing health service needs. Due to the intense and high-risk working conditions of nurses during the pandemic, the demands to resign increased, but many countries did not accept these resignation demands (21). When the literature is examined, it is seen that Turkish nursing students choose a nursing career because they think that it is easier to find a job in the nursing profession compared to other fields (10,22). In the results of Cho et al.'s (23) study, it was reported that the guarantee of finding a job is the most important reason affecting the career choice of Korean nursing students. In this study, it was found that the ease of finding a job after graduation was an important factor in choosing the nursing profession. In line with this result, it can be said that the students are concerned about finding a job while choosing a profession, but they realize that the nursing profession is an indispensable profession for people despite all the difficulties they have experienced during the COVID-19 pandemic, and they think that they will not have any difficulties in employment after graduation.

In their study conducted in China during the severe acute respiratory syndrome epidemic in early 2003, Sun et al. (24) found that students better understand the dangers nurses may face while fulfilling their roles and responsibilities during the epidemic, they are worried about their job security, and some students have the thought of leaving

the nursing profession in the future during the pandemic. In this study, 75.4% of the students stated that the difficulties experienced by nurses during the pandemic did not affect their choice of profession, and 46% stated that they planned to choose the nursing profession before the pandemic. These results suggest that our students tend toward the nursing profession with intrinsic motivation. Studies report that professional suitability plays a much more important role in choosing a profession than vital reasons (13,17,25).

According to the scores they got from the sub-dimensions of the NCCS, the results of this study show that students give more importance to professional suitability rather than vital reasons in choosing a career.

It is known that the precautions taken during the pandemic prevent many risks in terms of physical health but cause some psychological side effects. In this stressful period when we have to leave our daily routines and experience unwanted losses, many people are trying to adapt to the

Table 2.
Characteristics of Students Regarding Career Choice During the Pandemic (n=378)

Variables	n	%
The effect of the COVID-19 pandemic on the career choice		
Yes	93	24.6
No	285	75.4
Planning to choose the nursing profession before the pandemic		
Yes	174	46.0
No	204	54.0
Preferring the nursing profession because they like it		
Yes	197	52.1
No	181	47.9
Preferring the nursing profession because of not having any difficulty in employment after graduation		
Yes	189	50.0
No	189	50.0
Preferring the nursing profession because it is the ideal profession		
Yes	42	11.1
No	336	88.9
Preferring the nursing profession under the influence of family-friends		
Yes	48	12.7
No	330	87.3
Preferring the nursing profession under the influence of social media		
Yes	8	2.1
No	370	97.9
Preferring the nursing profession for its place and importance in society		
Yes	81	21.4
No	297	78.6
Preferring nursing because of seeing it as an indispensable profession during the pandemic		
Yes	56	14.8
No	322	85.2

COVID-19=Coronavirus disease-2019

Table 3.
Total and Sub-dimension Mean Scores of FCS and VCENS

Scales and sub-dimensions	Possible min-max	Obtained min-max	Mean ± SD
FCS total	7-35	7-35	16.81±5.20
VCENS total	0-100	35.29-94.71	65.44±11.49
Vocational congruency	0-100	8.18-100	74.43±15.70
Survival motivations	0-100	5-100	48.96±15.80

FCS=the fear of COVID-19 scale, VCENS: vocational choices in entering nursing scale, SD=standard deviation, COVID-19=Coronavirus disease-2019

Table 4.
Factors Affecting the VCENS

Variables	B	SD	Beta	t	p
Fear of COVID-19 scale total score	0.308	0.105	0.139	2.938	0.004
Presence of nurses in family/relatives	1.947	1.081	0.084	1.801	0.073
Presence of chronic disease in the family	-2.401	1.108	-0.104	-2.167	0.031
Planning to choose the nursing profession before the pandemic	2.264	1.293	0.098	1.751	0.081
Prefer the nursing profession because they like it	4.500	1.147	0.196	3.922	0.000
Preferring the nursing profession because it is the ideal profession	4.288	1.823	0.117	2.352	0.019
Preferring the nursing profession under the influence of family-friends	-4.777	1.652	-0.139	-2.892	0.004
Preferring the nursing profession for its place and importance in society	3.154	1.324	0.113	2.382	0.018
Preferring nursing because of seeing it as an indispensable profession during the pandemic	7.749	1.677	0.240	4.620	0.000

VCENS=vocational choices in entering nursing scale, B=coefficient, SD=standard deviation, Beta=standardised beta coefficient, t=student's t-test, COVID-19=Coronavirus disease-2019

reality brought by the fear of infection with the virus and have difficulty in this regard (26). In the study conducted by De Los Santos et al. (27), it is reported that the COVID-19 fear levels of the students are moderate to high, and the first-year students have the highest level of fear in the group. In the study of Kuru Alici and Ozturk Copur (28), it was found that the students' fear of COVID-19 was high. On the other hand, Martínez-Lorca et al. (29) reported that students' fear of COVID-19 was moderate. As a result of this research, it was seen that although the COVID-19 fear levels of the students were not very high, the increasing fear of COVID-19 influenced the NCCS scores. Despite the increasing fear of COVID-19, students preferred the nursing profession. It is thought that the reason for this situation is the job guarantee after graduation.

COVID-19 infection is more common in individuals with chronic diseases, which worsens the prognosis and increases the mortality rate. In addition, psychological disorders such as anger, depression, and anxiety, which are frequently seen in individuals with chronic diseases, have increased with the COVID-19 pandemic (30). In this study, it was determined that the absence of chronic disease in the family was a factor affecting the scale of career choice. This situation suggests that students may experience the fear of infecting their family members due to the profession they prefer and endangering their lives.

Individuals who have a profession in line with their interests and abilities, while fulfilling the requirements of their profession, they also get professional satisfaction and work happily and efficiently (9). In the study conducted by Prater and McEwen (31), it was found that the second most common reason for students to choose a nursing career is the desire to work in the field of health or medicine. In the study of Kılınç et al. (25), most of the students preferred the

nursing department willingly in line with their interests. In this study, it was determined that the students' love of the nursing profession and seeing it as their ideal profession were effective in choosing a nursing career.

The COVID-19 pandemic can be seen as an undesirable process but allows nurses to build a good image in society. The devotion of nurses all over the world during the pandemic has given the opportunity to understand once again the indispensability of nursing for society on a global scale. Thus, the positive attitude towards the importance and image of the profession in society has increased. This situation enabled nursing students to develop positive and professional attitudes towards the profession (32). In the qualitative study of Swift et al. (11) conducted with undergraduate nursing students during the COVID-19 pandemic, it was reported that the positive image of nursing perceived by society during the pandemic also affects the career choices of students positively and they are proud of their profession. As a result of this research, it has been determined that the place and importance of the nursing profession in society during the COVID-19 pandemic affects the career choice of the students and directs individuals to prefer the nursing profession.

Professional identity is important for nurses. Being a nurse has an intrinsic reward, and many students identify it as an important factor in their career choices. In the study of Swift et al. (11), it was reported that nursing students see nursing as an honorable profession that can be pursued if there is a strong passion for helping individuals in the most difficult times of their lives, as well as to be a part of history during the pandemic, and experience the feeling of taking a step into a struggle that feels personally satisfying and professionally valuable. As a result of this research, it was found that students' perception to see nursing as an indispensable

profession during the COVID-19 pandemic was effective on their career choice. Students have preferred the profession by realizing the importance and indispensability of nursing for society during the pandemic.

Conclusion

Despite the difficulty's nurses experienced during the pandemic, first-year nursing students preferred the nursing career because they liked the profession, they found the profession suitable for them, and they thought that they would not have any difficulties in finding a job after graduation. Although the fears of COVID-19 were not very high, the students preferred the nursing profession despite the increasing fear. Even though the pandemic is quite challenging for the nursing profession, the altruism of nurses has revealed the indispensability of the profession for society and has increased the positive image of the nursing profession. It will be an encouragement for individuals who will choose the nursing profession in the future if countries and institutions implement initiatives to improve working conditions by learning from the difficulties experienced by nurses during the pandemic.

Ethics Committee Approval: Ethics Committee approval and necessary institutional permissions were obtained from the Faculty of Medicine Scientific Research Ethics Committee of a Trakya University (TÜTF-BAEK 2020/403 protocol code) to conduct the research.

Informed Consent: The students were informed that participation was voluntary, their personal information and confidentiality would be protected, and an informed consent page was presented.

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ORIGINAL ARTICLE

Determining Self-efficacy and Quality of Life in Stroke Patients

İnmeli Bireylerde Öz Etkililik ve Yaşam Kalitesi Arasındaki İlişkinin Belirlenmesi

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Abstract

Objective: Stroke is an important health problem. It causes and impairs their quality of life. Learning the quality of life of the individual and planning treatment are important factors. Self-efficacy is also a concept that has an impact on the quality of life. This study aimed to determine the correlation between self-efficacy and the quality of life in patients.

Method: The cross-sectional study was conducted in a neurology outpatient clinic of a public hospital in western Turkey between March and September 2018. The sample of 170 stroke patients. The data collection tools used were: A "socio-demographic characteristics information form", the "stroke-specific quality of life scale (SSQOLS)", and the "chronic disease self-efficacy scale (CDSSES)". In pairwise comparisons, the Mann-Whitney U test was used for variables which were not normally distributed. The correlation between was examined using Spearman correlation test.

Results: A strong positive correlation was found between SSQOLS and CDSSES mean scores of the individuals. In the present study, it was determined that the patients who were male and married had a higher quality of life as well as a higher self-efficacy level. We observed in the present study that a higher self-efficacy level affected quality of life positively. Thus, we have overemphasized that need to be examined together within the scope of disease management of patients.

Conclusion: Such assessments make important contributions to determining individuals care needs. Therefore, nurses play an important role in this section. Quality of life and self-efficacy levels need to be considered while planning the care and rehabilitation of patients.

Keywords: Stroke, quality of life, self-efficacy, nursing

Öz

Amaç: İnme önemli bir sağlık problemidir. Bireylerin yaşam kalitesinin bozulmasına sebep olmaktadır. Bireyin, yaşam kalitesinin öğrenilmesi bakımın ve tedavinin planlanması açısından gereklidir. Öz etkililik de yaşam kalitesine etkisi olan önemli bir kavramdır ve birbirlerini olumlu ya da olumsuz anlamda etkilemektedirler. Bu çalışmanın amacı inmeli bireylerde öz etkililik ve yaşam kalitesi arasındaki ilişkinin belirlenmesidir.

Yöntem: Çalışma kesitsel nitelikte bir araştırmadır. Türkiye'nin batısındaki bir devlet hastanesinin nöroloji polikliniğinde Mart-Eylül 2018 tarihleri arasında gerçekleştirilmiştir. Araştırmanın örneklemini 170 birey oluşturmuştur. Kullanılan veri toplama araçları: "Sosyo-demografik özelliklere ilişkin bilgi formu", "İnme özgü yaşam kalitesi ölçeği (İÖYKÖ)" ve "kronik hastalıklarda öz etkililik ölçeğidir (KHÖEÖ)". İki gruplar arası karşılaştırmalarda Mann-Whitney U testi, sürekli değişkenler arasındaki ilişki için Spearman's korelasyon testi kullanılmıştır.

Bulgular: Bireylerin İÖYKÖ ile KHÖEÖ puan ortalamaları arasında pozitif yönlü çok güçlü ilişki olduğu saptanmıştır. Erkeklerin kadınlara, evli olanların olmayanlara göre yaşam kalitesi ve öz etkililik düzeyleri her iki ölçek puan ortalamasında istatistiksel olarak anlamlı oranda yüksektir. Çalışmamızda yüksek öz etkililik düzeyinin yaşam kalitesini olumlu yönde etkilediği görülmüştür. Bu nedenle inme hastalarının hastalık yönetimi planırken bu iki kavramın birlikte değerlendirilmesi gerektiğini vurgulamaktayız.

Sonuç: Yaşam kalitesi ve öz etkililik düzeylerinin birlikte değerlendirilmesi; bireylerin tedavi ve bakım ihtiyaçlarının belirlenmesinde önemli katkılar sağlamaktadır. Bu nedenle hemşireler bu noktada önemli bir rol oynamaktadır. İnme hastalarının bakımı ve rehabilitasyonu planlanırken yaşam kalitesi ve öz etkililik düzeyleri dikkate alınmalıdır.

Anahtar Kelimeler: İnme, yaşam kalitesi, öz etkililik, hemşirelik

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Introduction

Stroke is an important health problem that can affect all aspects of life. It poses a high risk of mortality and morbidity and can lead to a serious personal and social financial burden (1). Especially elderly individuals can experience considerable functional problems after stroke (2). Individuals mostly have a difficulty coping with psychological, social and functional consequences and stroke also has serious financial implications for institutions due to the need for rehabilitation over the long term (3). This condition affects individuals' neurological and physical functions, leading to dependence on others in their daily life activities, seriously affecting their quality of life and preventing their contentment in life (4,5). Therefore, it is of prime importance to carefully assess overall survival prospects and all losses of function after a stroke, as well as the degree to which quality of life is affected by changes in physical and mental functions (6).

Self efficacy is known to have a significant effect on the quality of life. Self-efficacy is defined as "a person's belief in initializing necessary actions and getting a result, in order to be effective on life events" (7). It is stressed that successful self-efficacy increases the quality of life in individuals with chronic illness (8). In addition, it has been indicated that individuals who have a high sense of self-efficacy are better able to cope with their disease, than those who have a low sense of self-efficacy (9,10). Increasing the level of self-efficacy increases the adaptation of the individual to the disease and causes an increase in the level of performing daily life activities and a decrease in depression. It also makes it easier for the individual to overcome the problems encountered (9,10).

Levels of self-efficacy and the quality of life can affect one another in both positive and negative ways. Self-efficacy is an important factor in initiating and maintaining goal-directed behavior. In stroke, a person's decreased confidence in performing a task for self-care or independent living will affect the actual performance of the task. Since self-efficacy is a behavioral determinant, the perceived capacity to perform the task will affect actual task performance, which in turn will affect functional independence (11-13). Successful self-efficacy after the event for the stroke survivor; it is stated that it is associated with reducing the effect of disability, increasing the level of capability and increasing the quality of life, as well as reducing depressive symptoms (14). It is stated that people with a high level of self-efficacy have better ability to work than those with low self-efficacy while performing daily life activities (9,15). Self-efficacy perception is a concept that can be changed and

developed. Especially with the experiences of individuals, this concept can be developed and planned activities can be completed successfully (7). The individual should be aware of his/her own capacities and abilities. Sometimes these abilities emerge spontaneously, and sometimes awareness can be created with external support or guidance (7). Thus, it is emphasized that these parameters should be examined in stroke patients with other clinical findings as well (11-13,16). These assessments make important contributions to determining treatment and care needs of individuals, directing rehabilitation goals properly, sustaining daily life activities, and reducing depressive symptoms (4,8).

In the meta-analysis study conducted by Taylor et al. (8). It is indicated that there is inadequate number of studies examining the self-efficacy of individuals surviving after stroke (8). In Turkey, there are studies examining the factors that affect the quality of life in stroke patients (4,17) and the correlation between self-efficacy and the quality of life in other chronic illnesses; whereas, there is only one study examining the correlation between self-efficacy and the quality of life in stroke patients (18). This study, it was aimed to determine the relationship between self-efficacy and quality of life in individuals with stroke. In the study; What is the level of quality of life in individuals with stroke? What is the level of self-efficacy in individuals with stroke? What are the factors affecting self-efficacy and quality of life in individuals with stroke? Is there a relationship between self-efficacy and quality of life in individuals with stroke? answers to the questions were sought. It is believed that the present study will guide in planning rehabilitation services in the future by determining the correlation between self-efficacy and the quality of life in stroke patients.

Material and Methods

Study Design

This study is a cross-sectional study conducted to determine the correlation between self-efficacy and the quality of life in stroke patients.

Setting

The study was conducted in a neurology outpatient clinic of a public hospital in western Turkey between March and September 2018.

Participants & Variables

The population of the study consisted of stroke patients being followed at a neurology outpatient clinic at a public hospital between March and September 2018. The sample formula of the unknown universe was used to determine the sample. According to the formula, the error level was taken as 0.05. The mean of the stroke-specific quality of life scale (SSQOLS) in similar studies was taken as 3.2, with a deviation of ± 0.5 from the mean. According to this formula, the number of samples was determined as 157. Data were collected from 170 patients who were diagnosed with stroke at that neurology outpatient clinic between the study dates.

Main Points

- Levels of self-efficacy and the quality of life affect one another both positively and negatively. Thus, it is overemphasized that stroke patients are examined together in disease management.
- Consider the quality of life and self-efficacy levels when planning the care and rehabilitation of stroke patients.

Inclusion criteria included being diagnosed with stroke, having no serious vision or hearing problems, being able to communicate, and not suffering from any form of advanced cognitive disability. Individuals who met the criteria and gave their consent were included in the study.

Data Sources/Measurement

In neurology outpatient clinics, the data were collected from individuals and their relatives by the researcher via the face-to-face interview method. The data collection tools used in this study were "socio-demographic characteristics information form", "stroke-specific quality of life scale (SSQOLS)" and "chronic disease self-efficacy scale (CDSSES)".

Socio-demographic characteristics information form:

The researchers prepared this form by conducting a literature review (24,17,19,20). It included questions about individuals' age, gender, marital status, educational background, profession, number of attacks, functional dependency level, hemibody affected, time from first stroke, disability after stroke .

SSQOLS: The scale was developed by Williams et al. (21). Turkish validity and reliability of the scale was conducted by Hakverdioğlu Yönt and Khorshid (19). It is a five-point Likert scale with 48 items and 8 subscales. The eight dimensions were activities (19 Items), social and family roles (8 Items), language (5 Items), vision (3 Items), energy (4 Items), mood (4 Items), personality (3 Items) and thinking (2 Items). The mean score of each subscale is calculated by adding the subscale item scores and dividing the resultant value by the number of items of that subscale. The total score of the scale is calculated by dividing the total mean score of each subscale by 8. A higher score indicates a higher quality of life. A lower score indicates a lower quality of life (19).

CDSSES: Lorig et al. (22), developed this scale to measure the self-efficacy perceptions of individuals suffering from chronic disease. Ceyhan and Ünsal (23) conducted the Turkish validity and reliability study of the scale. It includes 30 questions and 10 subscales. The dimensions of the scale consist of doing sports regularly (3 item), getting information about the disease (1 item), getting help from society, family and friends (3 item), communication with doctor (3 item), general disease management (4 item), doing housework (2 item), social/recreation activities (2 item), coping with the symptoms (5 item), coping with asthma (1 item), managing depression/control (6 item), titles respectively. Self-efficacy perception is rated on a scale ranging from 1 to 10 points. While point 1 stands for "I don't trust at all.", the point 10 stands for "I completely trust." The mean score of self-efficacy is obtained by dividing the total score by the total number of items. A score of ≥ 7 indicates that individual's disease-related self-efficacy is high and their belief that they will overcome all necessary actions is adequate. A score of < 7 indicates a low sense of self-efficacy.

Ethical Considerations

In order to conduct the study, approval from the Ethics Committee of the Çanakkale Onsekiz Mart University

Related Institution (decree no: 2018-05), from the provincial directorate of health (no: 81682077-811.99), and written permission from the participants were obtained.

Statistical Analysis

The data were analyzed using SPSS (version 19.0). The normal distribution of the variables was examined using the Kolmogorov-Smirnov test. Mean, standard deviation, minimum, maximum, frequency, and percentage values were used in presenting descriptive data. In pairwise comparisons, the Mann-Whitney U test was used for variables which were not normally distributed. The correlation between continuous variables lacking a normal distribution was examined using Spearman's correlation test. The p-value of < 0.05 was accepted as statistically significant.

Limitations

This study had some limitations. The study was conducted in neurology outpatient clinics of only one public hospital, which in turn might limit the generalization of results. Another limitation is that the responses given by individuals to the SSQOLS and CDSSES were based on self-reports.

Results

It was found that 60.6% of the stroke patients included in the study were male, 70% were married, 64.7% were primary school graduates, 47.1% were retired, and 33.5% were housewife. The average age of the individuals was 69.1 ± 11.1 years (min: 26, max: 90). Descriptive characteristics of individuals in the study for stroke are given in Table 1.

Descriptive characteristics	n	%
Number of attacks		
Primary stroke	130	76.4
Secondary stroke	29	17.1
Tertiary stroke	11	6.5
Functional dependency level		
No symptoms or no significant disability	43	25.3
Slight or moderate disability	83	48.8
Severe disability	44	25.9
Hemibody affected		
Right	79	46.5
Left	77	45.3
Both	14	8.2
Total	170	100
	Mean	± SD (min-max)
Time from first stroke (month)	46.8	±74.4 (1-456)
<i>SD=standard deviation</i>		

When the table is examined, 76.4% of the individuals had a primary stroke. 48.8% of individuals with stroke are slight or moderate disability. 46.5% of the right, 45.3% of the left, 8.2% of both sides were hemibody affected. Time from first stroke of individuals was found to be 46.8±74.4 (min: 1, max: 456) months (Table 1).

Post-stroke disabilities is shown in Table 2. When the table is examined, the disabilities in individuals after stroke; numbness or tingling in the face, arm or leg, especially on one side of the body in 68.8%, difficulty walking in 75.9%, loss on balance in 67.1%, weakness in the arms and legs in 68.8%, dysphagia in 25.3%, aphasia in 42.4%, fatigue in 69.4%, incontinence in 24.1% (Table 2).

The quality of life total mean score of the stroke patients was 2.9±0.9. While the highest mean score was obtained from the "vision (3.9±1.1)" subscale, the lowest mean score was obtained from the "personality (2.4±1.4)" subscale (Table 3).

When the distribution of chronic disease self-efficacy total and subscale mean scores in the present study was examined, the total mean score of the individuals was found to be 5.7±2.3. The highest self-efficacy level of stroke patients was obtained in "coping with dyspnea (8.4±2.4)" subscale, whereas the lowest self-efficacy level was obtained in

"doing housework (4.8±3.2)" subscale. 63.5% (n=108) of the individuals obtained scores of < "7," whereas 36.5% (n=62) obtained scores of ≥7 (Table 4).

In the study, a positive strong correlation was observed between the mean scores of SSQOLS and CDESES (r=0.782, p<0.001) (Table 5).

When the mean scores of SSQOLS and the CDESES were examined together with their descriptive traits, it was found that male patients had higher mean scores in both quality of life (p<0.001) and self-efficacy (p<0.001) than their female counterparts. In addition, the mean scores of SSQOLS (p=0.018) and the CDESES (p=0.018) were determined to be higher in married patients than single patients (Table 6). There was a negative weak correlation between age and the mean score of SSQOLS (r=-0.210; p=0.006), and also a negative moderate correlation between age and the mean score of CDESES (r=-0.266; p<0.001) (Table 6).

Discussion

Stroke patients can suffer from problems related to vision, sense, tonus, language, coordination-balance, swallowing, sphincter, and cognitive functions, all of which can affect

Table 2.
Post-stroke Disabilities (n=170)

Disability after stroke (*)	Number*	%*
Numbness or tingling in the face, arm or leg, especially on one side of the body	117	68.8
Difficulty walking	129	75.9
Loss on balance	114	67.1
Weakness in the arms and legs	117	68.8
Dysphagia	43	25.3
Aphasia	72	42.4
Fatigue	118	69.4
Incontinence	41	24.1

*multiple options are marked

Table 3.
Score of the Stroke Specific Quality of Life Scale-SSQOLS (n=170)

SSQOLS domains	Mean ± SD	Min/max
1. Activities	2.9±0.9	1.0-5.0
2. Energy	2.6±1.1	1.0-5.0
3. Mood	3.1±1.4	1.0-5.0
4. Social and family roles	2.5±1.3	1.0-5.0
5. Vision	3.9±1.1	1.0-5.0
6. Language	3.6±1.1	1.0-5.0
7. Thinking	2.6±1.5	1.0-5.0
8. Personality	2.4±1.4	1.0-5.0
Total score	2.9±0.9	1.1-4.9

SD=standard deviation

their quality of life (24,25). Of these, visual problems are less seen (12%), while post-stroke depression is encountered at the rate of 30-45% (4,20,25). In the present study, it was found that the stroke-specific quality of life level of

the participants was moderate. Visual problems affected their quality of life less; whereas, personality problems affected their quality of life at most (Table 3). Other study that assessed stroke-specific quality of life revealed that

Table 4.
Score of the Chronic Disease Self-efficacy Scale (CDSES) (n=170)

Sub dimensions	Median ± SD	Min/max
1. Doing sports regularly	5.1±3.0	1.0-10.0
2. Getting information about the disease	6.0±3.0	1.0-10.0
3. Getting help from society, family and friends	7.0±2.7	1.0-10.0
4. Communication with doctor	5.8±2.9	1.0-10.0
5. General disease management	5.3±2.7	1.0-10.0
6. Doing housework	4.8±3.2	1.0-10.0
7. Social/recreation activities	5.8±2.9	1.0-10.0
8. Coping with the symptoms	5.1±2.5	1.0-10.0
9. Coping with asthma	8.4±2.4	1.0-10.0
10. Managing depression/control	5.5±2.7	1.0-10.0
Total score	5.7±2.3	1.0-9.7
<7	n	%
≥7	108	63.5
	62	36.5

SD=standard deviation

Table 5.
The Relationship Between Stroke Specific Quality of Life Scale (SSQOLS) and the Chronic Disease Self-efficacy Scale (CDSES) Scores (n=170)

	SSQOLS	
	r	p
CDSES	0.782	<0.001

r=Spearman's correlation test

Table 6.
Comparison of the Stroke-specific Quality of Life Scale (SSQOLS) and the Chronic Disease Self-efficacy Scale (CDSES) with descriptive characteristics (n=170)

Descriptive characteristics	SSQOLS	Z	p	CDSES	Z	p
	Mean ± SD			Mean ± SD		
Gender						
Female	2.6±1.0			4.9±2.4		
Male	3.1±0.9	-3.540	<0.001	6.2±2.0	-3.619	<0.001
Marital status						
Married	3.0±0.9			6.0±2.2		
Single	2.6±1.0	-2.374	0.018	5.0±2.4	-2.363	0.018
Educational background						
≤ Primary school	2.8±0.9			5.6±2.3		
> Primary school	3.1±1.0	-1.384	0.166	6.3±2.3	-1.670	0.095
	SSQOLS			CDSES		
Age	r=-0.210 p=0.006			r=-0.266 p<0.001		

Z=Mann-Whitney U test, SD=standard deviation, Mann-Whitney U test was used to compare groups. Spearman was used for correlation analysis

individuals obtained the lowest mean score from the "personality (2.38±1.41)" subscale and the highest mean score from the "vision (4.32±0.99)" subscale (19). It appears that psychosocial problems should not be overlooked, it appears, because they can have a significant effect on the quality of life of stroke patients within the scope of rehabilitation services (26). Several studies have indicated that high self-efficacy is one of the most potent protective factors on depressive symptoms (27). Depression is delayed in diagnosis in people with stroke and their caregivers, and this affects the course of treatment. Various psychosocial methods are suggested in the literature in the management of depression (i.e., tailored support; educational resources; cognitive behavioural therapy; social support; stress management; social/dyad support; peer support) (11,12,28).

In the present study, the self-efficacy total mean score of the individuals was found to be 5.7±2.3 according to the CDESES. According to the results of the present study, fact that self-efficacy total mean score is below 7 is an important result indicating that "individuals have a low self-efficacy level" (Table 4). Similarly, stroke patients had low self-efficacy levels in the literature. Low self-efficacy also affects many factors (11,13,14). Self-efficacy helps to meet the needs of stroke patients and reintegrate them into society (29). It is of critical importance to make an assessment in order to define patient problems, solve these problems and initiate rehabilitation services after stroke (30). Use of specific scales is suggested when making an assessment. As there was no stroke-specific self-efficacy scale with Turkish validation during the present study, we made an assessment via the CDESES.

In the present study, a positive strong correlation was found between the self-efficacy and the quality of life mean scores. Upon considering this result, it can be asserted that there is a direct correlation between quality of life and self-efficacy. Thus, as individuals' self-efficacy increases, their quality of life will also increase. The literature stresses that because self-efficacy and quality of life levels can influence one another either positively or negatively, it is necessary to make them together while planning disease management for stroke patients (16,31,32). These assessments make important contributions toward determining the course of treatment and care needs of individuals, directing rehabilitation goals properly, and sustaining activities of daily living (4,18).

When comparing the mean scores of SSQOLS with those of the CDESES according to descriptive characteristics (Table 6), male patients were found to have higher mean scores than their female counterparts, which is compatible with the literature (17,18,33). In contradiction to the present study, some studies have reported that women have a higher quality of life (17,18) as well as self-efficacy levels than men do (18). The gender differences in these studies are thought to be associated with the roles expected from women in society (e.g., motherhood, wifehood, household chores). This is an important statement as the expectations of men and

women can make an impact on quality of life post stroke. It is also important to consider the age of the subject as roles change in time.

In the present study, SSQOLS and the CDESES total mean scores were found to be higher in married patients compared to single ones (Table 6). Upon examining the literature, differences between the results of studies that examine correlation between marital status, self-efficacy, and the quality of life are observed. For example, no significant difference was found between the quality of life, self-efficacy, and marital status in Topçu and Oğuz's (18) study ($p>0.05$). However, Hakverdioğlu Yönt and Khorshid (19) found in their study that single individuals obtained higher scores from SSQOLS than their married and widowed counterparts did. These different results might be associated with the social support taken by married individuals, from partner or family, as well as differences in characteristics of the sample groups in the studies.

When making a comparison according to educational background in the present study, we saw that there was an increase in the quality of life and self-efficacy levels even though it was not statistically significant (Table 6). Also, in the other study in literature, there was a similar correlation between educational background, self-efficacy and the quality of life (17-19). In the study by Jeon et al. (34), educational background reduced the quality of life, though not statistically significant. These different results can be associated with the multidimensional structure of the concepts of self-efficacy and the quality of life.

In the present study, a negative weak correlation was found between age average and the mean score of stroke-specific quality of life scale. Likewise, a negative moderate correlation was identified between age average and mean score of CDESES (Table 6). In their study, Topçu and Oğuz (18) revealed that patients' quality of life and self-efficacy levels decreased with age, albeit not in a statistically significant manner. In their study, Öztürk et al. (4), determined that quality of life was negatively affected in stroke patients over the age of 55 years. In their study, Brouwer-Goossensen et al. (35), found that there was a statistically significant correlation between age and self-efficacy level. In light of the findings of both the present study as well as other studies, it appears that age has a negative effect on individuals' quality of life and self-efficacy levels.

Conclusion

In the study, a statistically positive and strong correlation was identified between the mean scores of Stroke-Specific Quality of Life and the CDESES of the patients. A comparison of the SSQOLS and CDESES mean scores of individuals with their descriptive characteristics revealed that males and married patients had a higher quality of life as well as higher self-efficacy levels. Upon comparing the individuals' educational background, no statistical significance was

found at all. Additionally, a negative weak correlation was found between age and mean score of SSQOLS. Likewise, a negative moderate correlation was found between age and the individuals' mean score of CDSSES.

According to the results of the study; for disease management of stroke patients, it can be suggested to increase the number of studies assessing the quality of life and self-efficacy levels together, conduct studies in larger sample groups, conduct long-term studies to assess self-efficacy and the quality of life in stroke. The suggestion of long-term studies to study both self-efficacy and quality of life is important as life is not stable. Also, consider the quality of life and self-efficacy levels when planning the care and rehabilitation of stroke patients and use disease-specific scales in the assessment of individuals' self-efficacy and quality of life.

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ORIGINAL ARTICLE

Attitudes of Parents Living in Rural and Urban Areas in Kütahya Province Towards Childhood Vaccines

Kütahya İlinde Kırsal ve Kentsel Bölgede Yaşayan Ebeveynlerin Çocukluk Çağı Aşılarına Yönelik Tutumları

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Abstract

Objective: The aim of the study was to investigate the attitudes of parents living in rural and urban areas towards childhood vaccinations using the health belief model.

Method: The study is of descriptive comparative research type. The study was carried out interviews with parents between June and September 2021. A total of 254 parents, 153 from the urban area and 101 from the rural area, participated. In the study, descriptive questionnaire, vaccine-related community attitude-health belief model scale were used as data collection tools. Descriptive statistics, Spearman correlation analysis, Kruskal-Wallis test, Mann-Whitney U test were used in the analysis of the data.

Results: The total score of vaccine-related community attitude-health belief model scale was found to be 87.63±9.84 for parents in urban areas and 89±6.44 for parents in rural areas. Perceived sensitivity, perceived importance/seriousness, perceived benefit, health responsibility sub-dimensions were higher, and perceived disability sub-dimension scores were found to be lower in those who thought that childhood vaccinations were necessary and had them done (p<0.05). It was determined that 97% of parents living in rural areas and 92.2% of parents living in urban areas had the vaccines included in the childhood vaccination calendar. 67.3% of parents living in rural areas stated that "vaccination is a legal obligation and every newborn baby/child should be vaccinated compulsory".

Conclusion: It has been observed that the mean scores of parents' vaccination attitude in both urban and rural areas are at a moderate level.

Keywords: Child health, childhood, health belief model, vaccination attitude, behavioral health

Öz

Amaç: Çalışmanın amacı Kütahya ilinde kırsal ve kentsel bölgede yaşayan ebeveynlerin sağlık inanç modeli kullanılarak çocukluk çağı aşılarına yönelik tutumlarının araştırılmasıdır.

Yöntem: Çalışma betimsel karşılaştırmalı araştırma türündedir. Çalışma, Haziran-Eylül 2021 tarihleri arasında velilerle görüşmelerle gerçekleştirilmiştir. Kentsel bölgeden 153, kırsal bölgeden 101 olmak üzere toplam 254 ebeveyn katılmıştır. Çalışmada veri toplama araçları olarak araştırmacılar tarafından hazırlanıp geliştirilen tanımlayıcı anket formu ve aşıyla ilgili toplum tutumu-sağlık inanç modeli ölçeği kullanılmıştır. Verilerin analizinde tanımlayıcı istatistikler, Spearman korelasyon analizi, Kruskal-Wallis testi, Mann-Whitney U testi kullanılmıştır.

Bulgular: Aşıyla ilgili toplum tutumu-sağlık inanç modeli ölçeği toplam puanı kentsel bölgedeki ebeveynlerin 87,63±9,84, kırsal bölgedeki ebeveynlerin ise 89±6,44 bulunmuştur. Çalışmaya katılan ebeveynlerin yaş ortalaması 34,83±9,14 bulunmuştur. Çocukluk çağı aşılarının gerekli olduğunu düşünenlerin ve yaptıranların algılanan duyarlılık, algılanan önem/ciddiyet, algılanan yarar, sağlık sorumluluğu alt boyutları daha yüksek, algılanan engel alt boyutu puanları daha düşük bulunmuştur (p<0,05). Çocukluk çağı aşı takviminde yer alan aşıları kırsal bölgede yaşayan ebeveynlerin %97'sinin kentsel bölgede yaşayan

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ebeveynlerin ise %92,2'sinin yaptırdığı tespit edilmiştir. Kırsalda yaşayan ebeveynlerin %67,3'ü "aşı uygulamasının yasal zorunluluk olması ve doğan her bebek/çocuğa zorunlu olarak aşı yapılması gerektiğini" ifade etmişlerdir.

Sonuç: Hem kentsel hem de kırsal bölgedeki ebeveynlerin aşı tutumu puan ortalamalarının orta düzeyde olduğu görülmüştür.

Anahtar Kelimeler: Çocuk sağlığı, çocukluk çağı, sağlık inanç modeli, aşı tutumu, davranışsal sağlık

Introduction

The primary aim of health services provided to individuals and communities is to protect health, improve the current health status, and ensure the rehabilitation of deteriorated health status (1). Many declarations have been published to protect and improve health. These declarations first started with Alma-ata in 1978 and continued (2). The main purpose of the declaration of Alma-ata and the subject that is emphasized in the declaration is the primary health services. The Republic of Turkey declared the goal of "health for all", which is mentioned in primary health care services, in 2001. Within the scope of these goals, the first one to be realized is to control the infectious diseases that threaten public health with the gradual programs to be provided by 2020 and try to eradicate and eliminate them as much as possible (3).

Primary health services are uncompromised and minimal services that should be delivered to every segment of society justly as a priority, and immunization is among these services (2). In the fight against immunization and infectious diseases, the greatest achievement in biomedical and public health is vaccines. Because only the protection of individuals provides limited benefits in the protection of health whereas vaccines are an important investment that can be made for the protection of society. Vaccines are indispensable for a healthy and good future in welfare (1,4,5).

Childhood requires a sensitive approach since a child's development will be built on a solid basis and will provide a healthy future both individually and socially. Acquiring the right to a healthy life and maintaining healthy living conditions are the most fundamental rights of every child and duties that parents must fulfill (6). However, some reasons push some families to vaccinate their children or prevent them from being vaccinated. In a study, families stated several reasons for non-vaccination: Not trusting

vaccine ingredients (mercury, aluminum), not trusting the mechanisms of action of the vaccines, religious reasons (pig products), side effects that can be seen after vaccination (fever, convulsions, allergies), the foreign origin of vaccines, the belief that vaccines will cause harmful effects (SSPE, hyperactivity, infertility), negative news in the press, and other reasons. It is of great importance to get a baby/child vaccinated in order to obtain the right to a healthy life (6,7).

Successful and effective immunization provides protection from childhood vaccine-preventable diseases, as well as control the mortality and morbidity rates caused by the same diseases in youth, adulthood, and old age. With immunization, currently, around 4-5 million child deaths have been prevented and more than 1 billion children have benefited from vaccination services in the last 10 years (8). According to Turkish Demographic and Health Survey 2018 data, the rate of children aged 15-26 months who were never vaccinated was 1.6% whereas this rate increased to 2.9% in 2013. The rate of fully vaccinated children was 80.5 in 2008 and decreased to 74.1 in 2013. The resistance of infants to vaccine-preventable infectious diseases has decreased and the number of children who were not fully vaccinated has further increased by 77,694 (7-9). There are some health models that can be used to explain the importance of vaccination to families and the importance of vaccination in protecting and improving health. The health belief model (HBM) is one of these models.

HBM is a frequently used well- and old-established model that examines the reasons that encourage individuals to exhibit health behaviors when it comes to their health, their perceived benefits and seriousness, or the reasons that prevent them from protecting their health (10). Although there are studies conducted with the HBM regarding the early diagnosis of breast cancer, prevention of colorectal cancer, early diagnosis of cervical cancer, and accidents, studies using the HBM regarding vaccination have examined only urban parents' or rural parents' attitudes towards childhood vaccinations (11-18). For this reason, it is thought that this study, which aimed to evaluate the attitudes of parents living in rural and urban areas, towards childhood vaccinations will contribute to the literature.

Research questions:

- What are the parents' knowledge and opinions about vaccines?

- What are the mean scores of the parents living in the urban area on the public attitude towards vaccination scale - HBM and its subdimensions?

Main Points

- The rate of families who thought that childhood vaccines were necessary was 93.7%; the rate of families who had childhood vaccinations was 94%.
- 87.8% of the parents did not encounter any side effects.
- The mean score of the parents living in the urban area on the health responsibility subdimension was found to be higher than that of the parents living in the rural area.
- It was seen that the mean scores of the parents living in the urban and rural areas on the public attitude towards vaccination scale-health belief model were moderate.

- What are the mean scores of the parents living in the rural area on the public attitude towards vaccination scale - HBM and its subdimensions?

- Is there a significant difference between the mean scores of parents living in the urban area and parents living in the rural area on the public attitude towards vaccination scale-HBM?

- Is there a significant difference between the mean scores of parents on the public attitude towards vaccination scale-HBM in terms of their socio-demographic characteristics?

- Is there a significant difference between the mean scores of parents on the public attitude towards vaccination scale-HBM in terms of their knowledge and opinions?

Material and Methods

The research has a comparative and descriptive design and was carried out between June-September 2021. The research is a two-centered study. In order to make a comparison between the rural and urban areas, the study was carried out in family health center (FHC) located in the central district of Kütahya in the urban region and in the village house located in the rural area. In the study, "purposeful sampling", one of the non-probability sampling methods, was used in the selection of the sample. Although the main rule in sampling is to determine a sample group that will represent the entire population, in some cases, the researcher can determine the sample oneself, taking into account the subject of the research and using his/her knowledge and experience (19). FHC, one of the FHCs located in the central district of Kütahya constitutes the "urban sample" due to its location and total population whereas the health house district constitutes the "rural sample". The sample of the study was determined in line with these purposes and calculated as 377 with a margin of error of 5% and a confidence interval of 95%. Two hundred fifty-four included were included in the study and 68% of the calculated sample size was reached.

The inclusion criteria of the research were being a parent aged between 18-65 and volunteering to participate in the study. The data were collected by the researcher between 06/01/2021 and 09/01/2021 using the face-to-face interview technique. For data collection, a descriptive questionnaire prepared and developed by the researchers and the public attitude towards vaccination scale-HBM was used. A total of 47 questions were asked by the researcher to each individual in the research group. The dependent variable was the mean scores of parents on the public attitude towards vaccination scale-HBM. The independent variables were the socio-demographic characteristics of the parents and their knowledge and opinions about vaccines.

The descriptive questionnaire was created by the researchers and consists of 21 questions that determine the socio-demographic characteristics (13 questions)

of the individuals who agreed to participate in the study and their knowledge and opinions about vaccines (8 questions). The public attitude towards vaccination scale-HBM was developed by Tanyer et al. (20). The scale has a 5-point Likert-type rating system and consists of 26 items. The Cronbach alpha value of the scale was 0.89. The scale is not evaluated based on the total score, but each of the five subdimensions is evaluated separately. A decrease in the score on the barrier subdimension indicates a positive attitude; an increase in the scores on other subdimensions indicates a positive attitude. The Cronbach alpha reliability coefficient was 0.88 for the susceptibility subdimension, 0.86 for severity, 0.81 for benefit, 0.80 for barrier, and 0.71 for health responsibility (20). In terms of the reliability of the items, it can be said that the questionnaire is quite reliable since the Cronbach alpha coefficient for the entire scale was 0.738 (21).

Statistical Analysis

In data analysis, descriptive statistics (mean, standard deviation, minimum, median, maximum) were used to define continuous variables. Non-parametric tests (Mann-Whitney U, Kruskal-Wallis) were used since the data did not show normal distribution in the Kolmogorov-Smirnov test. The statistical significance level was taken as 0.05. The IBM SPSS 25 program was used in the analysis of the data. Institutional permission was taken from Kütahya Provincial Directorate of Health and Ethics Committee approval was received in order to carry out the study (decision no: 2021/08-16). "Informed voluntary consent form" was filled in by each participant who agreed to participate in the study.

Results

A total of 254 individuals participated in the study. Of the participants, 153 were included from the urban area and 101 from the rural area. The mean age of the participants was 34.83±9.14. The mean age of the parents from the urban area was 32.84±6.8 and the mean age of those from the rural area was 37.86±11.17. Of the parents included in the study, 81.1% were female and 18.9% were male. The mean age of the participants was 34.83±9.14. 96.5% of the participants were married. 65% of the female participants were unemployed; 21.7% were government officials. Of the male parents included in the study, 24.4% were government officials, 20.5% were workers, and 41.7% had other jobs. 23.6% of female parents were primary school graduates and 29.5% had a bachelor's degree. 23.6% of male parents were primary school graduates and 26.4% had a bachelor's degree. The rate of parents with health insurance was 71.3% and the rate of those who perceived their economic status as moderate was 48% (Table 1).

The rate of parents who did not have problems regarding transportation to the health institution was 78.7%; the rate of families who thought that childhood vaccines were necessary was 93.7%; the rate of families who had childhood vaccinations was 94%. 57.5% of the parents

received information about childhood vaccinations from an institution-person and 42.5% of the parents participating in the study did not receive information about childhood vaccinations from any person/institution. The FHC was the institution where parents received information about childhood vaccinations with the highest rate (23.6%). The rate of parents who had the opinion about the execution of childhood vaccination services that “vaccination should be a legal obligation; every newborn/child should be vaccinated” was 56.7% and the rate of those who thought that “the decision to have vaccination should belong to the mother/

father; if the mother/father does not allow vaccination, the child must not be vaccinated” was 43.3% (Table 2).

87.8% of the parents did not encounter any side effects (expected side effects such as fever, pain). Of the parents who experienced side effects in their children after vaccination, 5.9% encountered fever. The rate of parents who had information about non-routine vaccines was 36.6% and the rate of those who did not have information was 63.4%. Of the parents, 25.2% had non-routine vaccinations and 74.8% did not have non-routine vaccinations. The rate of parents

Table 1.
Socio-demographic Characteristics of Parents

		City n	City %	Dirt n	Dirt %	Total n	Total %
Gender	Female	113	73.9%	93	92.1%	206	81.1%
	Male	40	26.1%	8	7.9%	48	18.9%
Mother's job	Unemployed	66	43.1%	99	98.0%	165	65.0%
	Government official	55	35.9%	0	0.0%	55	21.7%
	Permanent worker	9	5.9%	1	1.0%	10	3.9%
	Other	19	12.4%	0	0.0%	19	7.5%
Father's job	Unemployed	3	2.0%	20	19.8%	23	9.1%
	Government official	59	38.6%	3	3.0%	62	24.4%
	Permanent worker	10	6.5%	1	1.0%	11	4.3%
	Worker	26	17.0%	26	25.7%	52	20.5%
	Other	55	35.9%	51	50.5%	106	41.7%
Mother's educational status	Illiterate	0	0.0%	16	15.8%	16	6.3%
	Primary school graduates	11	7.2%	49	48.5%	60	23.6%
	Middle school	7	4.6%	30	29.7%	37	14.6%
	High school	36	23.5%	6	5.9%	42	16.5%
	Bachelor's degree	75	49.0%	0	0.0%	75	29.5%
	Graduate	24	15.7%	0	0.0%	24	9.4%
Father's educational status	Illiterate	1	0.7%	5	5.0%	6	2.4%
	Primary school graduates	7	4.6%	53	52.5%	60	23.6%
	Middle school	5	3.3%	32	31.7%	37	14.6%
	High school	44	28.8%	9	8.9%	53	20.9%
	Bachelor's degree	65	42.5%	2	2.0%	67	26.4%
	Graduate	31	20.3%	0	0.0%	31	12.2%
Health insurance	There is	149	97.4%	32	31.7%	181	71.3%
	None	4	2.6%	69	68.3%	73	28.7%
Perceived economic status	Very good	23	15.0%	1	1.0%	24	9.4%
	Good	68	44.4%	10	9.9%	78	30.7%
	Moderate	59	38.6%	63	62.4%	122	48.0%
	Bad	2	1.3%	20	19.8%	22	8.7%
	Very bad	1	0.7%	7	6.9%	8	3.1%
Problem of transportation to health institution	There is	7	4.6%	47	46.5%	54	21.3%
	None	146	95.4%	54	53.5%	200	78.7%

who got their children vaccinated against rotavirus, which is one of the non-routine vaccines, was 10.2% and the rate of parents who got their children vaccinated against rotavirus and meningitis was 15% (Table 2).

The mean score of parents on the perceived susceptibility subdimension was 16.02±3.01; the mean perceived severity score was 15.36±3.08; the mean perceived benefit score was

18.8±3.46; the mean perceived barrier score was 18.04±5.54; the mean health responsibility score was 19.96±3.46. The mean total score was 88.17±8.66. There was a statistically significant difference in perceived severity and health responsibility distributions according to the place where the data were collected ($p < 0.05$). The mean perceived severity score of those living in the rural area was high and their mean health responsibility score was low (Table 3).

Table 2.
Information and Opinions of Parents on Vaccines

		City n	City %	Dirt n	Dirt %	Total n	Total %
Childhood vaccinations requirement	Necessary	142	92.8%	96	95.0%	238	93.7%
	Not required	11	7.2%	5	5.0%	16	6.3%
Getting childhood vaccines	Made by	141	92.2%	98	97.0%	239	94.1%
	Not made	12	7.8%	3	3.0%	15	5.9%
Information on childhood vaccines	There is	105	68.6%	41	40.6%	146	57.5%
	None	48	31.4%	60	59.4%	108	42.5%
Childhood vaccines information resource	Not received	48	31.2%	60	60%	108	42.5%
	FHC	60	39.0%	0	0.0%	60	23.6%
	Health house	0	0%	38	38%	38	15.0%
	Other	46	29%	2	2.0%	48	19.1%
Legal obligation childhood vaccines	Should be a legal obligation	76	49.7%	68	67.3%	144	56.7%
	Not legal obligation	77	50.3%	33	32.7%	110	43.3%
Experiencing post vaccine side effects	Encounter	23	15.0%	8	7.9%	31	12.2%
	Not encounter	130	85.0%	93	92.1%	223	87.8%
Non-routine vaccines information status	Has information	88	57.5%	5	5.0%	93	36.6%
	No information	65	42.5%	96	95.0%	161	63.4%
Getting non-routine vaccinations	Made by	63	41.2%	1	1.0%	64	25.2%
	Not made	90	58.8%	100	99.0%	190	74.8%

Table 3.
Comparison of Parents' Scores from the Scale Sub-dimensions of Community Attitude to Vaccination-health Belief Model

	City	Dirt	Total		
	Mean + SD Med (min-max)	Mean + SD Med (min-max)	Mean + SD Med (min-max)	z/H*	p
Perceived susceptibility	15.74±3.51 16 (4-20)	16.45±1.98 16 (12-20)	16.02±3.01 16 (4-20)	-1.054	0.292
Perceived severity	14.99±3.5 16 (4-20)	15.92±2.19 16 (8-20)	15.36±3.08 16 (4-20)	-2.067	0.039
Perceived benefit	18.75±4.03 20 (5-25)	18.86±2.37 19 (13-25)	18.8±3.46 19 (5-25)	-1.350	0.177
Perceived barrier	17.84±6.24 17 (8-33)	18.35±4.29 18 (8-30)	18.04±5.54 17 (8-33)	-1.454	0.146
Health responsibility	20.31±3.74 21 (8-25)	19.43±2.94 19 (11-25)	19.96±3.46 20 (8-25)	-3.334	0.001
Total score	87.63±9.84 89 (57-118)	89±6.44 89 (73-112)	88.17±8.66 89 (57-118)	-0.034	0.973

*Mann-Whitney U, SD=standard deviation

Those who thought that childhood vaccines were necessary had a higher total score. The mean total score of those who had childhood vaccinations was higher. The mean total score of those who received information about childhood vaccinations from an institution/person was higher. The mean total score of those who thought that “vaccination should be a legal obligation; every newborn/child should be vaccinated” about the execution of childhood vaccination services was higher. No significant correlation was determined between the side effects that parents encountered/did not encounter in their children after vaccination and their total score. No significant correlation was found between having/not having information about non-routine vaccines and the total score. The mean score of those who had non-routine vaccines was higher (Table 4).

Discussion

According to the study results, it was observed that parents living in rural and urban areas believed that childhood vaccinations were necessary and got their children vaccinated. In the study conducted by Seskute et al. (22), it was found that 75.3% of mothers believed that childhood vaccinations were necessary and that the benefits outweigh the harms. In another study, 95.1% of parents were found to believe in the protective effects of vaccines (23).

According to the study results, although most of the parents had their children vaccinated, 12 (7.8%) in the urban area and 3 (3%) in the rural area did not have their children vaccinated. In the literature, various reasons have been reported as to why some parents are anti-vaccine. Some reasons are the presence of mercury in vaccines and the

Table 4.
Community Attitude to Vaccination-health Belief Model Scale Scores According to Parents’ Knowledge and Views on Vaccines

			Total score		
		n	Mean + SD Med (min-max)	z/H*	p
Childhood vaccinations requirement	Necessary	238	89.37±6.98 89 (59-118)	-5.513	<0.001
	Not required	16	70.44±11.68 66.5 (57-97)		
Getting childhood vaccines	Made by	239	89.58±6.53 89 (73-118)	-6.390	<0.001
	Not made	15	65.8±7.72 65 (57-82)		
Information on childhood vaccines	There is	146	89.49±7.93 90 (57-118)	-2.976	0.003
	None	108	86.39±9.3 88 (58-112)		
Legal obligation childhood vaccines	Should be a legal obligation	144	90.51±6.59 90 (75-118)	-4.044	<0.001
	Not legal obligation	110	85.11±10.01 87 (57-106)		
Experiencing post vaccine side effects	Encounter	31	88.68±7.31 89 (67-102)	-0.197	0.844
	Not encounter	223	88.1±8.84 89 (57-118)		
State of knowledge on non-routine vaccines	Has information	93	88.44±9.36 90 (57-107)	-1.258	0.208
	No information	161	88.02±8.25 88 (58-118)		
Non-routine vaccinations	Made by	64	90.56±6.83 91 (75-107)	-2.476	0.013
	Not made	190	87.37±9.07 88 (57-118)		

*Kruskal-Wallis, **Kruskal-Wallis p<0.005, SD=standard deviation

increase in questioning as the level of education increases (24,25). In a study, it was concluded that the reason why 56% of parents did not get their children vaccinated was the idea that vaccination was useless (26). As a result of the study, although the rate of vaccination was high, it was concluded that there were parents who did not get their children vaccinated.

According to the study results, the mean scores of those who thought that “vaccination should be a legal obligation; every newborn/child should be vaccinated” on the perceived susceptibility, severity, benefit, and health responsibility subdimensions were found to be significantly high and their mean score on the barrier subdimension was high. In a thesis study in which the knowledge, attitudes, and behaviors of parents about childhood vaccinations were examined, it was found that the mean susceptibility, severity, benefit, and health responsibility scores of parents who thought that vaccination should be done were high and it was concluded that this thought lowered the mean score on the barrier subdimension (14). In another thesis study, the mean scores of parents who thought that “vaccination should be a legal obligation; every newborn/child should be vaccinated” on the perceived susceptibility, severity, and benefit subdimensions were found to be high (15).

According to the study results, it was found that 12.2% of the families encountered side effects after vaccination and that they hesitated against vaccinations. In previous studies, one of the hesitations of the parents about vaccination was the side effects such as fever and pain seen after vaccination (27,28). In a study in which the causes of childhood vaccine rejection in Australia were examined, it was found that 35.9% of parents were afraid of the side effects of vaccines (29). In another study, it was found that 44% of parents did not have their children vaccinated completely and hindered them due to their concerns about the side effects of vaccines (30). This suggests that side effects prevent families from getting vaccinated.

57.5% of parents living in the urban area had knowledge of non-routine vaccinations but this rate was only 5% in the rural area. 41.2% of parents living in the urban area had non-routine vaccinations whereas this rate was found to be only 1% in the rural area. The low rate of these vaccinations, which are not routine and are provided by families, may be due to the fact that these vaccines are paid and families are not aware of these vaccines because more than half of the families (63.4%) stated that they were not aware of these vaccines. In a study, it was determined that the first one among the reasons why families did not get their children vaccinated against rotavirus, was that the families were not informed about the vaccines, and the second was the inability to get the vaccine because it was paid (31). In a different study, it was seen that the families received the most information about non-routine vaccines from the health personnel and then the media when used effectively (32).

Conclusion

It was seen that the mean scores of the parents living in the urban and rural areas on the public attitude towards vaccination scale-HBM was moderate. The mean score of the parents living in the urban area on the Health Responsibility subdimension was found to be higher than that of the parents living in the rural area. The mean score of the parents living in the rural area on the perceived severity subdimension was determined to be higher than that of the parents living in the urban area. The mean scores of the parents living in the urban area who had non-routine vaccinations on the perceived susceptibility, perceived benefit, perceived severity, and health responsibility subdimensions were found to be higher. Those who had information about non-routine vaccinations and got their children vaccinated had a lower mean score on the perceived barrier subdimension.

Ethics Committee Approval: Institutional permission was taken from Kütahya Provincial Directorate of Health and Ethics Committee approval was received in order to carry out the study (decision no: 2021/08-16).

Informed Consent: “Informed voluntary consent form” was filled in by each participant who agreed to participate in the study.

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ORIGINAL ARTICLE

Determination of the Relationship Between the Coronavirus-2019 Phobia Level and Hygiene Behaviors of Nurses

Hemşirelerin Koronavirüs-2019 Fobi Düzeyleri ile Hijyen Davranışları Arasındaki İlişkinin Belirlenmesi

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Abstract

Objective: Nurses are in the high-risk group in terms of catching Coronavirus disease-2019 (COVID-19) and infecting their families/relatives and society, as they take part in the diagnosis, treatment and care practices of individuals. Therefore, they are afraid and worried about catching the disease and infecting their families/relatives. During the COVID-19, nurses tried to protect both themselves and their families/relatives from the disease by taking personal protective and general hygiene measures protect themselves and to minimize the transmission routes of the coronavirus. The purpose of this study was to determine the relationship between the COVID-19 phobia level of nurses and their hygiene behaviors.

Method: The descriptive and correlation study was carried out with 287 nurses between July-November, 2021. Data were collected using online data collection tools "descriptive information form", COVID-19 phobia (CP19-S)" and "COVID-19 hygiene" scales. Cronbach's alpha values of the scales are respectively; it was found as 0.959 and 0.963.

Results: It was determined that the relationships between the total and sub-dimensions of the CP19-S and COVID-19 hygiene scale were examined; correlation coefficients were positive, varying between 0.213 and 0.401, and were found to be weak or moderate in terms of the strength of the relationships.

Conclusion: It was determined that when the total score from the CP19-S scale increased, the COVID-19 hygiene scale score also increased. It is recommended that the study be conducted in larger sample groups and that nurses should be taught how to cope with COVID-19 phobia.

Keywords: COVID-19, coronaphobia, nurse, hygiene

Öz

Amaç: Hemşireler, bireylerin tanı, tedavi ve bakım uygulamalarında yer aldıkları için Koronavirüs hastalığı-2019'a (COVID-19) yakalanma ve aile/yakınlarına ve topluma bulaştırma açısından yüksek risk grubunda yer almaktadır. Bu nedenle hastalığa yakalanmaktan ve ailelerine/akrabalarına bulaştırmaktan korkmakta ve endişe duymaktadırlar. COVID-19 sürecinde hemşireler kendilerini korumak ve koronavirüsün bulaşma yollarını en aza indirmek için kişisel koruyucu ve genel hijyen önlemlerini alarak hem kendilerini hem de ailelerini/yakınlarını hastalıktan korumaya çalıştılar. Bu çalışmanın amacı hemşirelerin COVID-19 fobi düzeyleri ile hijyen davranışları arasındaki ilişkiyi belirlemektir.

Yöntem: Tanımlayıcı ve ilişki arayıcı bu çalışma, Temmuz-Kasım 2021 tarihleri arasında 287 hemşire ile gerçekleştirildi. Veriler çevrimiçi veri toplama araçları olan "tanımlayıcı bilgi formu", COVID-19 fobisi (CP19-S)" ve "COVID-19 hijyeni" ölçekleri kullanılarak toplandı. Ölçeklerin Cronbach alfa değerleri sırasıyla; 0,959 ve 0,963 olarak bulundu.

Bulgular: CP19-S ve COVID-19 hijyen ölçeğinin toplam ve alt boyutları arasındaki ilişkilerin incelendiği; korelasyon katsayıları 0,213 ile 0,401 arasında ve pozitif, ilişkilerin gücü açısından zayıf veya orta düzeyde olduğu bulundu.

Sonuç: CP19-S ölçeğinden alınan toplam puan arttıkça COVID-19 hijyen ölçeği puanının da arttığı belirlendi. Araştırmanın daha geniş örneklem gruplarında yapılması ve hemşirelere COVID-19 fobisi ile baş etme yöntemlerinin öğretilmesi önerilmektedir.

Anahtar Kelimeler: COVID-19, koronafobi, hemşire, hijyen

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Introduction

Coronavirus disease-2019 (COVID-19) is an infectious respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (1,2). At the beginning of December 2019, several pneumonia cases of unknown etiology were reported in the city of Wuhan, Hubei province. In January 2020, a new coronavirus was detected in a patient's throat swab by the Chinese Center for Disease Control and Prevention, and later this disease was named 2019-nCoV by the World Health Organization (WHO) (2,3). The first COVID-19 case in our country was reported by the Ministry of Health on March 10, 2020, and a pandemic was declared by WHO on March 11, 2020 (2).

Since the COVID-19 disease has not yet been fully controlled in the world and in our country, cases and deaths continue to be seen. Pandemics that affect public health on a universal scale affect individuals not only physiologically, but also psychologically, socially and economically. Various psychological problems such as fear, panic and phobia are seen in individuals. It has been reported in the literature that such pandemics affect people negatively and cause psychological problems such as fear and anxiety disorders (4,5). In addition, frequent exposure to news about COVID-19 in written, visual and social media increases people's anxiety and fear levels. This situation affects the whole society and increases the incidence of mental disorders such as anxiety, depression and acute stress disorder in nurses who play an active role during the fight against the pandemic (5,6).

Nurses are in the high-risk group in terms of catching the disease and transmitting it to their families/relatives and the community, as they play a role in the diagnosis, treatment and care practices of individuals with COVID-19. As a matter of fact, many nurses caught COVID-19, died due to this disease. Therefore, nurses have fear and anxiety about contracting the disease and infecting their families/relatives (7,8). Healthcare workers in Wuhan, where the pandemic started, are faced with problems such as high-risk of infection and inadequate protection against contamination, overwork, hopelessness, not being able to meet with their families and burnout, which results in mental health problems such as stress, anxiety, depressive symptoms, anger and fear (9).

The transmission of coronavirus from person to person through droplets and these infected droplets hanging on

surfaces, and uninfected individuals carrying their hands to the mouth, nose or eye mucosa after contacting these surfaces accelerate the spread of the disease (10). For this reason, it is recommended that individuals increase their individual hygiene measures and avoid environments with close contact in order to protect themselves from the disease (11). During the COVID-19 pandemic, nurses tried to protect both themselves and their families/relatives from the disease by taking personal protective and general hygiene measures in order to protect themselves from the pandemic and to minimize the transmission routes of the coronavirus (12).

Although there is no study in the literature on determining the level of phobia of nurses related to COVID-19 disease, as a descriptive-relationship-seeking study to determine the relationship between the COVID-19 phobia level and hygiene behaviors of nurses working in health institutions.

In the literature, no study has been found to determine the level of phobia of nurses related to COVID-19 disease. There are limited studies on the evaluation of hygiene behaviors conducted only on nursing students (10,13). Therefore, the aim of this study was to determine the relationship between the COVID-19 phobia nurses and their hygiene behavior.

Research Questions

1. What is the COVID-19 phobia level and hygiene behaviors of nurses?
2. What is the correlation between nurses' COVID-19 phobia levels and hygiene behaviors?

Material and Methods

Design

It was planned as a descriptive and correlation study.

Sample

The population of the study consisted of nurses who were actively working in any health institution during the COVID-19 pandemic in Turkey. The sample of the study was carried out with 287 nurses who were actively working in any health institution between 1 July and 1 November 2021, who agreed to participate in the research and met the inclusion criteria of the study. Snowball sampling technique, one of the non-probability sampling methods, was used. Snowball sampling is used when the boundaries and units of the population cannot be determined precisely. Some form of connection is made to one of the units in the population to make a snowball sampling. With the help of this contact person, the second person is reached, and with the second contact, the third person is reached. Thus, like the snowball growth, the number of units of the sample also grows. Then, with the help of the contact person, another person is contacted, and then another person is contacted in the same way. Hence, the sample is enlarged as a snowball effect (14).

Main Points

- During the pandemic process, as with all individuals, nurses tried to protect themselves and their families/relatives from the disease by taking personal protective and general hygiene measures in order to protect themselves from the pandemic and to minimize the transmission routes of the Coronavirus disease-2019 (COVID-19).
- In the study; it was determined that the only variable affecting the COVID-19 phobia score of the nurses was their hygiene habits, and as the phobia scores of the nurses increased, they gave more importance to personal and general hygiene measures.
- In line with this result; it is recommended that nurses be supported psychologically in order to cope with COVID-19 phobia.

The analysis suggested for relational studies, which is used to determine the factors that are decisive in calculating the sample size, was used. Considering the number of independent variables, the study was planned to be completed after 285 nurses were recruited according to the parameters 0.05 significance value, 95% power and 0.15 effect size (15). The study was completed with the participation of 287 nurses.

Inclusion criteria: Being over the age of 18, working actively in any health institution during the COVID-19 outbreak and volunteering.

Exclusion criteria: Not to work in any health institution during the COVID-19 outbreak.

Data Collection Tools

In the study, the data collected by the researchers were in line with the literature (10,13) online data collection tools "personal description form", COVID-19 phobia (CP19-S)" and "COVID-19 hygiene" scales.

Personal description form: There are 17 questions in the form, such as the age, gender, education level, chronic disease status, and COVID-19 status of the nurses.

CP19-S: It is a 5-point Likert-type and 20-item self-assessment scale developed to measure the phobia that may develop against the Coronavirus by Arpacı et al. (5) scale items; it is evaluated between 1 "strongly disagree" and 5 "strongly agree". Items 1, 5, 9, 13, 17, and 20 psychological sub-dimension; items 2, 6, 10, 14, and 18. Somatic sub-dimension; 3, 7, 11, articles 15 and 19. Social sub-dimension; 4, items 8, 12 and 16 measure the economic sub-dimension. While the sub-dimension scores are obtained by the sum of the answers given to the items belonging to that sub-dimension; the total CP19-S score is obtained by the sum of the sub-dimension scores and ranges from 20 to 100 points. Higher scores indicate height in lower dimensions and general corona phobia. Arpacı et al. (5) while the Cronbach's alpha value was reported as 0.925 in the scale development study conducted by, it was found as 0.959 in the study.

COVID-19 hygiene scale: It is a 5-point Likert-type and 27-item self-assessment scale developed by Çiçek et al. (16) to determine the personal and general hygiene measures that individuals take to protect themselves from the COVID-19 pandemic and to minimize the transmission routes of the coronavirus. Scale items were evaluated between 1 "never" and 5 "always". The 7th, 11th, 12th, 14th, 21st and 27th items included the "changing hygiene behaviors" sub-dimension, the 16th, 18th, 19th and 20th items included the "home hygiene" sub-dimension, 1st, 2nd, 3rd and 25th items "social distancing and mask use" sub-dimension, 15th, 22nd, 23rd, 24th and 26th items "shopping hygiene" sub-dimension, 4th, 5th, 6th, 8th and items 9 measure "hand hygiene" and items 10, 13 and 17 measure "hygiene when coming home from outside" sub-dimension. The lowest score that can be obtained from the scale is 27,

and the highest score is 135, and the high score indicates that individuals carry out personal and general hygiene measures and attach great importance to these measures. While the Cronbach's alpha value was reported as 0.908 in the scale development study conducted by Çiçek et al. (16) it was found as 0.963 in the study.

Data Collection

The nurses participating in the study were reached using the snowball sampling method. The link address for the data collection form was sent to the e-mail addresses or social media accounts of the nurses who will participate in the study. It was requested that the data collection form be forwarded to other nurses who met the inclusion criteria of the study. With the help of the contacted nurse, another nurse was reached, and then another nurse was reached in the same way. The data collection process was continued until the number of nurses to be included in the study was reached. On the entry page of the data collection form, the nurses who will participate in the study were informed about the purpose of the study and the principle of voluntary participation. Nurses who gave consent to the informed consent form were included in the study. Filling out the data collection form takes approximately 10 minutes.

Data were collected online in order to protect the health of the participants due to the ongoing pandemic, and to reach the participants more easily because the research population is Turkey in general.

Statistical Analysis

Data analysis was performed with SPSS 25.0 (Statistical Packages for the Social Sciences, Armonk, NY: IBM Corp. 2017) program. In the evaluation of the data, mean, standard deviation, median, frequency, percentage, minimum and maximum were used from descriptive statistics. Before examining the differences according to the socio-demographic variables regarding the total and sub-dimension scores of the scales, their conformity to the normal distribution was examined with the Kolmogorov-Smirnov test. Non-parametric tests, Mann-Whitney U test and Kruskal-Wallis test, were used to analyze the differences between groups, since many scores did not fit the normal distribution according to the groups. After Kruskal-Wallis test, Dunn-Bonferroni test was applied as a post-hoc test, and the results were evaluated at 95% confidence interval and $p < 0.05$ significance level.

Ethical Consideration

Ethical permission for the research from Haliç University Non-Interventional Research Ethics Committee (date: 05.04.2021 and 2021-07-40), work permission from the Scientific Research Platform (2021-06-19T23_39_30), scale usage permission from the authors and participating in the research written informed consent was obtained from the nurses.

Results

According to their socio-demographic characteristics, 91.3% of the nurses are women, 38.3% are 24 years old and younger, 65.1% are undergraduate graduates, 56.8% are single, 28.9% have children. It was claimed that 57.5% of them had income equal to their expenses, 76.7% of them lived in the Marmara Region. According to their working status; it was determined that 47.4% of them were working in the state and 82.2% were working in clinics, and surgery + COVID-19 and intensive care clinics were prominent among the clinics studied. According to their working experience; it was found that 47% of them worked between 1-5 years. It was ascertained that 16% of the participants had a chronic disease, 39.7% had COVID-19, 89.2% had their relatives diagnosed with COVID-19, and 53% of the diagnosed individuals were family members. Although the rate of nurses who lost their relatives due to COVID-19 was 30%, it was determined that 8% of the degree of closeness was related (Table 1).

Cronbach's alpha coefficient was used to measure the reliability of the total and scale sub-dimensions of the CP19-S scale and COVID-19 hygiene scale included in the study. When the Cronbach alpha reliability coefficients in the total and sub-dimensions of the CP19-S scale were examined; it was detected that it varied between 0.850-0.959, and the COVID-19 hygiene scale ranged between 0.801-0.963. According to the coefficients determined, it is seen that the internal consistency of both scales is quite reliable.

Just as soon as the relations between the total and sub-dimensions of the CP19-S scale for nurses and the COVID-19 hygiene scale were examined; correlation coefficients showing statistically significant relationships appear as weak or moderate in terms of the strength of the positive correlations, varying between 0.213 and 0.401.

Positive relationships show that as the score of one of the scales increases, the score of the other also increases (Table 2).

The total score obtained by the nurses from the scale was 47.96 ± 17.4 , and it can be said that the level of phobia is high. The socio-demographic characteristics of nurses include age, marital status, income level, education level, region of residence, clinic worked, duration of work, history of chronic illness and COVID-19 disease, as well as CP19-S scale total score, psychological sub-dimension, somatic sub-dimension, and there is no statistically significant difference between them in terms of social and economic sub-dimensions ($p > 0.05$).

With nurses having children; while there was no statistically significant difference between them in terms of CP19-S scale total score, psychological sub-dimension, social sub-dimension and economic sub-dimensions ($p > 0.05$), there was no statistically significant difference in somatic sub-dimension ($p < 0.05$). The CP19-S scale mean score of those

who had children was found to be higher than those who did not have children.

Conforming to the institution where the nurses work; while there was no statistically significant difference in terms of CP19-S scale total score and psychological sub-dimension ($p > 0.05$), there was a statistically significant difference in terms of somatic sub-dimension, social sub-dimension and economic sub-dimension ($p < 0.05$, $p < 0.01$).

In the light of the results of the post-hoc test carried out to find the groups that make a difference; in the somatic sub-dimension, those who work at the university have higher values than those who work in the state or privately, those who work at the university in the social sub-dimension have higher values than those who work in the state, and those who work at the university in the economic sub-dimension have higher values than those who work privately.

Once there is no statistically significant difference in terms of the social sub-dimension of the CP19-S scale according to the position the nurses work in ($p > 0.05$), there is a statistically significant difference in terms of the scale total score, psychological sub-dimension, somatic sub-dimension and economic sub-dimension ($p < 0.05$). It was found that the mean scores of those working in administrative units had higher values than those working in clinical units.

The total score of the nurses from the COVID-19 hygiene scale is 98.71 ± 23.27 , and high scores indicate that individuals take personal and general hygiene measures and attach great importance to these measures. Between socio-demographic characteristics of nurses (marital status, education level, income status, having children, working institution, working position, clinic, working time, chronic disease history, and having COVID-19 disease) and total COVID-19 hygiene scale scores were compared and there is no statistically significant difference ($p > 0.05$).

As claimed by the age groups of the nurses; while there was no statistically significant difference in terms of COVID-19 hygiene scale total score, social distance and mask use sub-dimension, shopping hygiene sub-dimension, hand hygiene sub-dimension ($p > 0.05$), changing hygiene sub-dimension, home hygiene sub-dimension, outside-to-home There is a statistically significant difference in terms of hygiene sub-dimensions ($p < 0.05$).

According to the results of the post-hoc test carried out to find the groups that make a difference; in the changing hygiene sub-dimension, the 25-29 and 30-34 age groups compared to the 24 and below age groups, in the home hygiene sub-dimension, the 25-29 age group compared to the 24 and below age group, and the 30-34 age group compared to the 35 and over age group in the hygiene sub-dimension when coming home from outside. found to have high values.

Table 1.
Introductory Characteristics of the Nurses (n=287)

Characteristics		n	%
Sex	Female	262	91.3
	Male	25	8.7
Age range	24 years and younger	110	38.3
	25-29 years old	84	29.3
	30-34 years old	35	12.2
	35 years and older	58	20.3
Education	Health vocational high school associate degree	78	27.2
	Undergraduate	161	56.1
	Graduate	48	16.7
Marital status	Single	163	56.8
	Married	124	43.2
Status of having a child	No	204	71.1
	Yes	83	28.9
Income level	Income less than expenses	75	26.1
	Income equals expenses	165	57.5
	Income more than expenses	47	16.4
Living district	Marmara district	220	76.7
	Other district	67	23.3
Employed institution	State	136	47.4
	Private	108	37.6
	University	43	15.0
Position held	Clinic	236	82.2
	Administrative	51	17.8
Practiced clinic	Surgical and COVID clinic	63	22.0
	Intensive care unit	54	18.8
	Other (emergency, polyclinic, administrative) clinics	47	16.4
	Operation room	46	16.0
	Obstetrics, gynecology and child clinics	43	15.0
	Internal medicine	34	11.8
Work experience	1 year and less	44	15.3
	1-5 years	135	47.0
	More than 5 years	108	37.6
Chronic disease history	Yes	46	16.0
	No	241	84.0
Infected with COVID in the past	Yes	114	39.7
	No	173	60.3
Presence of a family member infected with COVID-19 in the past	Yes	256	89.2
	No	31	10.8
COVID-19 infection by the proximity	Family member	152	53.0
	Relative	87	30.3
	Colleague	109	38
	Friend	87	30.3
	Neighbour	57	19.9
Presence of deceased relatives due to COVID-19	Yes	86	30.0
	No	201	70.0
Proximity of the person who deceased due to COVID-19	Family member	15	5.2
	Relative	23	8.0
	Colleague	15	5.2
	Friend	7	2.4
	Neighbour	8	2.8

COVID-19=Coronavirus disease-2019

Table 2.
Relationships Between Total and Sub-dimensions of the COVID-19 Phobia Scale and COVID-19 Hygiene Scale

		COVID-19 hygiene scale total	Changing hygiene subdimension	Domestic hygiene subdimension	Social distancing and mask use subdimension	Shopping hygiene subdimension	Hand hygiene subdimension	Hygiene sub-dimension when coming home from outside
COVID-19 phobia scale	rho	0.350	0.326	0.251	0.351	0.321	0.244	0.276
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
Psychological sub-dimension	rho	0.329	0.263	0.240	0.401	0.301	0.265	0.246
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
Somatic sub-dimension	rho	0.295	0.337	0.223	0.220	0.251	0.164	0.263
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.005**	0.000**
Social sub-dimension	rho	0.340	0.316	0.233	0.330	0.317	0.230	0.273
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**
Economic sub-dimension	rho	0.352	0.379	0.262	0.261	0.308	0.213	0.302
	p	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**	0.000**

*rho=Spearman Rho correlation coefficient, **p<0.01, COVID-19=Coronavirus disease-2019*

While there was no statistically significant difference in terms of the changing hygiene sub-dimension, home hygiene sub-dimension, and hand hygiene sub-dimension according to the region where the nurses live ($p>0.05$), the hygiene scale total score, social distance and mask use sub-dimension, shopping hygiene sub-dimension, there is a statistically significant difference in terms of hygiene sub-dimensions when coming home from outside ($p<0.05$). It was found that those living in non-Marmara Regions had higher average evaluations than those living in the Marmara Region.

When the regression analysis was performed to determine the effect of the independent variables on the dependent variable, it was determined that the only variable effective on the COVID-19 hygiene scale score was the score obtained from the CP19-S scale, and the hygiene score increased by 0.568 points with an increase in the score.

Discussion

Epidemics such as severe acute respiratory syndrome, middle east respiratory syndrome and Ebola, which have been seen recently, have spread all over the world from the countries where they were first seen (17). Epidemics turn into a crisis because they not only threaten the health of individuals, but also negatively affect daily life, require taking various precautions, and lead to an increase in the number of patients who need treatment (18).

Crises cause physical, cognitive, emotional and behavioral reactions in individuals such as anxiety, feeling of being unable to cope, depression, fear of harming themselves and their loved ones, uneasiness and changes in rituals (19). As in other epidemics, COVID-19 has affected individuals in many aspects such as health, psychology, social interaction and economy from the moment it was declared a pandemic by WHO (2) to the present (20,21). However, the health workers who were at the forefront of the COVID-19 pandemic, who worked for a long time, had frequent contact with infected individuals, had a high-risk of transmitting the disease to their families and loved ones, and who experienced fatigue and psychological distress, were particularly affected by this process (22,23).

Coronaphobia is a special type of phobia defined as specific to COVID-19 disease and accepted in diagnostic and statistical manual of mental disorders-5. The high scores indicate the height in the lower dimensions and general coronaphobia (5). Healthcare workers working with patients who are suspected and/or positive for COVID-19 have a high-risk of being infected with the coronavirus. In a study from China, it is reported that the fear, anxiety and depression values of healthcare personnel working with patients with suspected and/or positive COVID-19 were found to be higher than administrative personnel (24). In another study, when the COVID-19 phobia levels of 172 health workers (physicians, nurses and allied health workers) were evaluated with the CP19-S scale, the total score they got was determined as

50.1±17.3 (25). Although the total score of the nurses from the CP19-S scale in the research was 47.96±17.4, it can be interpreted that the nurses have moderate coronaphobia. It can be said that the total score of the health workers from the scale and the total score of the nurses in the research are similar.

In the light of Oktay Arslan's et al. (25) study, it was reported that no statistically significant difference was found when the C19P-S scale total and subscale scores and the socio-demographic characteristics (such as age, gender, marital status and chronic disease history) were compared ($p>0.05$). In the study, it was determined that there was no statistically significant difference between the socio-demographic characteristics of the nurses and the total score and sub-dimension scores of the C19P-S scale ($p>0.05$).

Oktay Arslan et al. (25) in their study, it was stated that healthcare professionals working in the intensive care unit had the highest C19P-S scale total and subscale scores. In the research, it was no statistically significant difference in terms of total score and sub-dimension scores with the clinics where the nurses work ($p>0.05$). The difference between the results of the research and the literature may be due to the fact that the study data were collected at a time when the pandemic was under control and the number of cases was decreasing. Another reason is that intensive care professionals are in constant and close contact with patients suspected and/or positive COVID-19, being exposed to a high-risk of contamination, heavy workload and death, can increase the level of coronaphobia.

In the literature it is stated that healthcare workers who are in direct contact with COVID-19 patients have significantly higher anxiety/anxiety scores than those who do not (24,26,27). While there was no statistically significant difference in the social sub-dimension of the C19P-S scale ($p>0.05$) in the research, there was a statistically significant difference in scale total score, psychological sub-dimension, somatic sub-dimension and economic sub-dimension ($p<0.05$). It was found that the average scores of employees in administrative units were higher than those working in clinical units. The result of the study does not show parallelism with the literature. Amin's et al. (28) study reported that having a child is associated with COVID-19 anxiety. While there was a statistically significant difference in the somatic sub-dimension according to having a child in the research ($p<0.05$), no statistically significant difference was found in the total score, psychological, social and economic sub-dimension ($p>0.05$). The average score of those who have children is higher than those without children. The results are similar to Amin's et al. (28) study. It can be said that those who have children are afraid and worried about infecting their children.

To control the pandemic and slow the spread of COVID-19, countries have had to implement individual and environmental hygiene measures, as well as practices such as social isolation and quarantine (29). Washing hands with

soap and water for personal hygiene or using $\geq 60\%$ alcohol-containing hand sanitizers in the absence of soap and water are some of the critical measures recommended (30).

Most of the studies reported in the literature are aimed at determining the change in hand hygiene habits of health workers, nurses and students studying in health-related departments and examining the use of personal protective equipment during the pandemic period. A study examining the importance of personal and general hygiene of health professionals together has not been found in the literature, and it is thought to be the first study in which the COVID-19 hygiene scale was used on healthcare workers and/or nurses. For this reason, the research results were compared with two different studies using the COVID-19 hygiene scale.

Aydın et al. (31) in their studies, the COVID-19 hygiene scale score of the participants was 94.62±26.56, Çiçek et al. (32) in their studies reported it as 112.31±15.46. As a result of the research Aydın et al. (31) is similar to their studies, the total score of the nurses from the COVID-19 hygiene scale was 98.71±23.27. High scores indicate that individuals take personal and general hygiene measures and attach great importance to these measures.

In the research, no statistically significant difference was found between the socio-demographic characteristics of the nurses (marital status, education level, income status, having children, working institution, position, clinic worked, duration of work, history of chronic illness and having COVID-19 disease) and the COVID-19 hygiene scale score ($p>0.05$).

Uğurlu's et al. (33) in their study with 1660 participants to evaluate the knowledge and attitude of the Turkish society on handwashing during the COVID-19 pandemic, they stated that the frequency of handwashing increased. The relationship between socio-demographic characteristics and handwashing habits of adults in the United States of America was examined. It was stated that who reported less concern about Coronavirus, had no experience with the disease, men and younger participants compared to women, washed their hands and used hand antiseptics at a lower rate (34). In addition another study reported a significant difference between age and hand hygiene sub-dimension. It has been stated that the level of exhibiting hand hygiene behavior is lower under the age of 34 year and the age of 65 and over is higher ($p<0.05$) (32). Contrary to previous studies in the research (32,34) no statistically significant difference was found between the age of nurses and the "hand hygiene" sub-dimension.

Aydın et al. (31) In their studies, individuals belonging to the 18-33 years age group had significantly higher hand hygiene scores than the other age groups ($p<0.05$). Unlike the study, there was no statistically significant difference in hand hygiene sub-dimension according to the age groups of the nurses in the research.

Aydin et al. (31) in their studies, there was no significant difference in the hygiene scores as per the participants' marital status, education level, income level, employment status, COVID-19 diagnosis. Unlike the study, a statistically significant difference was found in the sub-dimensions of "changing hygiene", "home hygiene" and "hygiene coming home from outside" ($p < 0.05$). According to "changing hygiene" sub-dimension, it was stated that the 25-29 and 30-34 age groups have higher dimension values than the 24 years old and below. According to "home hygiene" sub-dimension, the 25-29 age group has higher values than the 24 and under age group. According to "hygiene when you come home" dimension, the 30-34 age group had higher scores than the 35 and over age.

There was no statistically significant difference in the "social distance and mask use" sub-dimension, "shopping hygiene" sub-dimension and "hand hygiene" sub-dimensions in this research. It is thought that giving more importance to hand hygiene, social distance and mask use, and hygiene measures during and after shopping to protect their families/people who live with from the disease may lead to this result. In addition, according to the statistically significant result of the research, it can be concluded that as the age increases, the nurses want to pay more attention to personal and general hygiene measures to protect the health of themselves, their families/relatives/the people they live with.

There was no statistically significant difference in terms of hygiene, home hygiene, hand hygiene sub-dimension according to the region where the nurses live ($p > 0.05$). A statistically significant difference was found in terms of hygiene scale total score, social distance and mask use, shopping hygiene, when coming home from outside sub-dimensions ($p < 0.05$). The average of the evaluation of the people living in the non-Marmara district is higher than the ones living in the Marmara district. In the studies conducted on this subject in the literature, comparisons were made not according to the region they lived in, but according to the place where they live. Haas et al. (35) in their studies; it is reported that individuals living in villages/towns, districts and provinces pay more attention to home hygiene than those living in metropolitan areas in order to protect themselves from the pandemic, while those living in metropolitan areas attach more importance to hand hygiene than those living in other places. As the Marmara district has the largest metropolitan area and the most densely populated region in Turkey, the results of the study were obtained by Haas et al. (35). When compared with the research, it is seen that the results do not show parallelism with each other. It is thought that in the research, the fact that nurses living in the Marmara district receive support in carrying out domestic activities (including cleaning and maintenance of the house, vacuuming, dusting, laundry, etc.) and their active participation in working life may be effective in the absence of difference in the sub-dimension of home hygiene.

Study Limitations

The results obtained from the study can only be generalized to the nurses who participated in this study. In addition, it is thought that the nurses invited by the researchers to participate mostly from a single region, the reduction in restrictions in the world and Turkey at the time of data collection, more information about the disease, and the widespread application of vaccination to the community may affect the results.

Conclusion

The COVID-19 phobia score is the only variable that affects hygiene habits, and an increase of one point in the phobia score increases the other scale score by 0.568 points. It is seen that the higher the phobia scores of the nurses, the more importance they attach to personal and general hygiene measures. In line with the results; it is recommended that the study be conducted in larger sample groups and that nurses should be provided with psychological support to cope with COVID-19 phobia.

Ethics Committee Approval: Ethical permission for the research from Haliç University Non-Interventional Research Ethics Committee (date: 05.04.2021 and 2021-07-40), work permission from the Scientific Research Platform (2021-06-19T23_39_30).

Informed Consent: Written informed consent was obtained from the nurses.

Peer-review: Internally and externally peer-reviewed.

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ORIGINAL ARTICLE

The Effect of Palliative Care Training on Symptom Management, Rehospitalization and Quality of Life in Chronic Heart Failure: A Randomized Controlled Trial

Kronik Kalp Yetersizliğinde Palyatif Bakım Eğitiminin Semptom Yönetimi, Yeniden Yatışlar ve Yaşam Kalitesi Üzerine Etkisi: Randomize Kontrollü Çalışma

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Abstract

Objective: Palliative care is of great importance because of the poor quality of life and high mortality risk in advanced heart failure. This study was planned as a randomized controlled trial to determine the effect of palliative care training on symptom management, rehospitalization, and quality of life among patients with heart failure.

Method: The study included 42 control and 42 intervention groups in patients with class III and IV heart failure according to New York Heart Association classification.

Results: According to the Edmonton symptom assessment scale, tiredness ($p=0.044$), nausea ($p=0.016$), depression ($p=0.002$), anxiety ($p=0.004$), feeling of well-being ($p=0.009$), leg edema ($p=0.021$), and total symptom burden ($p=0.027$) in the first month after discharge and tiredness ($p=0.042$), nausea ($p=0.014$) and leg edema ($p=0.042$) in the third month after the discharge of intervention group was found to be significantly better than the control group. There was no significant difference between groups in quality of life. The rehospitalization rate at the first ($p=0.001$), third ($p=0.001$), and sixth ($p=0.001$) months in the intervention group was found to be significantly lower than the control group.

Conclusion: The patients who received palliative care had a better symptom burden in the first month and a lower rehospitalization rate in the first, third, and sixth months. Palliative care should be integrated into the health care system to improve symptom management, increase the quality of life, and reduce rehospitalization among patients with heart failure. Trial Registration: clinicaltrials.gov Identifier: NCT05285163.

Keywords: Heart failure, palliative care, rehospitalization, symptom burden, quality of life

Öz

Amac: İleri kalp yetersizliğinde kötü yaşam kalitesi ve mortalite riskinin yüksek olması nedeniyle palyatif bakım büyük önem taşımaktadır. Bu çalışma, kalp yetersizliği hastalarında palyatif bakım eğitiminin semptom yönetimi, yeniden hastaneye yatış ve yaşam kalitesi üzerine etkisini belirlemek amacıyla randomize kontrollü bir çalışma olarak planlandı.

Yöntem: Çalışmaya New York Kalp Derneği sınıflamasına göre sınıf III ve IV kalp yetersizliği olan 42 kontrol ve 42 deney grubu hastası dahil edildi.

Bulgular: Edmonton semptom tanılama ölçeğine göre, taburculuk sonrası birinci ay deney grubunun yorgunluk ($p=0,044$), bulantı ($p=0,016$), depresyon ($p=0,002$), anksiyete ($p=0,004$), kendini iyi hissetme ($p=0,009$), ayak ödemi ($p=0,021$) ve toplam semptom yükü ($p=0,027$) ve üçüncü aydaki yorgunluk ($p=0,042$), bulantı ($p=0,014$) ve ayaklarda ödem ($p=0,042$) puanı kontrol grubuna göre anlamlı olarak daha iyi olduğu bulundu. Yaşam kalitesinde gruplar arasında anlamlı fark saptanmadı. Deney grubundaki hastaların birinci ($p=0,001$), üçüncü ($p=0,001$) ve altıncı ($p=0,001$) ay hastaneye yatış oranı kontrol grubundan düşük olduğu bulundu.

Sonuç: Palyatif bakım alan hastaların birinci ay semptom yükü daha iyi ve birinci, üçüncü ve altıncı ay hastaneye yeniden yatışlarının daha az olduğu saptandı. Kalp yetersizliği hastalarında semptom yönetimini iyileştirmek, yaşam kalitesini artırmak ve hastaneye yeniden yatışları azaltmak için palyatif bakım sağlık sistemine entegre edilmelidir. Araştırma Kaydı: [Clinicaltrials.gov](https://clinicaltrials.gov) Tanıtıcı: NCT05285163.

Anahtar Kelimeler: Kalp yetersizliği, palyatif bakım, yeniden hastaneye yatış, semptom yükü, yaşam kalitesi

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Introduction

Chronic heart failure is an essential health problem due to mortality risk and high morbidity, which also, often leads to poor quality of life in individuals (1-3). Heart failure is increasing to $\geq 10\%$ among people >70 years of age and nearly 1-2% of adult people in developed countries (4). One of six people has undiagnosed heart failure. The risk of having heart failure at 55 years is 33% for males and 28% for females. According to the latest data in Europe, 17% of all deaths in 12 months are caused by heart failure patients in the hospital and 7% are patients with outpatient heart failure (4). According to the study about heart failure prevalence and predictors conducted in Turkey, the absolute prevalence of heart failure was found to be 2.9%. The prevalence of heart failure in the country was found as 6.9% according to the results of prevalence analysis performed without echocardiography (5).

Although heart failure is an important problem and equivalent to malignant disease with regards to symptom burden and mortality risk, patients with heart failure receiving palliative care are very low (2). Also, the symptom burden of advanced heart failure patients is reported to be higher than in advanced cancer patients (6). However, there is little awareness of palliative care for other diseases than cancer (7,8) and therefore the integration of palliative care other than malignant diseases is poor (9). Although palliative care is of cancer origin, it has been extended to the care of individuals with all diseases that limit life today (2). Forty million people need palliative care every year. Of these, 39% are cardiovascular diseases, 34% are cancers and 10% are chronic lung diseases. However, 86% of people who need palliative care don't receive it (10). Since heart failure is a chronic and progressive disease, it is difficult to predict its course (11). While 61.9% of cancer patients receive palliative care, 21.2% of heart failure patients have palliative care (12). Palliative care should be integrated into the health care system to improve symptom management and quality of life and reduce rehospitalization in patients with heart failure (7,9,13).

Material and Methods

Aim of the Research

The study was planned as a randomized controlled trial to determine the effect of palliative care training given

to patients with end-stage heart failure on symptom management, rehospitalization, and quality of life.

Hypothesis

H1: Palliative care increases the symptom management of patients with heart failure.

H2: Palliative care improves the quality of life of patients with heart failure.

H3: Palliative care reduces heart failure patients' rehospitalization.

Research Place/Time/Design

The research population consisted of patients who were referred to heart failure at a university in Turkey between January and December 2017. The data were collected in the hospital without discharge and in the first, third, and sixth months after discharge. The control group took usual care and the intervention group took both usual care and palliative care.

Description of Sample

The inclusion criteria of the patients of the study are 18-year-old or over, class III and IV heart failure patients according to the New York Heart Association (NYHA) classification, patients without any communication problem to prevent participation in the research (loss of hearing, visual impairment, lack of understanding/speaking in Turkish), can be contacted by telephone, are literate. The patients who were diagnosed with heart failure at least six months ago and accepted to participate voluntarily were also included in the study. Exclusion criteria; patients who wish to quit their study voluntarily during the study period and patients who died or worsened during the study period.

As a result of the Power analysis (G*Power 3.1.9.2) situated on a similar study previously conducted for the experimentally designed study (14); in the evaluation made according to the scale of quality-of-life scores: it was identified power: 0.80, β : 0.05 and α : 0.05 receiving as Δ : 0.696, it was found that a total of 68 patients, the minimum number of patients for each group was 34 (Δ : Effect size).

It was aimed to reach a total of 84 patients 42 in the intervention group and 42 in the control group, as it could be the patients with the possibility of leaving. The patients were distributed with the minimization method of covariate-oriented randomization. According to NYHA (class III, IV), sex (male and female), and the number of hospitalizations (≤ 3 and ≥ 4) within one year, the patients were randomly appointed to the control and intervention groups. Thus, the patients in the intervention and control groups were distributed as homogeneous. As shown in Figure 1, the sample was distributed according to the consolidated standards trials (CONSORT) guide. The template for intervention description and replication checklist was used in the 5th item of CONSORT.

Main Points

- The study enhances the awareness of palliative care for other diseases than cancer.
- Palliative care can improve symptom management and reduce rehospitalization among patients with end-stage heart failure.
- Palliative care can improve the quality of life among patients with end-stage heart failure.
- Palliative care should be integrated into the health care system to improve symptom management, increase the quality of life and reduce rehospitalization among patients with heart failure.
- Health professionals can become more conscious about giving palliative care to patients with heart failure.

Data Collection Tools

A patient information form including demographic and disease-related questions was created. The Edmonton symptom assessment scale was used to assess the patient's symptoms, (ESAS), and the left ventricular dysfunction questionnaire (LVD-36) was used to determine the quality of life.

Patient Information Form

The patient information form was created as a questionnaire with 21 questions about the patient's demographics (such as age, height, household, occupation, smoking, and alcohol use status) and medical features (ejection fraction, drugs, creatine, hemoglobin value, ProBNP, etiology of heart failure, number of days in the hospital... etc.).

Edmonton Symptom Assessment Scale

The Edmonton Symptom Assessment System (ESAS) reported by Bruera et al. (15) was developed to evaluate the symptoms of patients receiving palliative care. ESAS consists of 10 symptoms as tiredness, pain, the feeling of well-being, nausea, depression, anxiety, lack of appetite, drowsiness, shortness of breath, and others. Each symptom was scored between 0 and 10. While zero points indicate no symptoms, 10 points are severe symptoms. The validity and reliability of ESAS were made by Yeşilbalkan et al. (16) in Turkey. ESAS was found to be a valid and reliable scale.

LVD-36

LVD-36 was developed by O'Leary and Jones (17). The aim of this questionnaire aims to evaluate the effect of left ventricular dysfunction on the state of well-being and daily life in patients with heart failure, the effect of the disease, and the effectiveness of the treatment. The questionnaire consists of 36 questions and the questions are answered as true or false. The correct answers are collected and indicated as the total percentage. The score is 0-100. High scores indicate poor quality of life (17). Reliability and validity of the questionnaire were performed by Özer and Argon (18) in Turkey.

Data Collection

Data collection in the hospital, training of the intervention group, and telephone follow-up were performed by the cardiology nurse. The cardiology nurse had a doctorate. The nurse has been working with heart failure patients for 10 years. Trained cardiology nurse worked as a case manager, training, and consultant for patients. The initial data from the patients in the intervention and control groups were collected from the hospital before discharge with patient data form, Edmonton symptom assessment scale, and LVD-36. The control group received the usual care. The intervention group, which was planned to be discharged, was given palliative care training and a booklet besides the usual care. During the first, third, and sixth-month

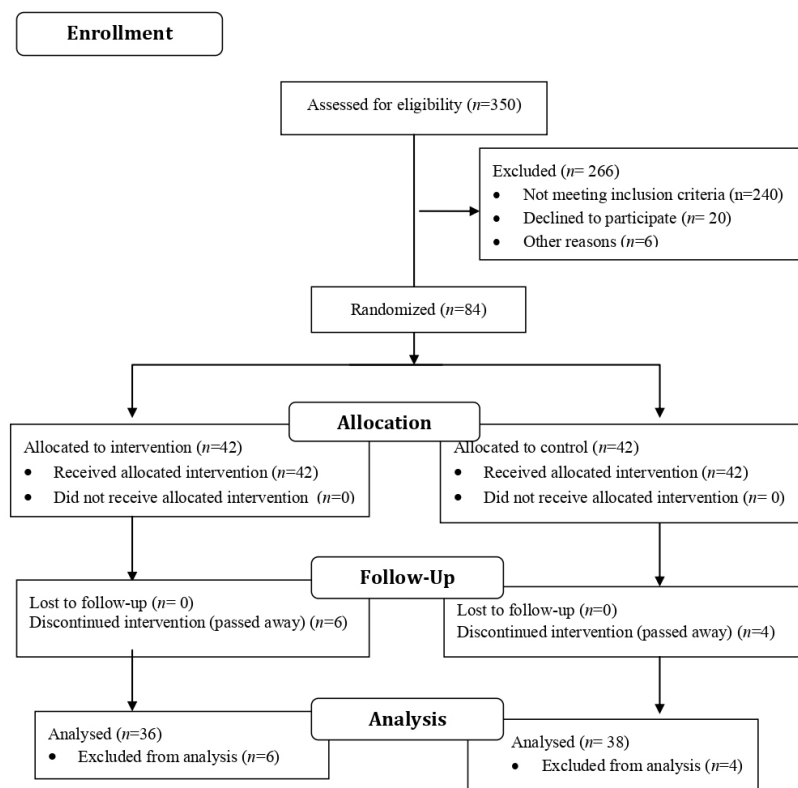


Figure 1.
CONSORT flow diagram
CONSORT=consolidated standards trials

follow-up visits, the patients were contacted by telephone, and the Edmonton symptom diagnostic scale, LVD-36, and rehospitalization were evaluated.

Usual Care

Firstly, the usual care provided to patients was described. It was determined that patients were not given regular and comprehensive training on heart failure, and no training was given on palliative care. Written educational material was not given to the patients. Patients were not followed up after discharge. Palliative care was not discussed with patients and their relatives. Also, they were not asked about their preferences. In usual care, heart failure patients received medical treatment for their symptoms during hospitalization.

Palliative care

The patients in the intervention group were presented with palliative care training in addition to their usual care. The training period lasted at least 45 minutes. After the training, the patients were given the booklet "palliative care in heart failure". In this training, patients were informed about heart failure and pharmacological and non-pharmacological methods for symptoms such as dyspnea, pain, constipation, depression, edema, tiredness, and nausea. The patients were followed up by telephone during the first, third, and sixth months after discharge. The patient's symptoms and quality of life were reevaluated in a telephone follow-up. During the follow-up period, the patient's training related to symptoms was repeated. The patients were referred to the physician for the symptoms and problems they experienced in the house.

Training booklet: "Palliative care in heart failure" training booklet was created for the intervention group. The palliative care in the heart failure training booklet consisted of what is heart failure, causes of heart failure, symptoms, treatment, changes in life behaviors in heart failure (diet, physical activity/exercise, alcohol, smoking, weight tracking, stress, drug use), symptom management (shortness of breath, pain, nausea-vomiting, constipation, mouth sores, tiredness, sleep problems, anxiety, edema, loss of appetite/nourishment) and warning signs in heart failure. It is a 32-page color booklet formatted as A4.

Data Collection Process

After the control group patients have finished, the intervention group was passed. Thus, the control group was prevented from the training given to the intervention group. Patients were informed about the research and written informed consent was obtained. Data were collected by face-to-face interviews within two days before discharge. Patient information forms and scales were applied to patients in the intervention and control groups. Patients in the intervention group received education after filling out the forms. The training was given one by one at the hospital. One or two relatives of patients were included in the training. The patient was comfortably seated, the room door was closed, and face-to-face interaction was conducted. The patient

and his/her relatives were allowed to ask questions during the training. The patient in the intervention group received at least 45 minutes of data collection from a case because of detailed training. It took about 15 minutes to collect data from a patient in the control group. In some patients, the training program was divided to be clearer. The patients were traced by telephone during the first, third, and sixth months after discharge. The investigator's phone number was presented to the patients and they were told that they could call at any time. Continuous communication was ensured by giving the educator's phone number to the patients. The planned training was repeated by contacting the phone. However, more attention was paid to the severe symptom experienced by some patients, especially. More detailed training was given on this symptom. Phone calls lasted about 30 minutes. The intervention group was retrained the symptoms they experienced during their telephone interview. The training was given to the experimental group as planned. No modifications/changes were made to the intervention during the study. Special notes were taken for each patient. The effect of the education given on the quality of life and symptom management was evaluated with questionnaires. The intervention was adhered to as planned.

Statistical Analysis

A statistical program was used to evaluate the findings of the study. Shapiro-Wilks test was used to determine the normal distribution of variables. In the evaluation of the study data, descriptive statistical methods were used to mean, frequency, standard deviation, and percentage. Student's t-test was used in the inter-group evaluations for quantitative data showing normal distribution. The Mann-Whitney U test was utilized for the intergroup evaluation of quantitative data that did not show normal distribution. The chi-square test, Continuity (Yates) correction, and Fisher's Exact test were utilized for the evaluation of qualitative data. Significance was measured at $p < 0.05$ level.

Ethical Aspect of Research

Verbal and written informed consent from the participants were obtained. Ethical approval was obtained from the Kocaeli University where the study was conducted (research project number: KU GOKAEK 2016/295). Since individual rights are to be protected, this study has thoroughly abided by the human rights Helsinki Declaration.

Results

The CONSORT diagram shows the flow of the study in Figure 1. Three hundred and fifty patients with heart failure were evaluated for the study. Two hundred and sixty six patients were excluded because they did not meet the study criteria. A total of 84 patients (42 intervention and 42 control) were included in the study. Six patients from the intervention group and four from the control group were excluded from the study due to passed away. An analysis of the study was performed on survivors (Figure 1).

Socio-demographic Characteristics of Patients

The study was performed on all 74 patients with 47 (63.5%) males and 27 (36.5%) females. The patients were 38 (51.35%) control and 36 (48.65%) intervention group. The age of the patients ranged from 43 to 86 years, the mean was 67.50±11.01 years, 59.5% of the patients were over 65 years old, 70.3% were married, 60.8% of them were primary or secondary school graduates, 64.9% were retired, economic status of 95.9% was just enough, 86.5% of patients lived with their families and average body mass index was 30.47±5.51 kg/m², it was determined that 63.5% of the patients were active/left smokers, and 71.6% no drink any alcohol. There was no significant difference between the groups in terms of the general characteristics of the patients. Both groups were similar in terms of their socio-demographic characteristics (Table 1).

Symptom Management of Patients

According to the Edmonton symptom assessment scale; the tiredness score of the control group was found to be higher than the intervention group in the first (p=0.044) and the

third month (p=0.042) after the discharge. The nausea score of the control group was found to be higher than that of the intervention group in the first (p=0.016) and third month (p=0.014) after the first discharge. Lack of appetite (p=0.030), depression (p=0.002), anxiety (p=0.004), and feeling of well-being (p=0.009) scores of the control group were found higher than those of the intervention group in the first month after discharge. The leg edema score of the control group was found higher than that of the study group in the first (p=0.021) and third month (p=0.042) after discharge. The total ESAS score in the first month after the discharge of the control group was found higher (p=0.027) than that of the intervention group. Conclusively, tiredness, nausea, loss of appetite, depression, anxiety, feeling of well-being, leg edema, and total symptom burden of the intervention group was better than those of the control group in the first month after discharge and tiredness, nausea, and leg edema of the intervention group in the third month after discharge were better than those of control group (Table 2).

Table 1.
Comparison of the Socio-demographic Characteristics of the Patients

Variable		Intervention (n=36)	Control (n=38)	Total (n=74)	Test value	p
		n (%)	n (%)	n (%)		
Gender	Female	13 (36.1)	14 (36.8)	27 (36.5)	² 0.004	0.948
	Male	23 (63.9)	24 (63.2)	47 (63.5)		
Age (year)	Min-max	47-83	43-86	43-86	¹ 0.210	0.834
	Mean ± SD (median)	67.77±10.08 (68.5)	67.23±11.95 (68)	67.50±11.01 (68)		
Age group	65 years and under	13 (36.1)	17 (44.7)	30 (40.5)	² 0.571	0.450
	Over 65 years	23 (63.9)	21 (55.3)	44 (59.5)		
Marital status	Married	27 (75)	25 (65.8)	52 (70.3)	² 0.751	0.386
	Single	9 (25)	13 (34.2)	22 (29.7)		
Education	Literate	9 (25.0)	5 (13.1)	14 (18.9)	² 1.890	0.389
	Primary/secondary	21 (58.3)	24 (63.2)	45 (60.8)		
	High school/university	6 (16.7)	9 (23.7)	15 (20.3)		
Employment	Housewife	12 (33.3)	14 (36.8)	26 (35.1)	² 0.100	0.752
	Retired	24 (66.7)	24 (63.2)	48 (64.9)		
Economic status	Just enough	34 (94.4)	37 (97.4)	71 (95.9)	² 0.406	0.610
	Not enough	2 (5.6)	1 (2.6)	3 (4.1)		
Household	Alone	4 (11.1)	6 (15.8)	10 (13.5)	² 0.346	0.737
	With family	32 (88.9)	32 (84.2)	64 (86.5)		
BMI (kg/m ³)	Min-max	21.88-45.71	22.86-47.75	21.88-47.75	¹ 0.831	0.408
	Mean ± SD (median)	31.04±5.92 (28.80)	29.94±5.51 (28.74)	30.47±5.51 (28.76)		
Smoking	Never used	15 (41.7)	12 (31.6)	27 (36.5)	² 0.812	0.368
	Active/left	21 (58.3)	26 (68.4)	47 (63.5)		
Alcohol	Never used	27 (75)	26 (68.4)	53 (71.6)	² 0.394	0.530
	Active/left	9 (25)	12 (31.6)	21 (28.4)		

¹Student t-test, ²chi-square test, continuity (Yates) correction, and Fisher's Exact test, BMI=body mass index, SD=standard deviation

Table 2.
Comparison of the Edmonton Symptom Assessment Scale of the Patients

Edmonton symptom assesment scale		Intervention (n=36)	Control (n=38)	Z	p
		Mean ± SD (median)	Mean ± SD (median)		
Pain	T0	3.05±2.65 (4)	2.02±2.83 (0)	-1.801	0.172
	T1	1.69±2.21 (0)	1.60±2.19 (0)	-0.272	0.786
	T2	1.63±2.17 (0)	1.60±2.56 (0)	-0.509	0.610
	T3	2.17±2.17 (2.5)	1.92±2.73 (0)	-0.703	0.482
Tiredness	T0	7.72±2.1 (8)	8.42±1.78 (9)	-1.716	0.086
	T1	4.88±2.88 (4.5)	6.28±2.78 (6.5)	-2.011	0.044*
	T2	5.22±2.93 (5.5)	6.63±2.59 (7)	-2.038	0.042*
	T3	6.19±2.32 (6.5)	7.16±1.50 (7)	-1.702	0.089
Drowsiness	T0	5.94±3.60 (7)	6.07±3.32 (6.5)	-0.174	0.862
	T1	3.91±3.14 (4)	4.02±3.46 (3)	-0.022	0.983
	T2	3.11±3.03 (3)	3.97±3.26 (3.5)	-1.152	0.250
	T3	3.14±3.10 (3)	3.68±3.27 (3.5)	-0.720	0.471
Nausea	T0	0.63±1.58 (0)	1.15±2.17 (0)	-1.240	0.215
	T1	0.55±0.33 (0)	0.76±1.90 (0)	-2.410	0.016*
	T2	0.05±0.32 (0)	0.63±1.56 (0)	-2.469	0.014*
	T3	0.11±0.67 (0)	0.24±0.85 (0)	-0.938	0.348
Lack of appetite	T0	2.08±2.94 (0)	1.55±2.43 (0)	-0.534	0.593
	T1	0.27±1.25 (0)	1.18±2.45 (0)	-2.167	0.030*
	T2	0.36±1.01 (0)	1.05±1.88 (0)	-1.525	0.127
	T3	0.89±2.16 (0)	0.63±1.38 (0)	-0.135	0.893
Shortness of breath	T0	9.02±1.25 (10)	8.78±2.01 (10)	-0.124	0.901
	T1	3.88±2.51 (4)	5.15±2.99 (4)	-1.651	0.099
	T2	4.50±2.68 (4)	5.73±2.84 (6)	-1.903	0.057
	T3	5.22±2.19 (5)	6.29±2.37 (6)	-1.818	0.069
Depression	T0	6.22±3.30 (6.5)	8.28±2.31 (9)	-3.022	0.051
	T1	4.30±2.94 (4)	6.50±2.72 (6.5)	-3.042	0.002**
	T2	5.66±3.11 (5)	6.60±2.82 (7)	-1.243	0.214
	T3	5.86±2.62 (6)	6.21±2.60 (6)	-0.419	0.675
Anxiety	T0	6.30±3.37 (7.5)	8.05±2.67 (9)	-2.555	0.052
	T1	4.50±2.90 (4.5)	6.60±2.63 (7)	-2.917	0.004**
	T2	5.80±3.00 (5)	6.65±2.65 (7)	-1.112	0.266
	T3	6.06±2.55 (6)	6.24±2.50 (6)	-0.223	0.823
Feeling of well-being	T0	7.47±2.40 (8)	8.34±2.30 (9)	-2.113	0.055
	T1	4.72±2.58 (4.5)	6.42±2.75 (6)	-2.594	0.009*
	T2	5.63±2.76 (5)	6.84±2.597 (7)	-1.830	0.067
	T3	6.36±2.36 (6)	6.50±2.32 (6)	-0.158	0.874
Leg edema	T0	7.08±3.36 (8)	8.34±2.20 (9)	-1.497	0.134
	T1	2.36±3.13 (0)	3.94±3.43 (3)	-2.308	0.021*
	T2	2.66±3.25 (0.5)	4.13±3.33 (4)	-2.032	0.042*
	T3	3.22±3.43 (3)	3.76±3.23 (3)	-0.787	0.431
Total	T0	5.02±1.45 (4.82)	5.19±1.19 (5.25)	-0.806	0.420
	T1	2.64±1.51 (2.39)	3.59±1.89 (3.03)	-2.207	0.027*
	T2	2.61±2.54 (1.75)	3.69±2.87 (3.50)	-1.582	0.114
	T3	3.24±1.50 (3.03)	3.56±1.61 (3.10)	-0.795	0.426

Z: Mann-Whitney U test, *p<0.05; **p<0.01, T0=before discharge, T1=first month after discharge, T2=third month after discharge, T3=sixth month after discharge, SD=standard deviation

Quality of Life of Patients

There was no significant difference between groups in quality of life according to the LVD-36 questionnaire before discharge ($p=0.054$) and first ($p=0.484$), third ($p=0.750$), and six months ($p=0.201$) after discharge (Table 3).

Rehospitalization of Patients

Readmission to the hospital of the intervention group was found to be lower than the control group in the first ($p=0.001$), third ($p=0.001$), and sixth ($p=0.001$) months. There was no difference between the groups in terms of patients' visits to the emergency department ($p>0.05$) (Table 4).

Discussion

In the study, according to the Edmonton Symptom Assessment Scale, tiredness, nausea, loss of appetite, depression, anxiety, the feeling of well-being, leg edema and total symptom burden in the first month after discharge and tiredness, nausea, and leg edema in the third month after the discharge of the intervention group were found to be better than those of the control group. In a randomized

controlled study by Evangelista et al. (19), symptom burden and depression of patients with heart failure who received palliative care were found lower than those of the control group. It was determined that the healing of symptoms such as fatigue, pain, bad feeling, depression, dyspnea, and nausea were better than those of the control group. In a randomized controlled trial of Brännström and Boman (20), total symptom burden, self-efficacy, and quality of life of patients receiving palliative care were found an improvement by 18%, 17%, and 24%, respectively. Eight of the nine symptoms in the experimental group revealed a numerical improvement in four of the control group (20). Depression scores of the patients receiving palliative care were found significantly low in the meta-analysis of seven randomized controlled studies by Zhou and Mao (21). The quality of life, anxiety, depression, and mental well-being of the patients with heart failure who received palliative care was found significantly better in a randomized controlled study by Rogers et al. (22). Forty-three experimental group and 41 control group patients with heart failure have included in a randomized controlled study conducted by Wong et al. (14), depression, dyspnea, and total ESAS scores were found low in patients receiving palliative care. In other randomized

Table 3.
Comparison of LVD-36 Questionnaire Scores of the Groups Before and After Discharge

LVD-36		Intervention (n=36)	Control (n=38)	Z	p
		Mean ± SD (Median)	Mean ± SD (Median)		
Average of accuracy percentages	T0	84.79±15.40 (88.88)	89.54±11.91 (97.22)	-1.924	0.054
	T1	60.10±28.60 (70.83)	64.83±26.73 (68.05)	-0.699	0.484
	T2	53.31±32.04 (62.50)	55.55±28.32 (52.77)	-0.319	0.750
	T3	49.00±28.91 (45.83)	56.65±28.12 (56.94)	-1.278	0.201

T0=before discharge, T1=first month after discharge, T2=third month after discharge, T3=sixth month after discharge, Z=Mann-Whitney U test, SD=standard deviation, LVD-36=left ventricular dysfunction questionnaire

Table 4.
Comparison of the Patients' Readmission to the Hospital and Applications to Emergency After the Discharge

Variables		Intervention (n=36)		Control (n=38)		* χ^2	p
		n	%	n	%		
Readmission in the first month	Yes	2	5.6	14	36.8	10.678	0.001**
	No	34	94.4	24	63.2		
Readmission in the third month	Yes	10	27.8	25	65.8	10.716	0.001**
	No	26	72.2	13	34.2		
Readmission in the sixth month	Yes	13	36.1	28	73.7	10.563	0.001**
	No	23	63.9	10	26.3		
Application for emergency in the first month	Yes	1	2.8	5	13.2	2.673	0.200
	No	35	97.2	33	86.8		
Application for emergency in the third month	Yes	8	22.2	8	21.1	0.015	0.903
	No	28	77.8	30	78.9		
Application for emergency in the sixth month	Yes	8	22.2	11	28.9	0.438	0.599
	No	28	77.8	27	71.1		

*chi-square test and Fisher's Exact test, ** $p<0.01$

controlled trials, it was found that symptom management of patients with heart failure receiving palliative care was better (23-26). In the above studies, it was determined that patients with heart failure who received palliative care had better depression, nausea, tiredness, and total symptom burden than the control group. It was similar to this study. In addition, although there was no significant difference between the two groups, the experimental group had better scores. As a result, palliative care can be improved symptom management in patients with heart failure.

In the study, no important difference was found between the groups in the first, third, and sixth months according to the LVD-36 quality of life questionnaire. In the randomized controlled trials of Brännström and Boman (20) and Yu et al. (27), there was no important difference in the quality of life between heart failure patients receiving palliative care and the control group. In a randomized controlled study by Wong et al. (28), an important difference wasn't observed between the quality of life of the patients with end-stage heart failure who received palliative care at home. In the meta-analysis of five randomized controlled trials by Xu et al. (29), there wasn't a difference between the control group and the palliative care group from the point of quality of life and mortality. The study was found to be similar to the above study results. Palliative care given to patients with heart failure may be helpful in terms of controlling some symptoms but the quality of life of the patients was poor due to recurrent symptoms.

In the study, the hospitalization rate of the patients in the intervention group was lower than the control group. There was no difference between the groups in terms of patients' visits to the emergency department. Approximately 25% of patients with heart failure go back to the hospital within 30 days after discharge (30) and % ≥50 are re-hospitalized every six months (31). In many studies, it was found that patients with heart failure who received palliative care had fewer hospitalizations and emergency admissions (27,32-35). However, in some randomized controlled trials, it was determined that there was no difference in the re-hospitalization of patients with heart failure who received palliative care (21,22,25), but this study was found to be similar to the above study results. It is thought that if patients' symptom management and quality of life are supported, their re-hospitalization rate will decrease in heart failure patients receiving palliative care.

Study Limitations

The study was conducted only in an institution.

Conclusion

Palliative care was found to increase symptom management and reduce re-hospitalization in patients with heart failure. There was no difference in the quality of life between the groups. It is recommended that patients with heart failure

should be directed to palliative care and awareness of health professionals for palliative care should be increased in patients with heart failure.

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Ethics Committee Approval: Ethical approval was obtained from the Kocaeli University where the study was conducted (research project number: KU GOKAEK 2016/295). Since individual rights are to be protected, this study has thoroughly abided by the human rights Helsinki Declaration.

Informed Consent: Verbal and written informed consent from the participants were obtained.

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ORIGINAL ARTICLE

Determining the Relationship Between Nurses' Attitudes to Professional Autonomy and Job Satisfaction

Hemşirelerin Mesleki Özerkliğe Yönelik Tutumları ile İş Doyumu Arasındaki İlişkinin Belirlenmesi

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Abstract

Objective: In this study we aimed to determine nurses' attitudes toward professional autonomy and the relationship between job satisfaction.

Method: This study was conducted with 302 nurses between December 2022 and March 2023. The following two tools were used for data collection: Attitudes towards professional autonomy scale for nurses and job satisfaction scales for nurses. The research data was used to collect the numerical and percentile distribution, Kruskal-Wallis-H, and correlation analyses were used to analyze the data.

Results: According to this study it was found that the total mean score of the nurses obtained from the attitude scale toward professional autonomy was 69.07±4.63. The total mean score of the nurses obtained from the job satisfaction scale was found to be 22.27±3.81. It was found that there was a positive and significant correlation between the attitude towards professional autonomy total scale score and the job satisfaction scale total score ($r=0.384$, $p=0.044$).

Conclusion: It was determined that the nurses' attitudes towards professional autonomy and job satisfaction were above average. It has been determined that there is a significant relationship between the attitude toward professional autonomy and job satisfaction; as the attitude toward autonomy increases, job satisfaction increases.

Keywords: Autonomy, job satisfaction, nurse, attitudes, professional

Öz

Amaç: Bu çalışmanın amacı hemşirelerin profesyonel otonomiye yönelik tutumlarının ve iş doyum düzeyi arasındaki ilişkinin belirlenmesidir.

Yöntem: Bu çalışma Aralık 2022-Mart 2023 tarihleri arasında 302 hemşire ile yapılmıştır. Araştırma verilerinin toplanmasına hemşireler için profesyonel otonomiye karşı tutum ve iş doyum ölçekleri kullanılmıştır. Verilerin analizinde sayısal ve yüzdeler dağılımı, Kruskal-Wallis-H ve korelasyon analizleri kullanılmıştır.

Bulgular: Hemşirelerin profesyonel otonomiye yönelik tutum ölçeğinden aldıkları toplam puan ortalamasının 69,07±4,63 olduğu belirlenmiştir. Hemşirelerin iş doyum ölçeğinden aldıkları toplam puan ortalamalarının ise 22,27±3,81 olduğu bulunmuştur. Profesyonel otonomiye yönelik tutum toplam ölçek puanı ile iş doyum ölçeği toplam puan arasında pozitif yönlü anlamlı bir korelasyon olduğu belirlenmiştir ($r=0,384$, $p=0,044$).

Sonuç: Hemşirelerin profesyonel otonomiye karşı tutumlarının ve iş doyumlarının ortalamasının üstünde olduğu saptanmıştır. Profesyonel otonomiye yönelik tutum ile iş doyum arasında anlamlı bir ilişki olduğu ve otonomiye yönelik tutum arttıkça iş doyumunun arttığı belirlenmiştir.

Anahtar Kelimeler: Otonomi, iş doyum, hemşireler, tutum, profesyonellik

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Introduction

The concept of professionalism is defined as a service carried out by experts trained in the field, supported by relevant professional organizations, and provided by considering the interest of society (1). Having theoretical knowledge of a profession, a standard education process, and having experts in the field are among the criteria for professionalization (2).

Miller et al. (3) first explained the concept of professionalism in nursing. According to Miller et al. (3), a professional nurse; integrating theoretical knowledge with practice in line with intellectual knowledge, skills, and attitudes, benefiting from professional knowledge while providing health protective, improving and curative health services; nurses is a member of the profession who can get to the root of problems, can think critically, make decisions and solve problems, can provide quality care to individuals in need, and can fulfill the roles of educator, researcher and manager. The lack of education in the first years of nursing, the fact that only women are in the profession, and education at different education levels are considered obstacles to professionalism. However, in recent years, it has gained importance in professionalism in nursing, especially with the standardization of education. The members of the nursing profession need to know the criteria of professionalism to fulfill their requirements and to conduct research on this subject (4).

The meaning of nursing autonomy is multidimensional, but it is generally explained by definitions such as independence, self-management, and clinical decision-making (5). Autonomy in nursing is examined in two dimensions: Professional autonomy and professional autonomy. According to Oshodi et al. (6) refers to the autonomy of nurses who provide direct patient care, their ability to act beyond standard practice and make decisions about individual patient care. Autonomy in nursing is defined as making independent decisions regarding patient care, developing care processes to ensure patient safety, the ability to make decisions regarding the profession, and having and using independent roles (7).

Autonomy is one of the essential and basic building blocks in the professionalization of the nursing profession. To strengthen the nursing profession, clinical autonomy is required. The professional autonomy of nursing is the ability to have the right and responsibility to make clinical decisions and implement decisions according to the needs of patients (8,9). Although the importance of autonomy in patient care is known, it is stated that the clinical decision-making status

of nurses for patients is uncertain (10,11). In the studies in the literature, it is stated that nurses have a significant level of autonomy (12,13). It has also been reported that autocratic leadership styles and the effect of physician leadership in management are obstacles to autonomy and negatively affect autonomy in nursing by reducing nurses' self-esteem (14). In the literature, it is stated that the high level of autonomy of nurses increases the quality of care given to patients (15,16). A higher level of autonomy among nurses is considered to be a significant predictor of increased job satisfaction (14), safety performance (17), and nurses' increased attendance (18). It has also been reported that nurses' low level of autonomy causes depression, job change, burnout, and decreased job satisfaction (18-20).

Job satisfaction is defined as evaluating the work environment and giving emotional reactions, which can affect the employees' physical and mental health, work performance, happiness, productivity, and work-related behaviors (5). The satisfaction of nurses from their work and the environment they work in can be achieved by determining the institution's needs of the managers, taking the necessary precautions, and improving the employees' motivation and quality of life (21,22). Employees' positive and negative situations in business life affect job satisfaction (5). Nurses' high workload and low autonomy negatively affect job satisfaction and cause it to decrease gradually (23). On the other hand, the decrease in job satisfaction causes nurses to be negatively affected physically and mentally by the emergence of various diseases, decreases work efficiency, and affects human relations negatively (24). It is stated that nurses get efficiency from their workplace, have high job satisfaction, and increase their performance, patient satisfaction, and quality of care (25).

In the literature, it is stated that nurses' having a say in patient care, being independent in the clinical decision-making process and having high autonomy provide a positive working environment and accordingly, the job satisfaction of nurses increases (10). In a study, it was stated that as the occupational autonomy levels of nurses increased, their job satisfaction levels increased (14). At the same time, it is stated that nurses' receiving administrative support for autonomy and working in cooperation increases their job satisfaction (7,26).

Aims: One of the factors affecting autonomy, which is one of the foundations of professionalization, is the level of job satisfaction of nurses. Increasing the professional autonomy of nurses increases their job satisfaction and patient care quality. For this reason, it is necessary to determine the relationship between nurses' attitudes toward professional autonomy and job satisfaction and to make improvements accordingly. Therefore, the aim of the study is to determine the attitudes of nurses toward professional autonomy and job satisfaction. There are not enough studies in the literature examining the relationship between nurses' professional autonomy and job satisfaction. Especially in Turkey, there is no study on the subject. Therefore, the

Main Points

- Professional autonomy is one of the essential elements in the professionalization of nursing.
- The high level of autonomy of nurses increases their job satisfaction of nurses.
- It was found that the nurses' autonomy levels and job satisfaction were above average.

results of our study will contribute to the literature. For this reason, our study will make important contributions to the literature on this subject and will pioneer future research.

Material and Methods

This descriptive and cross-sectional study was conducted between December 2022 and March 2023.

Research population and sample: The research population comprises nurses working in Turkey. In determining the sample, the open epi program was used for calculating the sample of 204,969 nurses. According to the sample calculation, 302 nurses were reached for 90% power.

Sample Size for Frequency in a Population

Population size (for finite population correction factor or fpc)(N):	204969
Hypothesized % frequency of outcome factor in the population (p):	50% +/- 5
Confidence limits as % of 100 (absolute +/- %)(d):	5%
Design effect (for cluster surveys-DEFF):	1

Sample Size (n) for Various Confidence Levels

Confidence Level (%)	Sample Size
95%	384
80%	165
90%	271
97%	470
99%	662
99.9%	1078
99.99%	1504

Equation

$$\text{Sample size } n = \frac{[\text{DEFF} * N * p(1-p)]}{[(d^2 / Z^2)_{1-\alpha/2} * (N-1) + p * (1-p)]}$$

Results from OpenEpi, Version 3, open source calculator--SSPropor
 Print from the browser with ctrl-P
 or select text to copy and paste to other programs.

Data Collection Tools of the Research

Individual identification form: It consists of 6 questions questioning the socio-demographic characteristics and working experiences of nurses, such as age, gender, marital status, clinic worked, duration of work, and educational status.

Attitudes towards professional autonomy scale for nurses:

It was developed by Asakura et al. (27) in Japan. Turkish validity and reliability were performed by Şimşek and Ceylan (28). The scale consists of three sub-dimensions, namely "work-related independence," "autonomous clinical decisions," and "control over working conditions," and 18 items. The items of the scale were scored using a 5-point Likert system ranked from "I strongly disagree" to "I strongly agree". "Strongly agree" indicates the most liberal attitude towards professional autonomy for nurses, while "strongly disagree" indicates the most conservative attitude. The lowest score that can be obtained from the scale is 18, and the highest score is 90. In the study of Şimşek and Ceylan (28), the Cronbach alpha value was found to be 0.81. In our study, the Cronbach alpha value of the scale was found to be 0.76.

Job satisfaction scale: The scale consists of 10 questions. The answers given to the questions on the scale are scored between 1 and 4 in the direction of dissatisfaction-satisfaction. The lowest score that can be obtained from the scale is 10, and the highest score is 40. A high score from the scale indicates a high level of job satisfaction. Cronbach's alpha value of the scale was determined as 0.81 (29). In the study, Cronbach's alpha value was found to be 0.78.

Data collection: Data for this study were collected online. The web-based questionnaire was sent to the nurses after ethical approvals were obtained. The survey form was prepared in Google forms. The questionnaire link was sent to the nurses via e-mail and online messaging applications. An informed consent form has been added to the first page of the questionnaire. In addition, nurses were informed about the research. In this way, permission was obtained from the nurses to participate in the study. Nurses who agreed to participate in the study answered the questionnaire. For nurses who did not fill out the questionnaire, a reminder e-mail was sent once a week. Filling out the questionnaire took an average of 15 minutes. Research data were collected between 19 December 2022-4 March 2023.

Statistical Analysis

The data obtained from the research were analyzed in the SPSS (Statistical Package for Social Science) 23.0 package program. Numerical and percentile distribution, Kruskal-Wallis-H, and correlation analyses were used to analyze the data. Statistical significance was determined as $p < 0.05$.

Ethical Consideration

Permission was obtained from Kayseri University Ethics Committee for this study (date: 02.12.2022, no: 78). Necessary explanations about the study were made in the online form sent to the nurses, and the nurses were given the option of accepting or not participating in the research.

Results

It was found that the mean age of the nurses was 38.6 ± 7.48 . Of them 73.5% (n=222) were female, 86.1% (n=260) had the "a bachelor's degree", and 34.8% (n=105) had been working in the clinic for 4-6 years (Table 1).

The mean scores the nurses obtained from the the attitude scale towards professional autonomy was 69.07 ± 4.63 , the work-related independence sub-dimension mean score was 21.61 ± 2.65 , the control over working conditions sub-dimension 29.68 ± 2.45 , and the autonomous clinical decisions sub-dimension 19.70 ± 2.22 . The mean scores the nurses obtained from the job satisfaction scale was 22.27 ± 3.81 (Table 2).

Comparisons were made between the nurses' educational levels, the total score means of the job satisfaction scale, and the mean scores of the autonomy scale. There was a significant difference between the education level and the total score means of nurses obtained from the autonomy

Table 1.
Demographic Characteristics of Nurses (n=302)

Age (38.6±7.48)	n	%
Gender		
Female	222	73.5
Male	80	26.5
Education levels		
Associate degree	25	8.3
Bachelor's degree	260	86.1
Master's degree	17	5.6
Working years		
1-3 years	71	16.5
4-6 years	105	30.4
7-9 years	64	29.0
10-12 years	44	24.1
13> years	18	6.0

scale. In this study found that the mean total score of the undergraduate nurses was higher than the other education groups (KW=9.536, p=0.008). Similarly, there was a significant difference between the educational status and the mean scores of the job satisfaction scale. In the study, it was determined that the mean scores of the job satisfaction of the nurses with a bachelor's degree were higher than those from other education levels (KW=8.930, p=0.012) (Table 3).

When the working years of the nurses and the scale total score and sub-dimension scores were compared; it was determined that there was a significant difference between the total mean scores of the job satisfaction scale and the years of employment, and that the job satisfaction of the nurses who worked between 1-3 years was higher (KW=9.060, p=0.049). It was determined that there was no significant difference between the years of employment and the total and sub-dimension mean scores of the attitude scale toward professional autonomy (p>0.05) (Table 3).

Table 2.
Attitudes Towards Professional Autonomy Scale for Nurses and Job Satisfaction Scale Mean Scores

Scale sub-dimension and total score	Mean ± SD	Min-max
Job-related independence	21.61±2.65	13-25
Control over working conditions	29.68±2.45	23-36
Autonomous clinical decisions	17.77±3.07	10-15
Attitudes towards professional autonomy scale for nurses total score	69.07±4.63	56-80
Job satisfaction scale total score	22.27±3.81	11-34

SD=standard deviation

Table 3.
Comparison of Nurses' Educational Levels and Working Years, and Average Scores of Attitudes Towards Professional Autonomy Scale for Nurses and Job Satisfaction Scale

	Job-related independence median (X ± SD)	Control over working conditions median (X ± SD)	Autonomous clinical decisions median (X ± SD)	Autonomy scale for nurses total score median (X ± SD)	Job satisfaction scale total score median (X ± SD)
Education level					
Associate degree	23 (22.48±2.40)	31 (30.44±2.18)	19 (18.76±2.94)	69 (68.76±4.64)	21 (22.28±3.19)
Bachelor's degree	22 (21.55±2.67)	29 (29.57±2.45)	18 (17.64±3.10)	72 (71.68±3.78)	23 (22.41±3.75)
Master's degree	22 (21.41±2.57)	30 (30.29±2.68)	18 (18.23±2.51)	68 (68.94±4.56)	21 (20.17±4.14)
	KW=2.993 p=0.224	KW=4.792 p=0.091	KW=3.919 p=0.141	KW=9.536 p=0.008	KW=8.930 p=0.012
Working years					
1-3 years	22 (21.71±2.254)	30 (29.61±2.66)	19 (17.88±3.33)	70 (69.22±5.14)	24 (23.15±4.27)
4-6 years	22 (21.93±2.44)	29 (29.54±2.36)	17 (17.80±3.28)	69 (69.39±4.54)	22 (21.38±3.26)
7-9 years	20 (20.39±2.18)	28 (28.51±2.32)	17 (16.71±2.29)	66 (65.62±3.87)	22 (22.03±3.95)
10-12 years	21 (21.15±2.94)	26 (26.95±2.66)	19 (19.21±3.25)	68 (68.50±4.16)	23 (22.39±4.12)
13> years	20 (21.27±2.84)	30 (30.11±2.15)	18 (18.27±2.56)	70 (69.92±4.57)	19 (19.94±3.50)
	KW=2.458 p=0.652	KW=1.562 p=0.816	KW=2.322 p=0.627	KW=1.557 p=0.817	KW=9.060 p=0.049

SD=standard deviation

Correlation analysis was performed between the total and sub-dimension scores of the attitude scale towards professional autonomy and the total scores of the job satisfaction scale. According to the results of the analysis, it was determined that there was a positive and significant correlation between the autonomous clinical decisions sub-dimension scores and the job satisfaction scale total score ($r=0.221$, $p=0.031$). It was determined that there was a positive and significant correlation between the attitude towards professional autonomy total scale score and the job satisfaction scale total score ($r=0.384$, $p=0.044$) (Table 4).

Discussion

Autonomy increases the professionalism of the nursing profession. In particular, the increase in the autonomy of nurses in clinical practices and professional roles also increases professional autonomy. Autonomy in nursing enables nurses to increase their clinical decision-making ability and independent roles. At the same time, it increases the independence of nurses in their roles and responsibilities and enables them to defend their rights (24,25).

Professionalism in nursing is an important multidimensional concept that includes individual and professional conditions, structures suitable for the profession, sociological and individual factors. Professionalism in nursing includes a wide range of personal characteristics, self-regulation and competence, professional values, professional expertise and development effort, professional interactions, social, professional and legal responsibility, and the creation of a sense of belonging and professionalism (30). The formation of professional identity and professionalism in nursing is a dynamic process that starts with nursing education and continues to develop throughout the professional career. This process contributes to nurses' reflection of their competencies in their professional practices and thus positively affects their social interactions with patients, relatives and colleagues (31).

Professional autonomy is an important factor in ensuring patient safety and improving the quality of care. In addition, the autonomy of nurses affects professional satisfaction, motivation and performance positively (3). Professional autonomy is defined "as the practice of one's occupation by one's education, with members of that occupation governing, defining, and controlling their activities in the absence of external controls" (32). At the same time, in the

literature, professional autonomy is defined as an increase in the level of decision-making in patient care, an increase in the independent roles of nurses and clinical decision-making ability (33,34). A higher level of autonomy among nurses has been recognized as a critical determinant of job satisfaction, safety performance, and staff nurse retention (14,17,35,36). But, nurses cannot be autonomous if their authority over patient care and clinic operations is not substantially increased (14). The results of this study demonstrated that the total score obtained by the nurses from the scale of attitude toward professional autonomy was at a above average level (69.07 ± 4.63). This is similar to the results of studies evaluating nurses' professional autonomy in many countries, including Turkey (10,12,37,38). However, in a study conducted by Dorgham and Al-Mahmoud in Egypt, nurses' autonomy levels were found to be low (33). A study conducted in Turkey reported that the lowest score among the professionalism criteria was the professional autonomy score of nurses (34). In another study, it was stated that only 6.7% of nurses had professional autonomy (35). According to these results, we can say that the autonomy levels of nurses differ. These differences may be due to the countries where the research was conducted, the working conditions of nurses and the number of samples. Autonomy is one of the foundations of the nursing profession. For this reason, nurses' high level of autonomy will increase professional independence. In order to increase the autonomy level of nurses, training programs should be organized, and information should be given about the importance of autonomy in the nursing profession. In addition, it may be recommended to conduct multicenter studies with larger sample groups to determine the autonomy levels of nurses.

Studies have found that work experience increases nurses' ability to make clinical decisions, act independently, and have professional autonomy. However, an increase in the retirement rates of nurses with work experience is observed today. Therefore, clinics employ more newly graduated nurses. At the same time, with the increase of newly graduated nurses, the educational status of nurses is also increasing. For this reason, nurses' work experience and educational status affect professional autonomy (34-37). The results of this study demonstrated that there was a significant relationship between educational status and attitude towards professional autonomy, and nurses with a bachelor's degree had higher professional autonomy compared to other education groups ($p=0.008$). It has been reported that nurses with higher education levels have higher occupational autonomy (39,40). In the study of Lapeña et al.

Table 4.
Correlation of Attitudes Towards Professional Autonomy Scale for Nurses and Job Satisfaction Scale Sub-Dimension and Total Mean Scores

Scale sub-dimension and total score comparisons	Pearson's correlation	p
Job-related independence-job satisfaction scale total score	0.056	0.328
Control over working conditions-job satisfaction scale total score	-0.020	0.733
Autonomous clinical decisions-job satisfaction scale total score	0.221	0.031
Attitude towards professional autonomy total scale-job satisfaction scale total score	0.384	0.044

(41) with newly graduated nurses, it was found that nurses' autonomy levels were high. In addition, it was stated in the study that nurses' autonomy level is high because they have less clinical experience and are still adapting to their nursing roles. In other studies, it was stated that the level of education is effective in increasing professional autonomy (10,42). In this study, it was found that most of the nurses have a bachelor's degree. Especially in our country, nursing education is no longer given at the high school level. For this reason, as the number of undergraduate graduates working in the clinic increases, the autonomy level of nurses will also increase. At the same time, these results show that nursing education significantly impacts professional autonomy.

Nurses' autonomy over their roles allows them to act independently and increase their clinical decision-making rates, and thus their job satisfaction increases (7). It is stated that when nurses plan and prioritize their practices, they are more satisfied with their jobs and their adaptation to work increases (14,43). Thus, the quality of care given to patients increases (44,45). The results of this study demonstrated that found that the job satisfaction of the nurses was above the average level (22.27 ± 3.81). Similarly, another study reported that nurses' job satisfaction was at an average level (46). When the working years of the nurses were compared with their job satisfaction, it was determined that the job satisfaction of the nurses who had a working life of 1-3 years was higher than the nurses who worked for long years ($p=0.049$). In a study, it was found that nurses who worked for two years or less had higher job satisfaction than nurses with higher work experience. In addition, in the study, it was stated that as the working years of the nurses increased, their job satisfaction decreased (47). According to these results, we think that as the working years of nurses increase, their workload increases, and burnout may develop due to this. Increasing burnout in nurses may negatively affect job satisfaction. Therefore, we can say that job satisfaction is higher in nurses who have just started working.

In the literature, it has been stated that the autonomy levels of nurses cause different results related to work (8,29,44,45). A study conducted in Brazil stated that as nurses' occupational autonomy level increased, their job satisfaction also increased (29,44). In other studies, occupational autonomy was determined as the main predictor of job satisfaction (8). Another study found that as nurses' attitudes toward professional autonomy increased, job satisfaction, job performance, and professional commitment increased (45). At the same time, it has been determined in other studies that it causes negative results such as depression, leaving work, and increased burnout levels in nurses with low autonomy levels (44). The results of this study demonstrated that there was a positive and significant relationship between the participants' attitudes toward professional autonomy and their job satisfaction ($p=0.044$). It has been reported that professional autonomy is positively associated with job satisfaction, nurses with a bachelor's degree have a greater sense of professional

autonomy, and this situation is positively associated with job satisfaction (48). Nurses are the largest part of healthcare providers and their professional skills play an important role in the fulfillment of the healthcare system. Therefore, the professional competence of nurses is extremely important for healthcare providers (49). Work engagement in professional nursing practice is critically important to consider when addressing key challenges of health systems, including the global nursing shortage, pressures to reduce healthcare spending, and increasing demands for quality care and positive outcomes for patients (50). Our research findings are consistent with the literature. According to the study's results, as the autonomy levels of nurses increase, their job satisfaction increases. Especially with the increase in autonomy, the job satisfaction of nurses may increase due to greater control and compliance with the job.

Conclusion

Our study examined the relationship between nurses' attitudes toward professional autonomy and job satisfaction. Our study results determined that nurses' attitudes toward professional autonomy were high, and their job satisfaction was above average. The results of this study demonstrated that there is a significant correlation between nurses' attitudes toward professional autonomy and job satisfaction. As nurses' attitudes towards autonomy increase, their job satisfaction also increases. Nurses should be able to advocate for their patients and make appropriate patient care decisions in clinical settings involving the collaboration of various healthcare professionals. Educators and administrators should be encouraged to develop professional autonomy and provide stress management as part of the primary nursing curriculum to increase nurses' professional autonomy. There are very few studies in the literature examining the relationship between nurses' attitudes towards professional autonomy and their job satisfaction. Especially in Turkey, there is no study on the subject. Therefore, the results of our study will contribute to the literature. At the same time, autonomy is examined in two different ways as professional autonomy and occupational autonomy. Today, there are mostly studies on occupational autonomy in the literature. However, a holistic examination of the nursing profession is very important. For this reason, it is also important to determine the attitudes of nurses about professional autonomy. In future studies, we can suggest examining nurses' attitudes towards both professional autonomy and occupational autonomy with a larger sample group.

Ethics Committee Approval: Permission was obtained from Kayseri University Ethics Committee for this study (date: 02.12.2022, no: 78).

Informed Consent: An informed consent form has been added to the first page of the questionnaire

Peer-review: Internally and externally peer-reviewed.

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ORIGINAL ARTICLE

Patients' and Nurses' Perception of Individualized Care: A Comparative Study

Hastaların ve Hemşirelerin Bireyselleştirilmiş Bakım Algıları: Karşılaştırmalı Bir Araştırma

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Abstract

Objective: This study was carried out for purpose to evaluate the individualized care perception of patients and nurses.

Method: This descriptive, comparative study was carried out patients and nurses. It was conducted in the internal and surgical clinics of a university hospital.

Results: When the mean points that the patients and nurses scored in the individualized care scale-B were compared, the individualized care scale-B total score ($p=0.000$) and the mean scores for the subdimensions of clinical condition ($p=0.001$), personal life status ($p=0.000$), and control over decision-making ($p=0.000$) were significantly different.

Conclusion: It was found that the mean score differs between the score individualized care scale-B patients scale and individualized care scale-B nurse scale. Patients' perception of individualized care was higher than that of nurses. Therefore, it is important to consider the factors that affect the care perception of patients and nurses.

Keywords: Individualized care, nursing care, perception of care

Öz

Amaç: Bu çalışma, hastaların ve hemşirelerin bireyselleştirilmiş bakım algılarını değerlendirmek amacıyla yapılmıştır.

Yöntem: Bu tanımlayıcı, karşılaştırmalı çalışma hasta ve hemşireler üzerinde yapılmıştır. Bir üniversite hastanesinin dahili ve cerrahi kliniklerinde yürütülmüştür.

Bulgular: Hasta ve hemşirelerin bireyselleştirilmiş bakım skalası-B ölçeği puan ortalamaları karşılaştırıldığında, bireyselleştirilmiş bakım skalası-B toplam puanı ($p=0,000$) ve klinik durum ($p=0,001$), kişisel yaşam durumu ($p=0,000$), karar verme kontrolü ($p=0,000$) alt boyutlarında istatistiksel olarak anlamlı fark olduğu belirlenmiştir.

Sonuç: Bireyselleştirilmiş bakım skalası-B hasta ile bireyselleştirilmiş bakım skalası-B hemşire ölçeği puan ortalamalarının farklı olduğu bulundu. Hastaların bireyselleştirilmiş bakım algısı hemşirelere göre daha yüksekti. Bu nedenle hasta ve hemşirelerin bakım algısını etkileyen faktörlerin dikkate alınması önemlidir.

Anahtar Kelimeler: Bireyselleştirilmiş bakım, hemşirelik bakımı, bakım algısı

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Introduction

Care practice, which is one of the main responsibilities of nurses, are interventions that require knowledge, skill, and effort based on the interaction between the patient and nurse (1). Quality nursing care incorporates interventions concerning individualized care that take into account the person's personal characteristics, beliefs, values, needs (2), therefore nurses should aim to add importance to a person's individuality (3). Individualized nursing care involves taking into account the individual characteristics, emotions, values, cultural expectations, clinical conditions, and personal preferences of patients in order to achieve positive results in care (4). Individualized nursing care has positive effects on both patients and nurses. These effects on patients improved satisfaction (1,5), and functional state of the patient (6,7). Whereas effects on nurses increase professional satisfaction and motivation (4). Studies also indicate that individualized holistic care is necessary to meet the needs of patients and their relatives (6,8).

Characteristic attributes of patients and nurses affect the perception of care in individuals (1). Therefore, it is becoming highly crucial that individualized care should be evaluated from the perspective of nurses and patients, and that factors that have an impact on their perspectives should be analyzed (6,9). Individualized nursing care is an essential component of quality nursing care and is recommended to improve healthcare experiences of patients and achieve positive health outcomes. Accordingly, nurses are expected to provide more individualized nursing care today (10). In studies comparing both patient and nurse perceptions of care, it was found that there was a difference between patient and nurse care perceptions (11,12), however, there are few studies examining perception of individualized care in Turkey (2,6). Therefore, the research was conducted to evaluate the individualized care perceptions of patients and nurses. We believe that the present study will make an important contribution to the literature as it is study that has evaluated the care perceptions of patients and nurses regarding individualized care in a single study.

Material and Methods

Type of Study

This descriptive, comparative study were carried out at the internal and surgical clinic at a university hospital, between August 2018 and January 2019. The STROBE checklist was used in the writing of this article.

Main Points

- Individualized care perception of the patients was higher than that of the nurses.
- Individualized care perception of the patient is affected by the educational background and employment status of patients as well as whether a patient finds the nursing care satisfactory
- Individualized care perception of the nurse is also affected by the working style of the nurses and whether a nurse finds the nursing care satisfactory or not.

Population and Sample

The population of the study consisted of all nurses working at the internal and surgical clinics of the hospital (n=360) and all inpatients (n=609). Regarding the sampling, data were collected from 120 patients and 30 nurses with a patient/nurse ratio of 4:1, as there is no study concerning this area in Turkey. Upon analyzing these data in G*Power, it was determined that a minimum of 228 people, 182 of whom are to be patients and 46 nurses, should be included with an effect size of 0.47, an alpha level of 5% and a power of 80%. Considering any data loss that may occur during the study, a total of 240 patients and a group of 60 nurses were included. The study was made up of patients discharged following a hospital stay with a minimum of 2 days. During this period, over the course of at least one year, they received healthcare from nurses working in the above-mentioned clinics.

Data Collection Tools

The study data was collected using the patient information form/individualized care scale-B patient and nurse information form/individualized care scale-B nurse.

Patient Information Form

The patient information form consists of 18 questions: Six questions investigating socio-demographic characteristics and 12 investigating the nature of the disease.

Nurse Information Form

Nurse information form comprises 16 questions: Five questions investigating socio-demographic characteristics and 11 investigating the characteristics of the clinic where the nurses are employed.

Individualized Care Scale-B Patient

The individualized Care Scale Patient (ICS patient) was developed by Suhonen et al. (13), which aimed to evaluate the patient perception of individualized care and has since been revised to reduce the number of items included in the form.

The 17-item scale comprises 3 subdimensions; clinical condition, personal life status, and control over decision-making. This scale, which can be completely filled out within 15 minutes, is administered to adult patients who have been discharged following their hospital stays during which they received inpatient. The scale is filled out by individual patients on the date when they have been discharged. The scale was adapted to Turkish society by Acaroglu et al. (14). The scale is divided into two parts, one that evaluates the level of patient awareness about the nursing actions intended to support their individuality during their hospital stay (ICS-A) and the second part that evaluates the patient perceptions of their individuality in the care provided (ICS-B) (15). The minimum and maximum scores that can be achieved in each part of ICS and its subdimensions are 1.0 and 5.0, respectively. The higher the score, the higher the level of patient awareness about the nursing actions intended to support patient individuality during their hospital stay (ICS-A), and higher the level of their perception

and experience of individuality in the care provided to them (ICS-B) (13). This study, part ICS-B of the scale was used. Cronbach alpha was found to be 0.94 in this study.

Individualized Care Scale-B Nurse

Individualized Care Scale Nurse (ICS nurse) was developed by Suhonen et al. (16) to evaluate the perspectives of nurses about individualized care in health care settings. It is divided into two parts, the first evaluates nurse perception of supporting individuality of patients in care practices (ICS-A nurse) and the second evaluates their perception of personalizing patient care (ICS-B nurse) (15). Turkish validity and reliability, Şendir et al. (17) made by. This 17-item scale comprises of 3 subdimensions, clinical condition, personal life status, and control over decision making. The minimum and maximum scores that can be achieved in each part and the subdimension of the ICS nurse version are 1.0 and 5.0, respectively. The higher the scores, the greater the level of the nurse perception of supporting individuality of patients (ICS-A nurse) and personalising the care they give to the patients (ICS-B nurse) during their nursing actions in general (13,18). When applying the scale, the nurses were asked to consider the nursing care that they provided for the conscious patients during their latest shift. This study part ICS-B of the scale was used. Cronbach alpha was found to be 0.96 in this study.

Statistical Analysis

The study data were collected through one-to-one interviews with the consent of nurses and patients who volunteered to participate in the study. The SPSS 25 package program was used to analyse and assess the data. Descriptive characteristics of the patients and the nurses and scale scores numbers are presented as percentages, mean, and standard deviation (SD). The Kolmogorov-Smirnov test and skewness and kurtosis values were used to determine whether the numerical data were normally distribution. T-test and One-Way Analysis of Variance were used to assess the normally distributed data, whereas Kruskal-Wallis and Mann-Whitney U tests were used to assess the non-normally distributed data. Multiple regression analysis was used to determine the factors affecting ICS-B-patient and ICS-B-nurses. P-values of <0.05 were considered statistically significant.

Ethical Suitability

Before starting the study, ethics committee approval was obtained from the University Hospital Ethics Committee for Non-Pharmaceutical and Non-Medical Device Research (29.06.2018, 2018/1444). Institutional permission from the hospital where the study was conducted, verbal approval and written consent from the participants, and the necessary permissions to be able to use the scales were obtained from the group who developed them and from those who adapted the Turkish versions of the scales.

Results

Among the patients included in the present study, 43.3% were between the ages of 40 and 64 years, 65% were female patients, 58.8% were graduates of primary school, 65.8% were not employed, 81.3% married. Overall, 79.2% of these patients had a hospital stay of 2-7 days, whereas 90.4% were provided with one-to-one care by nurses at the time of their hospitalisation. While 88.3% of the patients found the nursing care sufficient, 92.5% affected by the disease, 98.7% believed that one-to-one care given by nurses was important. Average score given to nursing care $\bar{X} \pm SD$ 7.77 \pm 1.92 (range: 1-10).

Among the nurses included in the present study, 58.3% were between the ages of 20 and 29 years, 66.7% were women, 55% had an undergraduate degree, 56.7% were single, and 65% chose this profession voluntarily. Overall, 48.3% of these nurses had been working at these wards of the hospital for the last 1-5 years. While 68.3% of the nurses worked 40 hours per week, 73.3% worked both during day and night shifts, 96.7% provided one-to-one care to the patients at the time of their hospitalisation, and 76.7% found the nursing care inadequate. When enquired about the reasons for the poor quality of the nursing care, 73.3% of the nurses stated that the number of patients who are taken care of daily was high. Average score given to nursing care $\bar{X} \pm SD$ 6.32 \pm 2.16 (range: 1-10).

The mean ICS-B scores of the patients aged >65 years who were not employed and were affected by a disease, indicated importance to receiving one-to-one care from nurses and found the nursing care satisfactory, were significantly high, whereas the mean ICS-B score of the patients who had a university degree was relatively lower ($p < 0.05$, Table 1).

The working style of the nurses, the ICS-B total score, and the mean scores for the subdimension of control over decision-making were significantly different among the nurses ($p < 0.05$, Table 2). Whether one considers the nursing care provided by the nurses satisfactory as well as the ICS-B total score, and the mean scores for the subdimensions of clinical condition and control over decision-making, were significantly different among them ($p < 0.05$, Table 2).

When the mean points that the patients and nurses scored in the ICS-B were compared, the ICS-B total score ($p = 0.000$) and the mean scores for the subdimensions of clinical condition ($p = 0.001$), personal life status ($p = 0.000$), and control over decision-making ($p = 0.000$) were significantly different ($p < 0.05$, Table 3). The mean ICS-B score of the patients (4.35 \pm 0.67) was higher than the mean ICS-B score of the nurses (3.88 \pm 0.90; Table 3).

Factors Affecting ICS-B Patient Scale

Multiple regression analysis with the enter method was performed to investigate the effects of age, education,

Table 1.
ICS-B Scale Score Distribution According to Socio-demographic and Disease Characteristics of Patients

Characteristics	ICS-B patient							
	ICS-B-total		Clinical situation		Personal life situation		Decisional control	
	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value
Age								
18-39	4.27±0.59	F=2.000 p=0.138	4.29±0.68	F=1.225 p=0.296	0.88±0.81	F=7.307 p=0.001	4.51±0.58	F=0.249 p=0.780
40-64	4.35±0.71		4.30±0.85		4.10±0.87		4.57±0.64	
65≥	4.51±0.70		4.49±0.73		4.45±0.81		4.57±0.71	
Gender								
Female	4.35±0.71	t=-0.005 p=0.996	4.36±0.78	t=0.663 p=0.508	4.08±0.89	t=-0.308 p=0.758	4.53±0.69	t=-0.675 p=0.501
Male	4.35±0.60		4.29±0.75		4.12±0.80		4.58±0.51	
Education								
Primary school	4.43±0.67	F=5.926 p=0.003	4.41±0.76	F=3.353 p=0.037	4.20±0.89	F=7.661 p=0.001	4.60±0.62	F=4.913 p=0.008
High school	4.44±0.48		4.38±0.68		4.23±0.65		4.66±0.38	
University	4.09±0.72		4.10±0.82		3.71±0.83		4.32±0.75	
Working status								
Working	4.17±0.71	t=-3.054 p=0.003	4.16±0.84	t=-2.527 p=0.012	3.84±0.82	t=-3.330 p=0.001	4.40±0.71	t=-2.528 p=0.012
Not working	4.45±0.63		4.42±0.72		4.22±0.86		4.62±0.58	
Marital status								
Married	4.33±0.66	t=-1.118 p=0.265	4.31±0.78	t=-0.948 p=0.344	4.06±0.84	t=-1.364 p=0.174	4.53±0.63	t=-0.769 p=0.443
Single	4.45±0.70		4.43±0.73		4.25±0.92		4.61±0.63	
Nursing care sufficient								
Enough	4.43±0.61	Z=-4.781 p=0.000	4.42±0.71	Z=-4.127 p=0.000	4.19±0.79	Z=-4.025 p=0.000	4.61±0.59	Z=-4.192 p=0.000
Not enough	3.76±0.77		3.71±0.93		3.39±1.07		4.05±0.75	
It is important that nurses take care of one to one								
Important	4.41±0.58	Z=-2.640 p=0.008	4.41±0.65	Z=-3.052 p=0.002	4.15±0.78	Z=-1.990 p=0.047	4.59±0.58	Z=-1.512 p=0.131
Not important	3.78±1.07		3.58±1.24		3.55±1.31		4.17±0.93	
Affected by the disease								
Yes	4.38±0.66	Z=-2.546 p=0.011	4.37±0.75	Z=-2.711 p=0.007	4.12±0.86	Z=-2.017 p=0.044	4.56±0.62	Z=-1.166 p=0.244
No	4.02±0.68		3.90±0.82		3.78±0.78		4.32±0.76	

F=One-Way Analysis of Variance, t=t-test, Z=Mann-Whitney U, SD=standard deviation, ICS=individualized care scale patient

working status, nursing care sufficient, it is important that nurses take care of one to one, and affected by the disease on the ICS-B scale. For multiple regression analysis, categorical data were transformed into a dummy variable and the ICS-B scale total score was included in the analysis as a continuous variable. It was determined that the variables examined in the multiple regression analysis with the Enter method performed were important determinants of the scale scores ($p \leq 0.05$). It was determined that the independent variable that had an effect on ICS-B was the nursing care sufficient and it was found to be a 15% determinant on the total score of the scale ($R^2=0.158$, $F=7.215$, $p \leq 0.001$). It was found that age, education, working status, it is important that nurses take care of one to one, and affected by the disease did not affect the total score of the scale ($p > 0.05$, Table 4).

Factors Affecting ICS-B Nurse Scale

Multiple regression analysis with the enter method was performed to investigate the effects of nurses' age, education, type of work, and nursing care sufficient on the ICS-B-nurse scale. For multiple regression analysis, categorical data were transformed into a dummy variable and the ICS-B-nurse scale total score was included in the analysis as a continuous variable. It was determined that the variables examined in the multiple regression analysis with the enter method performed were important determinants of the scale scores ($p \leq 0.05$). It was determined that the independent variable that had an effect on ICS-B-nurse was the type of work and it was found to be a 18% determinant on the total score of the scale ($R^2=0.188$, $F=3.174$, $p \leq 0.05$). It was found that age, education, and nursing care sufficient did not affect the total score of the scale ($p > 0.05$, Table 5).

Discussion

The mean total ICS-B score of the patients was 4.35±0.67 in the present study (Table 3). Considering that a maximum item score of 5.0 can be obtained in ICS-B, it was concluded

that the patient level of perceptions of individualized care is high. Studies similar to the present study have reported that the perception of orthopaedic surgery patients (4.26±0.07) (19) and radiation oncology patients (4.44±0.74) (12) had high perceptions of individualized care. The reason why the

Table 2.
ICS-B-Nurse Score Distribution According to the Working Characteristics of Nurses

Clinical characteristics	ICS-B nurse							
	ICS-B-total		Clinical situation		Personal life situation		Decisional control	
	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value	$\bar{X} \pm SD$	Test and p-value
Age								
20-29	4.02±0.78		4.07±0.80		3.82±0.85		4.09±0.85	
30-39	3.57±0.94	KW=4.018	3.71±1.11	KW=1.717	3.26±0.69	KW=5.900	3.61±1.07	KW=3.500
40≥	3.88±1.23	p=0.134	3.96±1.19	p=0.424	3.68±1.25	p=0.052	3.91±1.35	p=0.174
Education								
High school	3.63±1.30		3.74±1.35		3.45±1.21		3.61±1.40	
University	3.91±0.66	KW=2.605	3.99±0.73	KW=1.179	3.67±0.71	KW=1.768	3.99±0.74	KW=2.938
Graduate/doctorate	4.30±0.41	p=0.272	4.32±0.43	p=0.555	4.03±0.65	p=0.413	4.46±0.43	p=0.230
Years in nursing								
1-5	4.06±0.67		4.09±0.71		3.86±0.75		4.15±0.75	
6-10	3.86±0.65		4.03±0.76		3.56±0.70		3.85±0.63	
11-15	3.16±1.39	KW=5.801	3.25±1.48	KW=3.790	3.00±1.16	KW=5.636	3.17±1.54	KW=6.051
16≥	4.21±0.55	p=0.122	4.34±0.53	P=0.285	3.88±0.79	p=0.131	4.30±0.64	p=0.109
Weekly working hours								
40 hour	3.86±0.85	Z=-0.573	3.95±0.94	Z=-0.080	3.61±0.81	Z=-1,064	3.91±0.96	Z=-0.662
40>	3.92±1.03	p=0.567	3.97±1.01	p=0.936	3.72±1.08	p=0.287	3.99±1.10	p=0.508
Type of work								
Day	4.29±0.44	Z=-2.142	4.32±0.44	Z=-1.478	3.98±0.65	Z=-1.725	4.47±0.50	Z=-2.693
Day and night	3.72±0.98	p=0.032	3.82±1.05	p=0.139	3.52±0.94	p=0.085	3.74±1.06	p=0.007
One-to-one care with patients								
Yes	3.92±0.84	Z=-1.464	4.01±0.90	Z=-1.883	3.69±0.85	Z=-1.119	3.98±0.93	Z=-1.343
No	2.50±1.87	p=0.143	2.50±1.72	p=0.055	2.50±1.77	p=0.307	2.50±2.12	p=0.206
Nursing care sufficient								
Enough	4.17±1.10	Z=-2.546	4.21±1.26	Z=-2.766	3.91±1.07	Z=-1.337	4.30±1.11	Z=-2.675
Not enough	3.79±0.83	p=0.011	3.88±0.84	p=0.006	3.57±0.83	p=0.181	3.82±0.94	p=0.007

Z=Mann-Whitney U, KW=Kruskal-Wallis, SD=standard deviation, ICS=individualized care scale patient

Table 3.
Comparison of ICS-B Scale Score Averages of Patients-nurses and Cronbach Alpha Value

ICS-B subscales	ICS-B			
Groups	Clinical situation	Personal life situation	Decisional control	ICS-B total score
Patient (n=240) $\bar{X} \pm SD$	4.33±0.77	4.09±0.86	4.55±0.63	4.35±0.67
Nurse (n=60) $\bar{X} \pm SD$	3.96±0.95	3.65±0.89	3.93±0.99	3.87±0.90
t-value	3.232	3.573	5.911	4.580
p-value	0.001	0.000	0.000	0.000
Patient α	0.92	0.83	0.86	0.94
Nurse α	0.93	0.78	0.93	0.96

SD=standard deviation, ICS=individualized care scale patient

patients included in the present study had high perceptions of care can be explained by their lower educational level and therefore less expectation from healthcare services.

The perception of care among the patients aged ≥ 65 years was found to be significantly higher compared to those in the older age group ($p < 0.05$, Table 1). A similar study has revealed that patients in the older age group had higher perceptions of care (20). It can be suggested that older patients had an increased perception of individualized care because they needed more assistance to perform their daily activities. It was found that the higher the educational background of the patients, the lower their perception of individualized care ($p < 0.05$, Table 1). Similar studies have also suggested that patients with lower educational backgrounds have higher perceptions of individualized care (3,19,21), indicating that the patients with higher educational backgrounds have higher awareness and therefore, decreased perception of care. It was also determined that unemployed patients had higher perceptions of individualized care ($p < 0.05$, Table 1). Similarly, Köberich and Feuchtinger (21) concluded that unemployed patients had significantly higher mean total ICS-B scores and mean scores for subdimensions. Although Şişe (22) have reported no statistically significant difference, it was found that unemployed patients had higher perceptions of nursing care than employed patients.

The difference in our study may be associated with lower educational backgrounds of the patients. Here, the patients who thought that the nursing care provided was satisfactory, had higher perceptions of individualized care ($p < 0.05$, Table 1). Similar to the present studies, it is stated that the quality of nursing care is related to the patient perception of care (19,23,24). The study results can be interpreted as follows: the patient perception of individualized care increase as their level of satisfaction in terms of nursing care increase.

The mean total ICS-B score of the nurses was 3.87 ± 0.90 in our study (Table 3). Considering that the maximum item score that can be obtained in ICS-B is 5.0, it was concluded that nurse perception of individualized care is high but lower than that of the patients. Rose (12), and Karayurt et al. (6) reported that the mean total ICS-B score of the nurses was 4.57 ± 0.33 and 3.93 ± 0.77 , wherein the nurses were questioned about the care they provided and their opinions were investigated. In our study, the nurses who participated had a lower perception of individualized care. This difference may be associated with the fact that the nurses included in the present study had less experience in the profession.

The nurses who worked in day shift were determined to have a higher perception of care ($p < 0.05$, Table 2). Similarly [Suhonen et al. (9)], concluded that the working style of

Table 4.
Determiners of ICS-B-Patient Scale (multiple regression analysis-enter model)

Variables	ICS-B-patient scale total score				
	$\beta \pm SD$	t	p	Collinearity	
				Tolerance	VIF
Age (65 \geq)	2.839 \pm 1.763	1.610	0.109	0.928	1.077
Education (high school)	1.822 \pm 1.828	0.996	0.320	0.954	1.049
Working status (not working)	2.508 \pm 1.537	1.631	0.104	0.891	1.123
Nursing care sufficient (enough)	11.711 \pm 2.305	5.082	0.000	0.944	1.059
It is important that nurses take care of one to one (important)	-7.976 \pm 6.281	-1.270	0.205	0.960	1.042
Affected by the disease (yes)	3.251 \pm 2.691	1.208	0.228	0.931	1.074
R=0.398	R²:0.158 Adjusted R²:0.136			F: 7.215 p=0.000	

SD=standard deviation, ICS=individualized care scale patient

Table 5.
Determiners of ICS-B-Nurse Scale (multiple regression analysis-enter model)

Variables	ICS-B-nurse scale total score				
	$\beta \pm SD$	t	p	Collinearity	
				Tolerance	VIF
Age (20-29)	8.541 \pm 3.910	2.185	0.033	0.920	1.087
Education (graduate/doctorate)	2.197 \pm 5.833	0.377	0.708	0.869	1.150
Type of work (day)	11.454 \pm 4.595	2.493	0.016	0.828	1.208
Nursing care sufficient (enough)	6.197 \pm 4.412	1.405	0.166	0.982	1.019
R=:0.433	R²:0.188 Adjusted R²: 0.128			F: 3.174 p=0.020	

SD=standard deviation, ICS=individualized care scale patient

nurses affects the perception of individualized care. The fact that the nurses working in day shift had higher scores in the subdimension of control over decision-making can be associated with the lower number of patients per nurse during day shift.

The present study found that the patients had higher perceptions of care than the nurses (Table 3). The studies investigating this issue similarly revealed differences between the perceptions of care of patients and nurses (25,26). In Turkish society, it is widely acknowledged that the role and responsibility of the nurse is to administer medication and to measure vital signs. Patients think that self-sufficient individualized care is provided by nurses performing these two types of healthcare practice. Nonetheless, due to the large number of patients they care for, nurses cannot give adequate individualized care to each patient by allocating the desired time. For this reason, we think that patients' perception of care is at a high level while nurses' perception of care is low. Taken together, it can be suggested that both the nurse and patient perception of care should be evaluated to ensure enhanced quality of care.

Strengths of the Study

The study reveals the care perceptions of patients and nurses regarding individualized care and the factors that may affect it. It is thought that considering the factors affecting the individualized care perceptions of patients and nurses in the development of care services will contribute to the professional development of nursing. In addition, it is recommended to re-study the study in different patient and nurse groups.

Study Limitations

This study could be improved with more patients and nurses to help identify possible confounding variables.

Conclusions

In conclusion, the present study demonstrated that the patients had higher perceptions of individualized care than the nurses. It was also concluded that the level of perception of care was affected by the educational background and employment status of patients as well as whether a patient found the nursing care satisfactory. The perception of care was also affected by the working style of nurses and whether a nurse found the nursing care satisfactory or not. In line with these results, it is thought that providing care by paying attention to the factors affecting care will contribute to the development of care services.

Ethics Committee Approval: Before starting the study, ethics committee approval was obtained from the University Hospital Ethics Committee for Non-Pharmaceutical and Non-Medical Device Research (29.06.2018, 2018/1444).

Informed Consent: The participants verbal approval and written consent was taken.

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