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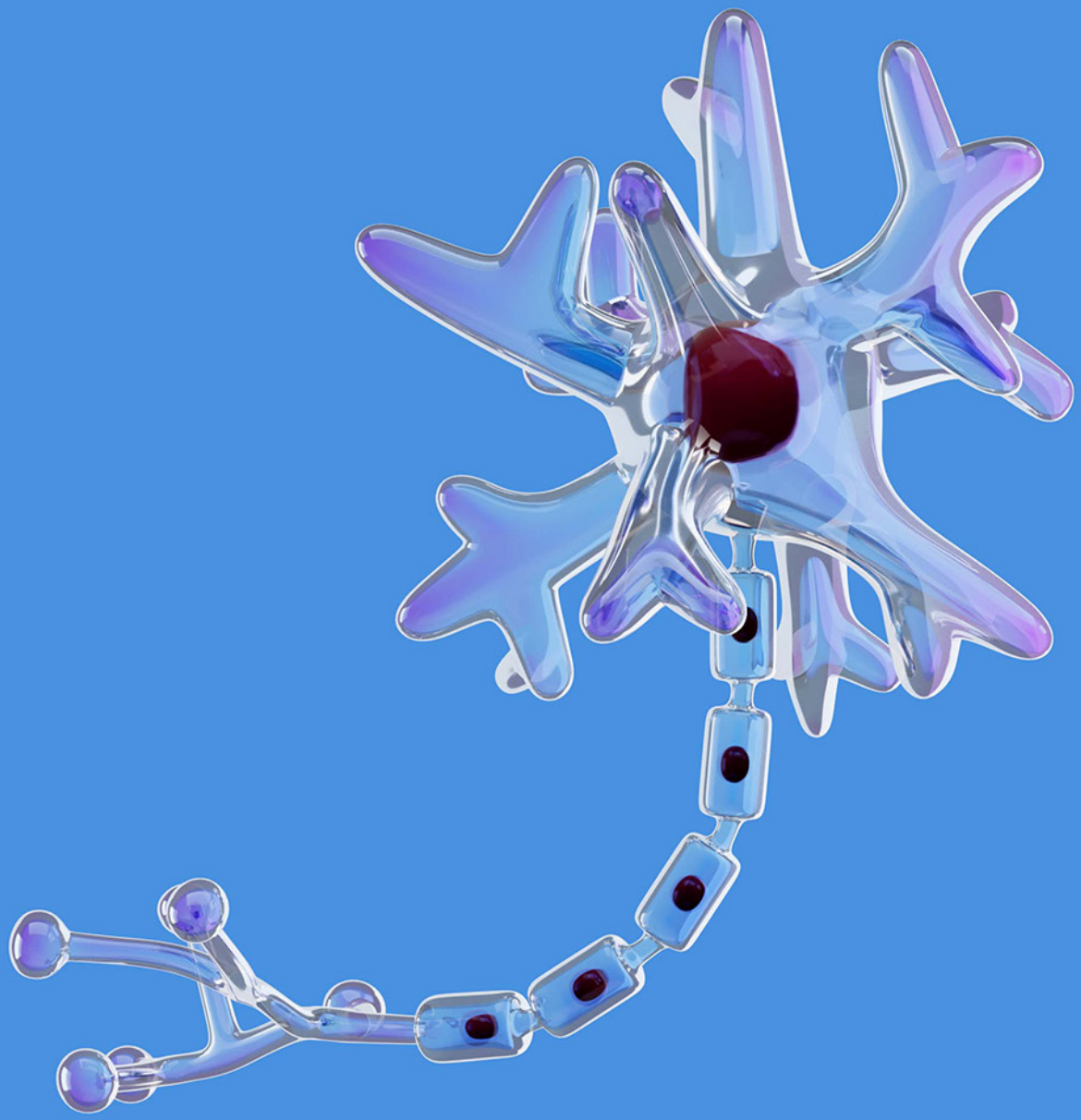

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Değerli okurlar, kıymetli bilim insanları,

Dergimizin ellibirinci sayısında, çeşitli sağlık ve hemşirelik konularına odaklanan dört önemli araştırma makalesini siz değerli okuyucularımızla paylaşmaktan mutluluk duymaktayız.

İlk olarak, Covid-19 pandemisi sırasında kadınların sağlık kaygısı ve çocuk doğurma isteğinin değerlendirilmesine odaklanan bir araştırma yer alıyor. Bu çalışma, pandeminin kadınlar üzerindeki etkilerini anlamak ve sağlık hizmetlerinin bu süreçte nasıl iyileştirilebileceğini belirlemek amacıyla önemli bir perspektif sunmaktadır.

İkinci makalede, hemşirelerin farklı kültürden olan hastalara yönelik kültürel zekâ düzeylerinin hasta bakımına etkisi incelenmektedir. Kültürel farklılıkların sağlık hizmetlerine olan etkisi giderek daha fazla önem kazanmaktadır. Bu çalışma ile hemşirelerin bu alandaki yetkinliklerini artırmak için değerli bilgilerin yer aldığı ve katkı sağladığı çalışmaya yer vermiş bulunmaktayız.

Üçüncü olarak, iskemik inmenin ikincil korunmasında varfarin tedavisinin sonuçlarına odaklanan bir retrospektif takip çalışması sunulmaktadır. İnme; dünya genelinde önemli bir sağlık sorunu olmaya devam etmektedir ve bu çalışma ile tedavi stratejilerinin etkinliği konusunda önemli bilgiler sunulmaktadır.

Son olarak, palyatif bakım merkezinde yatan akciğer kanserli bir hastanın Roper, Logan, Tierney Hemşirelik Modeli eşliğinde değerlendirildiği bir olgu sunumu bulunmaktadır. Bu makale palyatif bakımın önemini vurgulayarak, hastaların ve ailelerinin yaşam kalitesini artırmaya yönelik stratejiler hakkında bilgi vermektedir.

Bu dört makale, farklı sağlık ve hemşirelik alanlarındaki güncel konuları ele almakta olup sağlık hizmetlerinin iyileştirilmesine katkıda bulunmaktadır. Okuyucularımıza bu makaleleri dikkatle inceleyerek, sağlık alanındaki bilgi birikimlerini artırmalarını ve pratik uygulamalara yönelik yeni perspektifler edinmelerini öneriyoruz.

(Dergimizde etik kurul raporu gerektiren her türlü çalışmada yazar(lar) editörlüğe ve derginin sistemine yayın yüklerken gerekli etik kurul rapor bilgilerini girmekle yükümlüdür. Hiçbir koşul ve şartlarda oluşan ya da oluşacak bir sorunda problemde dergimiz, yayın kurulu, imtiyaz sahibi, yazı işleri, hakem ve bilim kurulları sorumluluk kabul etmez. Yazar(lar) bu bilgiyi dergiye yazılı olarak vermekle yükümlüdür. Bu konuda tüm sorumluluk yazar(lar) a aittir).

Basın Yayın Kanunun "5187" gereğince basılı eserler yoluyla işlenen fiillerden doğan maddi ve manevi zarar m-13-14 kapsamında dergimizde yayınlanan yayınların içeriği ve hukuki sorumluluğu tek taraflı olarak yazar(lar) a aittir. Dergimiz, yönetim, hakem, editör, bilim ve imtiyaz sahibi bu yükümlülükleri kabul etmez. Dergimizde bilimsel içerikli, literatüre katkı yapan, bilimsel anlamda değer ifade eden çalışmalar kabul edilir ve yayınlanır. Bunun dışında siyasi, politik, hukuki ve ticari içerikli fikri sınai haklar kanununa aykırılık içeren yayınlara yer verilmez. Olası bir olumsuzluk durumunda yazar(lar) doğabilecek her türlü maddi ve manevi zararı peşinen kabul etmiş ve yüklenmiştir. Bu nedenle ikinci üçüncü ve diğer şahıs ile kurumlar konusunda dergimiz yönetimi ve kurulları hiçbir sorumluluğu kabul etmez. Bu yönde dergimiz ve kurulları üzerinde bir hukuki yaptırım uygulanması söz konusu olamaz. Eserlerin içeriği ve mevcut durumu yazar(lar) ait olup dergimiz bu yayınların sadece yayınlanması ve literatüre kazandırılması aşamasında görev üstlenmiştir. Tüm okuyucu, kamuoyu ve takipçilerine ilanen duyurulur.

Prof. Dr. Çetin YAMAN
Chief Editor

Dear readers, precious scholars,

In the fifty-first issue of our journal, we are pleased to share with you, our esteemed readers, four important research articles focusing on various health and nursing issues.

Firstly, there is a study focusing on the assessment of women's health anxiety and childbearing desire during the Covid-19 pandemic. This study provides an important perspective to understand the effects of the pandemic on women and to determine how healthcare services can be improved in this process.

In the second article, the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care is examined. The impact of cultural differences on health services is gaining more and more importance. With this study, we have included valuable information to increase the competencies of nurses in this field.

Thirdly, a retrospective follow-up study focusing on the results of warfarin treatment in secondary prevention of ischaemic stroke is presented. Stroke continues to be a major health problem worldwide and this study provides important information on the effectiveness of treatment strategies.

Finally, a case report is presented in which a patient with lung cancer in a palliative care centre is evaluated using the Roper, Logan, Tierney Nursing Model. This article emphasises the importance of palliative care and provides information about strategies to improve the quality of life of patients and their families.

These four articles address current issues in different health and nursing fields and contribute to the improvement of health services. We recommend that our readers carefully analyse these articles to expand their knowledge in the field of health care and gain new perspectives on practical applications.

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EVALUATION OF WOMEN'S HEALTH ANXIETY AND CHILDBEARING DESIRE DURING COVID-19 PANDEMIC[1]

COVİD-19 PANDEMİSİ SÜRECİNDE KADINLARIN SAĞLIK KAYGISI VE ÇOCUK DOĞURMA İSTEĞİNİN DEĞERLENDİRİLMESİ

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Abstract: Aim: This study aims to investigate the effect of women's health anxiety level on their desire to have children during the epidemic period.

Method: The Health Anxiety Inventory (HAI) and the Childbearing Motivation Scale (CMS) were used to collect data from women between the ages of 18-50.

Results: Among the women participants of the study, 94.5% expressed negative impacts due to the pandemic, and 76.6% expressed a lack of desire to conceive during the period of the COVID-19 pandemic. HAI scores were higher for women who reported being significantly affected by COVID-19, those who had contracted the COVID-19 infection, those who attributed their lack of desire for children to economic reasons, and those with chronic diseases, compared to others (p=0.00, p=0.046, p=0.01, and p=0.00 respectively). It was determined that women with chronic diseases, whose spouses were unemployed, who did not desire children during the COVID-19 period, who attributed their lack of desire to economic reasons and COVID-19, who had a monthly household income below the minimum wage, and who were highly knowledgeable about COVID-19, had statistically significantly higher average scores in the sub-dimensions of childbearing motivation and negative childbearing motivation (p=0.048, p=0.01, p=0.00, p=0.00, p=0.00, and p=0.009, respectively). A moderately positive, statistically significant relationship was found between the participants' mean CMS scores and their HAI scores (r = 0.323, p < 0.01).

Conclusion: It can be concluded that the presence of a chronic disease, being affected by COVID-19, having contracted COVID-19, and the reasons for not wanting to have children contribute to an increase in women's health anxiety. The majority of women participants in the study expressed a reluctance to have children during the COVID-19 period, attributing this to economic reasons, already having a large number of children, and concerns related to COVID-19. It is assessed that the health anxiety levels of these women adversely impact their inclination towards childbearing.

Keywords: Health Anxiety, Childbearing Desire, COVID-19

Öz: Amaç: Bu çalışma kadınların salgın döneminde sağlık kaygı düzeyinin çocuk sahibi olma isteği üzerinde etkisinin araştırılması amacıyla yapılmıştır.

Yöntem: 18-50 yaş arası kadınlardan veri toplamak amacıyla Sağlık Anksiyete Envanteri (SAÖ), Çocuk Sahibi Olma Motivasyon Ölçeği (ÇSOMÖ) kullanıldı.

Bulgular: Çalışmaya katılan kadınların %94.5'i pandemiden olumsuz etkilendiğini, %76.6'sı COVID-19 pandemisi döneminde çocuk sahibi olmak istemediğini beyan etmiştir. COVID-19'dan çok fazla etkilendiğini ifade eden, COVID-19 enfeksiyonu geçiren, çocuk istememe nedeni ekonomik nedenlere bağlayan ve kronik hastalığı olan kadınların SAÖ puanları diğerlerinden daha yüksekti (sırasıyla p=0,00, p=0,046, p=0,01, p=0,00). Kronik hastalığı olan, eşi çalışmayan, COVID-19 döneminde çocuk istemeyen ve istememe sebebi ekonomik nedenler ve COVID-19 olan, aylık hane geliri asgari ücret altında olan, COVID-19 hakkında fazla bilgi sahibi olan kadınların çocuk sahibi olma motivasyonu ve olumsuz çocuk sahibi olma motivasyonu alt boyut puan ortalamalarının istatistiksel olarak anlamlı derecede yüksek olduğu saptandı (sırasıyla p=0,048, p=0,01, p=0,00, p=0,00, p=0.00, p=0,009). Hastaların ÇSOMÖ puan ortalamaları ile SAÖ puan ortalamaları arasında pozitif yönde orta düzeyde istatistiksel olarak anlamlı bir ilişki saptanmıştır (r = 0.323, p <0,01).

Sonuç: Kadınların kronik hastalığa sahip olmalarının, COVID-19'dan etkilenmelerinin, COVID-19 geçirmelerinin ve çocuk sahibi olmak istememe nedenlerinin sağlık kaygısını arttırdığı söylenebilir. Çalışmaya katılan kadınların büyük çoğunluğu COVID-19 döneminde ekonomik nedenler, fazla çocuğa sahip olma ve COVID-19 sebebiyle çocuk sahibi olmak istememektedir. Kadınların sağlık kaygı düzeylerinin çocuk sahibi olma isteğini olumsuz yönde etkilediği değerlendirilmektedir.

Anahtar Kelimeler: Sağlık Kaygısı, Çocuk Doğurma İsteği, COVID-19

[1] Sorumlu Yazar, Corresponding Author: Remzi KARASUNGUR, Hasan Kalyoncu University, Faculty of Health Sciences, Nursing Department, Gaziantep / Türkiye, rkarasungur@hotmail.com, *Geliş Tarihi / Received: 23.11.2023, Kabul Tarihi / Accepted: 27.03.2024, Makalenin Türü: Type of Article: (Araştırma – Uygulama; Research - Application) Çıkar Çatışması, Yok – Conflict of Interest, None, Conflict of Interest, None, Etik Kurul Raporu veya Kurum İzin Bilgisi Ethical Board Report or Institutiinal Approval, Var / Yes "Hasan Kalyoncu University Ethics Committee Number: 2021/065 Date: 03.05.2021, Siirt Governorship Provincial Health Directorate Research Permit Number: E-71987595-604.02 Date: 26.05.2021 permission was obtained." "Bu çalışma Araştırma ve Yayın Etiğine uygun olarak hazırlanmıştır. / This study has been prepared in accordance with Research and Publication Ethics."*

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INTRODUCTION

COVID-19, which took hold of the entire world, is a virus that manifests itself through an acute respiratory syndrome in humans (Atay, 2020; Zhou et al., 2020). The constant spread of the virus and the increase in the number of infected and hospitalized individuals as well as deaths may cause people to experience fear of encountering the physiological effects of the disease and become isolated from their family and environment. Additionally, such pandemics may cause negative effects on mental health by evoking death. Prolonged home isolation to avoid the disease and the reduction of social relationships may lead to psychological problems such as depression, concern towards a potential inability to receive sufficient and efficient healthcare, sleep problems, anxiety, and, particularly, fear of death in individuals (Torales et al., 2020). According to a study conducted during the COVID-19 pandemic, the risk of transmission has caused the level of health anxiety to increase in 62% of the participants (Karataş, 2020). During the pandemic, individuals with high health anxiety may contribute to overcrowding in the healthcare system by frequently visiting physicians and hospitals. Conversely, those with high anxiety might avoid seeking medical assistance due to concerns about hospitals being transmission hotspots. In contrast, individuals with low health anxiety may be less inclined to adhere to guidelines aimed at controlling the pandemic, and may exhibit a more relaxed demeanor (Asmundson & Taylor, 2020).

COVID-19 has impacted life in all parts of the world, and it may have affected women's attitudes towards childbearing. According to a WHO report, based on data from 105 countries, the services most frequently disrupted during the pandemic were facility-based services (61%), diagnosis and treatment of non-communicable diseases (69%), and family planning and birth control (68%) (WHO, 2020). In the first studies that investigated the impact of COVID-19 on pregnant women, it was reported that COVID-19, was detected in 31 pregnant women in Iran (Karimi-Zarchi et al., 2020) and 9 and 16 pregnant women in two separate studies conducted in China (Chen et al., 2020; Zhang et al., 2019), was overcome with no serious complications in either the mother or the baby, and that the virus had no vertical transmission from the mother to the baby. However, considering the fact that the virus has been detected in a small number of infants in the early period in studies conducted in recent years, it is considered that vertical transmission may be possible, albeit at a low rate (Oncel et al., 2020). It is still unknown whether COVID-19 increases the risk of miscarriage and stillbirth. There are concerns about women whose pregnancy was terminated due to the risk of infection and teratogenicity in the fetus (Liang & Acharya, 2020). A 2020 study by the Guttmacher Institute has shown that the pandemic has affected women's plans to have children, with 40% of women changing their plans. Additionally, 41% of women with children expressed concerns about not being able to care for their children, and 33% of women experienced disruptions in their

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reproductive health services (Lindberg et al., 2020). While current data on COVID-19 are still partial and incomplete, in a retrospective look, they will help predict the consequences of coronavirus infection in pregnancy. As most coronavirus human infections are asymptomatic or paucisymptomatic, we have witnessed two serious pandemics in the last two decades: severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East coronavirus syndrome (MERS-CoV). During these periods, approximately one-third of infected pregnant women died from the disease (Alfaraj et al., 2019; Wong et al., 2004). According to some studies in the literature, the majority of couples planning to have children deciding to stop their efforts during quarantine due to difficulties in accessing healthcare, fear, and economic reasons confirms this situation (Micelli et al., 2020; Sienicka et al., 2022; Chen et al., 2022; Peng et al., 2022).

While intensive studies are being conducted on the pathophysiology, clinical results and treatment of COVID-19, its effects on women's childbearing desire should not be overlooked. Additionally, the fact that no studies are found in the literature evaluating women's health anxiety and attitude towards childbearing during the pandemic process is the unique aspect of the present study. For this reason, the authors aimed to investigate the effect of women's health anxiety levels on their desire to give birth during the pandemic period.

OBJECTIVE

The present study was conducted with the purpose of investigating the impact of women's healthy anxiety level on childbearing desire during the pandemic.

METHODS

Study Design

The study was designed in descriptive and cross-sectional type.

Study Questions

1. How are women's health anxiety levels in the COVID-19 pandemic process?

2. What is the level of women's Childbearing Motivations in the COVID-19 pandemic process?

3. Is there a correlation between women's health anxiety levels and childbearing motivations?

Study Sample

The population of the present study consists of approximately 3000 women aged 18-49 registered at the Family Health Center located in the Baykan district of Siirt. The study sample consisted of all women who applied to Baykan Family Health Center and Baykan State Hospital between 06.05.2021 and 06.07.2021 and met the inclusion criteria presented below. Between the dates stated, 500 women were reached, 13 women were excluded due to not meeting the inclusion criteria, and a total of 487 women constituted the study sample.

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Inclusion Criteria

- Women who are aged 18 - 50

- Literate at the minimum,

- Able to operate smartphones

- Participating voluntarily.

Data Collection

The questionnaire including the participants' socio-demographic features and knowledge of COVID-19, the Health Anxiety Inventory (HAI), and the Childbearing Motivations Scale (CMS) were used as data collection tools. The data were collected through the electronic questionnaire prepared using Google Forms as a protective measure against COVID-19 for the women who applied to Baykan State Hospital and Baykan Family Health Center within the data collection dates. The link to the questionnaire was sent to the smartphones of the participants via text message while the forms of the participants who did not have smartphones were filled out through the tablet PC of the interviewer.

Health Anxiety Inventory (HAI): The 18-item inventory developed by Salkovskis et al. (2002) consists of two factors. The first 14 four-choice items involve ranked answers examining the mental condition of the patient. The remaining 4 items investigate the psychological state of the participants with the assumption that they may have severe diseases. Each item is scored from 0 to 3. The Turkish validity and reliability study of the inventory was conducted by Aydemir et al. (2013). The total score from the inventory ranges from 0 to 54. Higher scores indicate higher levels of health anxiety. The sub-dimension score from the first 14 items ranges from 0 to 42. Tyrer et al. regarded total scores of 20 and over from the first 14 questions as increased health anxiety (Tyrer et al., 2011). In the present study, scores of 20 and over were considered as high health anxiety. The Cronbach's alpha internal consistency coefficient of the inventory was determined as 0.910 and the Cronbach's alpha coefficient for the present study was calculated as 0.82.

Childbearing Motivations Scale: The scale developed by Guedes, Pereira, Pires, Carvalho & Canavarro (2013) was adapted into Turkish by Hüseyinzade Şimşek (2017). The scale consists of the sub-scales Positive Childbearing Motivations and Negative Childbearing Motivations.

The Positive Childbearing Motivations sub-scale consists of 22 items and 4 dimensions. For the positive items, the score '1' represents the answer 'not at all' while '5' represents 'completely'. The total score from this sub-scale ranges from 22 to 110. High scores indicate that individuals place high importance on these statements in the context of becoming a parent.

The Negative Childbearing Motivations sub-scale consists of 13 items and 5 dimensions. For the negative items, the score '1' represents the answer 'not at all' while '5' represents 'completely'. The total score from this sub-scale ranges from 13 to 65. High scores indicate that individuals place high importance on these statements in terms of not becoming a parent. The Cronbach's Alpha reliability coefficient for the overall scale was

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found as 0.916 while the Cronbach's alpha coefficient for the present study was calculated as 0.93.

Statistical Analyses

In the evaluation of the findings obtained in the present study, the IBM SPSS Statistics 23 (IBM SPSS, Turkey) program was used for statistical analyses. In the evaluation of the study data, the Huck (2008) Skewness (±1) and Kurtosis (+2,-1) distribution tests were used for the normality of the distribution of parameters. Descriptive statistics were represented in the form of a number, percentage, mean, standard deviation, and minimum and maximum value. For the analysis of quantitative data, the independent Student t-test was used in normally-distributed pairwise groups (spouse employment status, chronic disease status, childbearing desire during the pandemic) while the One Way ANOVA test was used in groups of three and more (average monthly household income, number of children, knowledge of COVID-19, reason for not wanting to have children) and the Mann Whitney U test was used in pairwise groups with non-normal distribution (chronic disease). The Bonferroni Correction was used to determine the source of the difference in the comparison of three or more groups. In the absence of normal distribution, the relations between the parameters were sought using the Spearman Correlation analysis. In terms of the correlation coefficient (r), the interval of 0.00–0.24 was regarded as a weak correlation while 0.25–0.49 was regarded as moderate, 0.50– 0.74 was regarded as strong and 0.75–1.00 was regarded as very strong correlation (Karaoğlu et al., 2020; Aksakoğlu., 2006; Pamuk et al., 2014; Taş et al., 2019). Significance was evaluated at the level of $p<0.05$.

Ethical Considerations

To conduct the present study, approval was obtained from a university's Health Sciences Ethics Committee of Non-Invasive Research (ethics committee no: 2021/65), Siirt Provincial Directorate of Health (no: E-71987595-604.02), and the T.R. Ministry of Health. At the beginning of the questionnaire applied to the participants face-to-face or sent to their smartphones, information was provided on the purpose and content of the study, and it was stated that participation was voluntary. Permission was obtained from the authors of the scales used in the study via e-mail. The identity information of the participants in the questionnaire was not recorded. The present study was carried out in line with the Principles of the Declaration of Helsinki.

RESULTS

Table 1. Distribution of the Descriptive Features of the Participating Women

Descriptive		n	%
Age: 32.86 ± 7.70 (mean± SD) years (min:18; max: 49)			
Education Status	Primary School	349	71,6
	High School	68	14

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	University	70	14.4
	Housewife	**406**	**83.4**
Occupation	Healthcare Personnel	29	6
	Educator	27	5.5
	Other	25	5.1
Family Type	**Nuclear Family**	**336**	**69**
	Extended Family	151	31
	Below Minimum Wage	151	31
Average Monthly Household Income	**Minimum Wage**	**192**	**39.4**
	Above Minimum Wage	144	29.6
	Self-Employed	**164**	**33.7**
	Healthcare Personnel	23	4.7
	Educator	25	5.1
Occupation of Spouse	Security Personnel	107	22
	Tradesman	60	12.3
	State Officer	25	5.1
	Other	83	17
Employment Status of Spouse	**Yes**	**350**	**71.9**
	No	137	28.1
	0 Children	40	8.2
Number of Children	1 Child	93	19.1
	2 Children	87	17.9
	3 or More Children	**267**	**54.8**
	0 Miscarriages or Stillbirths	**290**	**59.5**
Number of Miscarriages or Stillbirths	1 Miscarriage or Stillbirth	114	23.4
	2 Miscarriages or Stillbirths	61	12.5
	3 or more Miscarriages or Stillbirths	22	4.5

SD, standart deviation; min, minimum; max, maximum.

The mean age of the participants is 32.86, with a standard deviation of 7.70. The youngest participant is 18 years old, and the oldest is 49 years old. Among the participants, 71.6% are primary school graduates, 14% are high school graduates, and 14.4% are university graduates. 83.4% of the participants are housewives; 6% are health personnel; 5.5% are educators; and 5.1% belong to other occupational groups. In terms of family structure, 69% of the participants have a nuclear family, while 31% have an extended family. Regarding income, 31% of the participants earn below the minimum wage, 39.4% earn above the minimum wage, and 29.6% have an income significantly above the minimum wage. Among the participants' spouses, 33.7% are self-employed, 22% are security personnel, 12.3% are tradesmen, 5.1% are educators, and 17% belong to other occupational groups. Additionally, 71.9% of the participants' spouses are employed, while 28.1% are not employed. Regarding children,

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8.2% of the participants are childless, 19.1% have one child, 17.9% have two children, and 54.8% have families with three or more children. Finally, 59.5% of the participants have never had a miscarriage or stillbirth, 23.4% have had one miscarriage or stillbirth, 12.5% have had two miscarriages or stillbirths, and 4.5% have had three or more miscarriages or stillbirths (Table 1).

Table 2. Distribution of the Participants' Answers to the Descriptive Questions Regarding the COVID-19 Pandemic

		n	%
Knowledge of COVID-19	I have never heard of COVID-19	2	0.4
	I have heard of COVID-19 but have inadequate knowledge.	82	16.8
	I have moderate knowledge.	**350**	**71.9**
	I have almost expert-level knowledge.	53	10.9
Impact of COVID-19 on Daily Life	Did not affect me at all	27	5.5
	Affected a little	71	14.6
	Moderately affected	186	38.2
	Highly affected	**203**	**41.7**
Impact of COVID-19 on Professional Life	Did not affect my professional life	56	11.5
	I was dismissed from my job due to the pandemic	5	1
	I was laid off to unpaid leave due to the pandemic	8	1.6
	I had to close my business due to the pandemic	9	1.8
	I have to work more due to the pandemic	34	7
	Other (Housewife, Unemployed, etc.)	**375**	**77**
Status of Contracting COVID-19	**I or my family do not have COVID-19**	**286**	**58.7**
	I do not have COVID-19 but my family does	58	11.9
	I currently have/have had COVID-19, my family has not	67	13.8
	I currently have/have had COVID-19, and my family has too	76	15.6
Do you wish to have children during the pandemic?	Yes	114	23.4
	No	**373**	**76.6**
The reason for not wanting to have children during the pandemic	**No reason stated**	**192**	**39.4**
	Due to COVID-19	58	11.9
	Economic reasons	74	15.2
	A sufficient number of children	137	28.1
	Other (My child is little, chronic disease, etc.)	26	5.3
HAI Physical sub-dimension	Low health anxiety	418	85.8
	High health anxiety	69	14.2

COVID-19, Coronavirus Disease.

The proportion of participants who stated they have no knowledge about COVID-19 is 0.4%, while 16.8% have heard about COVID-19 but possess insufficient knowledge. 71.9% of the participants have moderate knowledge, and 10.9% have near-expert knowledge. Regarding the impact of COVID-19 on daily life, 5.5% reported being unaffected, 14.6% reported being slightly affected, 38.2% reported being moderately affected, and 41.7% reported being highly affected. The impact of COVID-19 on professional life was reported as follows: 11.5% of the participants were not affected, 1% lost their jobs due to the pandemic, 1.6% took unpaid leave due to the pandemic, 1.8%

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had to close their workplaces due to the pandemic, and 7% had to work more due to the pandemic. Participants in other situations (such as housewives, unemployed, etc.) are 77%. Among the participants, 58.7% reported that neither they nor their family contracted COVID-19. Among those who contracted COVID-19, 11.9% were individuals only, 13.8% were family members only, and 15.6% included both the individual and their family. The rate of participants who want to have children during the pandemic is 23.4%, while 76.6% do not want to have children. The reasons for not wanting children include unspecified reasons (39.4%), COVID-19 (11.9%), economic reasons (15.2%), and having enough children (28.1%). Additionally, 85.8% of the participants had a low level of health anxiety, while 14.2% had a high level of health anxiety (Table 2).

Table 3. Factors Affecting the Health Anxiety Levels of the Women

	Oversensitivity and anxiety towards physical symptoms dimension		**Negative outcomes of the disease dimension**		**Overall health anxiety score**	
	Mean ± S.D	**Median (IQR)**	**Mean ± S.D**	**Median (IQR)**	**Mean ± S.D**	**Median (IQR)**
Miscarriage and Stillbirth						
None	12.93±6.38	13 (7)	2.72±2.18	2 (3)	15.65±7.70	15 (9)
1	14.35±6.07	14 (8.25)	3.06±1.91	3 (2)	17.42±7.19	18 (9.25)
2	14.09±6.03	14 (8)	3.04±2.02	3 (3.50)	17.14±7.00	17 (7.50)
3 or more	15.68±7.64	15 (13.75)	2.9±2.02	3 (2.25)	18.59±8.36	17,5 (13)
Test	χ2=9.33		χ2=5.19		χ2=10.52	
P	**0.025***		0.158		0.15	
Impact of COVID-19						
No impact	11.25 ±5.27	11 (6)	2.22 ±1.64	2 (2)	13.48 ±5.41	13 (7)
Little impact	13.25 ±4.75	13 (5)	2.09 ±1.70	2 (2)	15.35 ±5.57	15 (6)
Moderate impact	12.14 ±5.55	13 (8)	2.83 ±1.88	3 (3)	14.98 ±6.60	15 (9)
Severe impact	15.21 ±7.13	15 (9)	3.21 ±2.36	3 (3)	18.42 ±8.70	18 (9)
Test	χ2=24.35		χ2=16.04		χ2=23.75	
P	**<0.01****		**<0.01****		**<0.01****	
Contracting COVID-19						
I or my family do not have COVID-19	13.41±6.28	13 (8)	2.75±2.00	3 (3)	16.17±7.40	15 (9)
I don't have COVID-19, my family does	13.50±4.91	14 (5.25)	2.79±1.90	3 (3)	16.29±5.89	17 (8)
I have COVID-19, and my family does not	12.58±9.37	13 (8)	3.14±2.56	3 (3)	15.73±10.44	14 (10)
I and my family have COVID-19	14.88±5.40	14.5 (9)	2.98±2.13	3 (2.75)	17.86±6.11	18 (7.75)
Test	χ2=9.42		χ2=1.11		χ2=8.02	
P	**0.024***		0.773		**0.046***	
Reason for not wanting to have children						
No reason	13.05±6.91	13 (7)	3.10±2,29	3 (3)	16.16±8.48	16 (9)
COVID-19 pandemic	15.03±5.86	14.5 (7.25)	2.65±2,22	2 (3)	17.68±.06	18 (7)
Economic reasons	15.94±6.21	14.5 (7)	3.10±2,07	3 (2)	19.05±7.53	17 (8.25)
A sufficient number of children	12.87±5.50	13 (7)	2.40±1,66	2 (2.50)	15.28±6.13	15 (9)
Other	10.38±5.29	10 (10)	3.00±2,07	3 (2.25)	13.38±6.11	12.5 (9.25)
Test	χ2=22.90		χ2=8.76		χ2=17.84	
P	**<0.01****		0.067		**<0.01****	
Chronic diseases						
Yes	15.6±5.23	15.5 (7)	2.81±2.00	3 (3)	18.68±6.25	18.5 (7.25)

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No	12.95±6.48	13 (7)	2.86±2.12	3 (3)	15.81±7.76	15 (9)
Test	z=-4.832		z =-0.002		z =-4.285	
P	**<0.01****		0.999		**<0.01****	

*COVID-19, Coronavirus Disease; SD, standart deviation. *p<0.05, **p<0.01 z= Mann-Whitney U Test, χ2=Kruskal Wallis Test.*

The participants had a mean score of 16.39±7.56 on the overall HAI, 13.53±6.36 from the oversensitivity and anxiety towards physical symptoms sub-dimension and 2.85±2.09 from the negative outcomes of the disease sub-dimension.

It was found that the participants who stated to have been highly affected by COVID-19 (χ2=23.75, P <0.01), contracted COVID-19 (χ2=8.02, P=0.046), and did not want to have children due to economic reasons and COVID-19 (χ2=17.84, P<0.01) and chronic diseases (z=-4.285, P<0.01) had higher HAI score medians to a statistically significant extent (Table 3).

Table 4. Factors Affecting the Participants' Level of Childbearing Motivation

	Positive Childbearing Motivation Sub-dimension Mean ± SD	**Negative Childbearing Motivation Sub-dimension Mean ± SD**
Spouse Employment Status		
Yes	64.31±17.78	26.87±11.91
No	64.72±16.99	30.91±12.72
Test Value	t=–0.236	t=–3.297
P Value	0.813	**<0.01****
Chronic Disease Status		
Yes	68.5±16.29	30.20±12.38
No	63.40±17.72	27.46±12.19
Test Value	t=2.717	t=1.985
P Value	**0.007***	**0.048***
Childbearing desire during the pandemic		
Yes	63.85±18.53	24.15±9.61
No	64.60±17.26	29.19±12.75
Test Value	t=–0.402	t=–4.507
P Value	0.688	**<0.01****
Average Monthly Household Income		
Below are the minimum wage[a]	64.84±16.51	30.80±12.58
Minimum wage[b]	65.95±16.22	11.82±0.85
Above the minimum wage[c]	61.95±20.00	11.79±0.98
Test Value	F=2.208	F=9,472
P Value	0.111	**<0.01**** **(a>b,c)**
Number of Children		
None[a]	67.72±18.06	23.77±10.77
1 child[b]	68.13±18.95	26.61±11.21
2 children[c]	62.24±18.41	28.45±12.70
3 and more children[d]	63.35±16.48	28.98±12.56
Test Value	F=2.666	F=2.623
P Value	**0.047*** **(a>c,d)** **(b>c,d)**	0.050
Knowledge of COVID-19		
I have never heard of COVID-19[a]	86.5±3.53	46.00±1.41
I have heard of COVID-19 but have inadequate knowledge[b]	59.39±16.15	30.06±12.68

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I have moderate knowledge[c]	65.60±16.87	27.18±11.88
I have almost expert-level knowledge[d]	63.66±22.20	29.66±13.45
Test Value	F=3.93	F=3.091
P Value	**0.009* (a>b,c,d)**	**0.027* (a>b,c,d)**
Reason for not wanting to have children		
No reason stated[a]	62.49±18.76	26.46±11.14
COVID-19 pandemic[b]	71.60±16.04	30.03±10.94
Economic reasons[c]	69.62±12.99	36.09±11.47
I have enough children[d]	62.44±16.22	26.24±12.90
Other[e]	58.38±22.38	21.26±11.31
Test Value	F=6.077	F=13.048
P Value	**<0.01** (b>c,a,d, e)**	**<0.01** (c>a, b, d, e)**

*COVID-19, Coronavirus Disease; SD, standart deviation. *p<0.05, **p<0.01, t= Independent Samples test, F= one-way ANOVA test.*

In the present study, when the overall childbearing motivation score averages of the women with chronic diseases (t=2.717, p=0.007), with no children or 1 child (f=2.666, p=0.047), who did not wish to have children due to the COVID-19 pandemic (f=6.077, p<0.001) and had little knowledge regarding the pandemic (f=3.930, p=0.009) were compared, it was found that the positive childbearing motivation sub-dimension score averages were higher to a statistically significant degree.

When the overall childbearing motivation score averages of the women with chronic diseases (t=1.985, P=0.048), whose spouses are unemployed (t=-3.297, p<0.01), who did not want to have children during the pandemic (t=-4.507, p<0.01), had an average monthly household income below the minimum wage (f=9.472 p<0.01), did not want to have children due to economic reasons and COVID-19 (f=13.047, p<0.01) and had a significant level of knowledge on COVID-19 (f=3.091, p=0.027) were compared, it was found that the negative childbearing motivation sub-dimension score averages were higher to a statistically significant degree (Table 4).

Table 5. The Relationship Between the Women's Childbearing Motivations and Health Anxiety Levels

Childbearing Motivations Scale		**Health Anxiety Inventory**		
		Oversensitivity and anxiety towards physical symptoms	**Negative outcomes of the disease**	**Overall scale score**
Positive Childbearing Motivations sub-dimension	r	0.332	-0.072	0.273
	p	**<0.01***	0.111	**<0.01***
Negative Childbearing Motivations sub-dimension	r	0.293	0.69	0.275
	P	**<0.01***	0.129	**<0.01***
Overall Scale	r	0.369	-0.003	0.323
	p	**<0.01***	0.943	**<0.01***

**p<0.01, r= Spearman Correlation test*

While a positive and moderate relationship was found between the scores from the Childbearing Motivations Scale and the oversensitivity and anxiety towards physical symptoms sub-dimension (r =0.369, p <0.01), no relationship was found with the

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negative outcomes of the disease sub-dimension (r =-0.003, p = 0.943). On the other hand, a positive and moderate relationship was found between the women scores on the Childbearing Motivations Scale and the scores from the HAI (r = 0.323, p <0.01) (Table 5).

DISCUSSION

It was found that the women who participated in the present study (n=487) had a mean score of 16.39±7.56 on the overall Health Anxiety Inventory, 13.53±6.36 from the oversensitivity and anxiety towards physical symptoms sub-dimension and 2.85±2.09 from the negative outcomes of the disease sub-dimension. Considering that the maximum score that can be obtained from the inventory is 54, it can be said that the health anxiety levels of the women who participated in the present study are not high. In comparison with other studies, it was found that the health anxiety levels of the participants were similar to those of the individuals in other samples (Özdin & Bayrak Özdin, 2020).

In this study, it was found that women with chronic diseases had higher overall score averages than HAI. Having a chronic disease is one of the factors that impact health anxiety levels. Previous studies have determined that chronic diseases are the most important risk factors for deaths due to COVID-19 (Zhou et al., 2020). Additionally, individuals with chronic diseases have a high risk of contracting the disease (Wang et al., 2020). In a study, an increase in health anxiety, depression, and anxiety levels was observed in individuals with chronic diseases during the COVID-19 period (Özdin & Bayrak Özdin, 2020). In the present study, the fact that the healthy anxiety levels of the individuals with chronic diseases were found to be high can be attributed to the reduction or decrease of physical functions, the fact that emotional coping methods are more frequently used compared to problem-oriented coping methods and the presence of symptoms that disrupt the quality of life, such as pain. It was found that another important factor that affects the health anxiety level of the women in this study was contracting COVID-19 and being impacted by COVID-19. In the study conducted by Newby et al. during the COVID-19 process in Australia in 2020, it was determined that one-tenth of the participants experienced health anxiety (Newby et al., 2020). According to another study, it was found that approximately 24.9% of students experienced anxiety due to the COVID-19 outbreak (Huang et al., 2020). In a 2020 study conducted by Reizer et al., it was reported that there was a positive relationship between the fear of COVID-19 in women and psychological distress (Reizer et al., 2020). In the study carried out by Unal et al. in 2020, it was shown that women have higher anxiety levels and that they are more sensitive compared to men in terms of the necessary precautions to be taken. It was expected situation that COVID-19, which affects large masses and for which no certain treatment is identified, would similarly increase the health anxiety levels of the women in the present study (Unal et al., 2020).

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It was determined that the score averages from the oversensitivity and anxiety towards physical symptoms sub-dimension of health anxiety were lower in the participants who suffered miscarriage or stillbirth. It has been determined that there is a potential link between COVID-19 infection and miscarriage in pregnant women (Magnus et al., 2019). In another study, it was determined that 16.4% of women with an anxiety rate of 63% during the COVID-19 pandemic experienced miscarriages (Jiang et al., 2023). Therefore, it is not surprising that the women who previously suffered miscarriage or stillbirth had low mean scores from the oversensitivity and anxiety towards physical symptoms sub-dimension of the HAI.

In the present study, it was found that the women who indicated the COVID-19 pandemic and economic reasons as the reasons for not wanting to have children had a high mean score on the overall HAI. A previous study indicates that the decision to postpone or avoid childbirth is associated with participants having lower perceptions of financial security and poorer mental health conditions during the pandemic (Malicka et al., 2021). Since COVID-19 blurs out future events in both medical and economic terms, it may have increased the level of anxiety and delayed the participants' desire to have children.

In this study, it was found that the women with chronic diseases who had more than 2 children and had an adequate level of knowledge regarding COVID-19 had a high mean score from the Positive Childbearing Motivation sub-dimension. Additionally, the participants whose spouses were unemployed had a low average monthly household income and did not wish to have children due to COVID-19 and economic reasons had a high mean score from the Negative Childbearing Motivation sub-dimension.

One of the important factors that influence childbearing desire is the COVID-19 pandemic. In this study, it was found that although the women had moderate knowledge regarding COVID-19 during the pandemic, they still lacked an adequate level of knowledge concerning the impacts of the disease on humans and that COVID-19 affected the daily life of the women. In addition, 76.6% of women did not want to have children during this period, as approximately half of the participants or their relatives were infected with COVID-19. In a study conducted in Italy, it was reported that more than a third (37.3%) of couples planning to have a child before the COVID-19 pandemic decided to suspend these plans during the quarantine period (Micelli et al., 2020).

In the current study, it was determined that the participants' average scores regarding the number of children and economic status, which are sub-dimensions of Negative Childbearing Motivation, were high. Previous studies have indicated that the closure of schools during the pandemic, the additional burden of childcare on parents, and the reduction in women's employment have led to a decrease in the desire for additional childbearing (Derndorfer et al., 2021; Lindberg et al., 2020; Malicka et al., 2021). In

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a study conducted in China, it was revealed that the largest factor affecting women's fertility intentions during the pandemic was economic pressure. The income reduction caused by the pandemic became a significant factor in preventing women from having children (Maiti et al., 2020). The conflict between work and childbearing remains a significant factor influencing the fertility intentions and number of children of women who are still of childbearing age.

While a positive and moderate relationship was found between the scores on the Childbearing Motivations Scale and the score averages from the oversensitivity and anxiety towards physical symptoms sub-dimension, no statistically significant relationship was found with the mean scores from the negative outcomes of the disease sub-dimension. On the other hand, a positive and moderate relationship was found between the participants' scores on the Childbearing Motivations Scale and HAI mean scores. In a study conducted in Jordan that examined the relationship between the desire to have children and the level of health anxiety, it was indicated that the fear of contracting COVID-19 infection during pregnancy, health anxiety, and the associated potential risks affected women's desire to have children (Albeitawi et al., 2022). Yassa et al. (2020) reported that anxiety and concerns regarding pregnancy and childbearing increased during the COVID-19 pandemic (Yassa et al., 2020). In a study conducted in Iran, it was found that anxiety induced by COVID-19 hurt childbearing desire, an intended behavior (Banaei et al., 2021). Liu et al. concluded that the basic attitudes towards COVID-19 could be easily altered through anxiety and stress (Liu et al., 2020). The public concern greatly varies throughout the course of the COVID-19 outbreak. Considering recent evidence, it is concluded that quarantined individuals have significant levels of anxiety, stress and anger (Brooks, 2020). According to the existing findings, anxiety induced by COVID-19 had a negative and significant relationship with childbearing desire. Micelli et al. showed that the worry and anxiety caused by the COVID-19 pandemic influence the wants of couples who plan to have children (Micelli et al., 2020). In another study, it was reported that knowledge on COVID-19 had a negative relationship with symptoms of general anxiety, depression, and psychological distress (Bäuerle, 2020). In general terms, as a result of the present study, it can be said that anxiety decreases childbearing desire and, due to being a serious health problem, COVID-19 increases health anxiety and effected childbearing desire.

Limitations of the Study

The primary limitation of the present study is the fact that the study was carried out in only one center and that the sample consisted of volunteering participants prevented the results to be generalized to the population. Additionally, the answers given are based on the statements provided by the women. No observational assessment was performed.

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CONCLUSION

In conclusion, it can be said that the health anxiety levels of the women participating in the present study were not very high during the COVID-19 period although having a history of miscarriages, having chronic diseases, having been impacted by COVID-19, having contracted COVID-19, economic reasons, and not wanting to have children due to the COVID-19 pandemic are factors that increase health anxiety.

It was determined that the large majority of the women who participated in the study had low childbearing motivations due to economic reasons during the pandemic, having a large number of children, and the COVID-19 pandemic. Additionally, it can be said that the health anxiety levels of the women are related to their childbearing motivations. Therefore, it can be suggested to provide consultancy services to women who wish to have children and experience anxiety along with their spouses, conduct studies to observationally evaluate the results of these services, and carry out multicenter studies on health anxiety and childbearing with large, society-based samples that can be generalized to the population.

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THE EFFECT OF NURSES' CULTURAL INTELLIGENCE LEVELS TOWARDS PATIENTS FROM DIFFERENT CULTURES ON PATIENT CARE BEHAVIORS[1]

HEMŞİRELERİN FARKLI KÜLTÜRDEN OLAN HASTALARA YÖNELİK KÜLTÜREL ZEKÂ DÜZEYLERİNİN HASTA BAKIM DAVRANIŞLARI ÜZERİNE ETKİSİ

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Abstract: Aim: This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors.

Method: The population of the cross-sectional study, which is one of the analytical research types, consisted of Turkish citizen nurses over the age of 18 working in Konya. The research was collected by random sampling method, one of the non-probability sampling methods. Using the G*Power 3.1 package program, the sample size was determined as a minimum of 170 people for an effect size of 0.5, 95% confidence interval and 5% margin of error and 177 people were included. The sample of the study consisted of nurses who were actively working in Konya, had high school or higher education level, owned at least one technological device and could use internet networks. The research data were obtained with the Introductory Information Form, Cultural Intelligence Scale (CQS) and Caring Behaviours Scale-24 (CBI-24).

Results: It was determined that 80.2% of the nurses participating in the study were women, 48% were in the age range of 25-34 years, 86.4% had a university or higher education level. The mean total score of CBI-24 was 127.06±14.09 and the mean total score of CQS was 94.92±16.62. A significant difference was found between nurses' age, marital status, family type and origin and CQS total mean scores ($p<0.05$). There was a significant difference between the origins of the nurses and their CBI-24 total mean scores ($p<0.05$). There is a weak and positive relationship between nurses' mean CBI-24 scores and CQS scores ($p<0.05$).

Conclusion: As a result of the study, it was determined that the cultural intelligence level of nurses was at a good level and the level of caring behaviours was at a moderate level, and it was seen that as the level of cultural intelligence increased, caring behaviours also increased.

Keywords: Caring Behaviours, Nursing, Cultural Intelligence

Öz: Amaç: Bu araştırma hemşirelerin farklı kültürden olan hastalara yönelik kültürel zekâ düzeylerinin hasta bakım davranışları üzerine etkisini incelemek amacıyla gerçekleştirilmiştir.

Yöntem: Analitik araştırma türlerinden kesitsel tipte olan araştırmanın evrenini Konya'da çalışan 18 yaş üstü Türk vatandaşı olan hemşireler oluşturmuştur. Araştırma olasılıksız örnekleme yöntemlerinden gelişi güzel örnekleme yöntemiyle toplanmıştır. Örneklem büyüklüğü G*Power 3.1 paket programı kullanılarak, 0,5 etki büyüklüğü, %95 güven aralığı ve %5 hata payı için minimum 170 kişi olarak belirlenmiş ve 177 kişi dahil edilmiştir. Araştırmanın örneklemini Konya'da aktif olarak çalışan, lise ve üzeri eğitim düzeyine sahip, en az bir teknolojik cihaza sahip olan ve internet ağlarını kullanabilen hemşireler oluşturmuştur. Araştırma verileri Tanıtıcı Bilgi Formu, Kültürel Zekâ Ölçeği (CQS) ve Bakım Davranışları Ölçeği–24 (CBI-24) ile elde edilmiştir.

Bulgular: Araştırmaya katılan hemşirelerin %80.2'si kadın, %48'i 25-34 yaş aralığında % 86.4'ü üniversite veya üzeri eğitim düzeyine sahiptir. CBI-24 toplam puan ortalaması 127.06±14.09, CQS toplam puan ortalaması 94.92±16.62 olarak bulunmuştur. Hemşirelerin yaş, medeni durum, aile tipi ve köken ile CQS toplam puan ortalamaları arasında anlamlı farklılık tespit edilmiştir ($p<0.05$). Hemşirelerin kökenleri ile CBI-24 toplam puan ortalamaları arasında anlamlı düzeyde farklılık tespit edilmiştir ($p<0.05$). Hemşirelerin CBI-24 puan ortalamaları ile CQS puan ortalamaları arasında zayıf ve pozitif yönlü bir ilişki bulunmaktadır ($p<0.05$).

Sonuç: Araştırma sonucunda hemşirelerin kültürel zekâ düzeylerinin iyi düzeyde ve bakım davranışları düzeyinin orta düzeyde olduğu belirlenmiş, kültürel zekâ düzeyleri arttıkça bakım davranışlarının da arttığı görülmüştür.

Anahtar Kelimeler: Bakım Davranışları, Hemşirelik, Kültürel Zekâ

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INTRODUCTION

Culture is a complex whole consisting of knowledge, beliefs, arts, traditions, habits, and skills that a person acquires from the society in which he/she lives and is the way of life of a society. Cultural values, attitudes, beliefs, and behaviors influence people's lifestyles and thus their health (Göl & Erkin, 2019). Increasing population mobility and globalization have resulted in people from different cultural backgrounds interacting and communicating more frequently (Kaya et al., 2021). In addition, advances in technology, migratory movements, ease of transportation, student exchange programs, and work opportunities abroad have effectively brought people from different cultures together (Gosse & Katic-Duffy, 2020; Verkuyten & Yogeeswaran, 2020). In this context, we come across the concepts of intercultural sensitivity and cultural intelligence, which we often hear about. Intercultural sensitivity can be defined as the ability to develop an understanding of, respect for, and appreciation of cultural differences (Kaya et al., 2021). Cultural intelligence, on the other hand, is defined as an individual's ability to function and manage effectively in culturally diverse environments that develop cultural sensitivity (Afsar et al., 2020). Cultural intelligence helps individuals to see from a broad perspective by better understanding their professional aspirations and perspectives, and to communicate effectively with culturally different individuals (Göl & Erkin, 2019). One study found that health professionals' generalizations and biases about individuals prevent them from seeing their real issues, which affects treatment and care (Swiss Red Closs, 2018). The assumption that individuals are culturally equal has negative consequences and makes it impossible to achieve treatment and quality health care goals (Gungor et al., 2021). The failure of health care professionals to accept the culture of the individual, family, or community can lead to miscommunication, conflict with patients, health care disparities, discrimination, and stereotyping in health care settings (Gungor et al., 2021). To avoid these negative effects, nurses must recognize the patient's cultural values, beliefs, and traditions and incorporate them into appropriate patient-centered care planning (Osmancevic et al., 2021).

The care provided by nurses who do not take into account intercultural differences negatively affects both the patient and the nurse. In a study, it was observed that the inability of nurses to keep up with different cultures and the different language used by patients leads to negative consequences between nurse and patient communication and makes care difficult (Amiri & Heydari, 2017). In a study conducted in our country, 87.5% of nurses stated that they had difficulty communicating with people from different cultures and felt inadequate in intercultural nursing (Başli et al., 2018). In another study conducted with immigrants in Spain, participants stated that nurses did not take into account the differences in patients' eating and drinking habits and patients' treatment preferences and often applied the same treatment to patients. As a result,

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participants indicated that they were not very satisfied with the care they received (Roure, 2021). As seen in the study results, the level of cultural competence and intelligence displayed by nurses is an important factor that enables them to provide effective and culturally compatible care (Osmancevic et al., 2021). As a result, the attitudes, sensitivity and values of the nurse, who is one of the main elements in the provision of health services, should also be multidimensional. This study was conducted to examine the effect of nurses' level of cultural intelligence toward patients from different cultures on patient care behaviors.

AIM

This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors.

Research Questions:

1. Do the sociodemographic variables of the nurses create a significant difference in the mean scores they obtained from the cultural intelligence scale?

2. Do the sociodemographic variables of the nurses create a significant difference in the mean scores of the care behaviours scale?

3. Is there a significant relationship between nurses' cultural intelligence levels and care behaviours?

MATERIAL AND METHOD

This study is a cross-sectional quantitative research of analytical research types. The research was conducted between 31.03.2023-25.06.2023 through social media to nurses working in Konya. The research population consisted of nurses over the age of 18 who are Turkish nationals working in Konya. Since this research is a research conducted to determine the level of culture, nurses should show similar cultural characteristics. Therefore, only Turkish nurses were included in the population. The study was collected by random sampling method, one of the non-probability sampling methods. The sample for the study was made up of all the nurses who could be reached using the random sampling method. G*Power 3.1 package programme was used in the sample calculation of the study. Erenoğlu et al. (2019) "Nursing Care Behaviours and Factors Related to Care Behaviours; Maternity Home Sample", based on the 'Care Behaviours Scale-24' score in the study titled 'Nursing Care Behaviours Scale-24', the sample size was determined as a minimum of 170 people for an effect size of 0.5, 95% confidence interval and 5% error margin, and 177 people were included.

Inclusion Criteria:

- Volunteering to participate in the research

- High school and above education level

- Working actively in Konya (sampled from 3 different hospitals)

- To have at least one technological device and to be able to use internet networks

Nurses working in areas such as outpatient clinics, blood collection, patient reception, who cannot be in active communication with patients due to their duties, and who come to

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Turkey from other countries to work were not included in the study. In the collection of data, verbal consent was first obtained by contacting by phone, and then the link created through Google forms to reduce the carbon footprint was sent to the participants via social media (WhatsApp).

Data Collection Form

The data of the research were collected with Identification Information Form, Cultural İntelligence Scale (CQS) and Caring Behaviors Inventory-24 (CBI-24).

Identification Information Form: The descriptive information form consists of 15 questions to determine the sociodemographic characteristics (age, gender, educational status, marital status), cultural levels (origin, mother tongue, reasons for choosing nursing, etc.) of the nurses participating in the study (Göl & Erkin 2019; Skaria & Montayre, 2023).

Cultural Intelligence Scale (CQS): Ang et al. (2007) developed this scale. İlhan and Çetin conducted the Turkish validity and reliability study in 2011. The original scale, which consists of a total of twenty items, consists of four sub-dimensions as "metacognitive" (4 items = 1, 2, 3, 4), "cognitive" (6 items = 5, 6, 7, 8, 9, 10), "motivational" (5 items = 11, 12, 13, 14, 15) and "behavioural" (5 items = 16.17.18.19.20). A minimum of 20 points and a maximum of 100 points can be obtained from the scale. High score represents high cultural intelligence level. There is no reverse coding. Cronbach's alpha for the Turkish form of the scale was .758. The Cronbach's alpha reliability coefficient was .885 in this study.

Caring Behaviors Inventory-24 (CBI-24): The scale, whose original name is Caring Behaviors Inventory and called Care Behaviours Scale in Turkish, was developed by Zane Robinson Wolf and colleagues in 1994 to study patient care from philosophical and ethical perspectives (Wolf et al., 1994). Kurşun and Kanan conducted the Turkish validity and reliability study of the scale. (2012). The scale has been developed to assess nursing care (Kurşun & Kanan, 2012). It consists of 24 items and 4 sub-dimensions measured on a 6-point Likert scale. These sub-dimensions are respectfulness (6 items=1, 3, 5, 6, 13, 19), assurance (8 items=16, 17, 18, 20, 21, 22, 23, 24), commitment (5 items=2, 4, 7, 8, 14), knowledge-skill (5 items=9, 10, 11, 12, 15). There is no reverse coding. The response scores given to the scale are minimum 1 and maximum 6 points for each item. The minimum score is 42 and the maximum score is 252. The higher the score, the more favourable the patients' or nurses' perception of care. Cronbach' alpha of Turkish form of scale was calculated to be .96. A Cronbach alpha reliability coefficient of .95 was found in this research.

Data Analysis

Data analysis was performed in SPPS 25. The distributions of the data groups were analysed and the means, standard deviations, quartile widths, normal distribution and histograms of the groups were obtained. In the comparison of independent groups with measured data; Student's t test and analysis of variance (further analysis Tukey HSD) were applied if parametric test data were

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provided Kruskall Wallis H test (Dunnett's C) with Bonferoni correction were applied if non-parametric test data were provided. In addition, Spearman Correlation Analysis was applied to determine whether there is a relationship between two or more variables. The significance level was set as p<.05 for all analysis results.

Ethical Consideration

Permission was obtained from KTO Karatay University Pharmaceutical and Non-Medical Device Research Ethics Committee for the conduct of the research (2023/038). Participants were informed that voluntariness was essential and that they could leave the study at any time.

RESULTS

In our study, the mean total score of the cultural intelligence scale was 94.92±16.62 and the mean total score of the caring behaviours scale was 127.06±14.09. The distribution of the findings related to the sociodemographic and occupational characteristics of the nurses is given in Table 1. 80.2% of the nurses were women, 48% were between the ages of 25-34 years, and 86.4% had a university or higher education level. 66.7% of the nurses were single, 97.2% lived in the city centre, 84.2% were of Turkish origin, 50.8% were from Konya, 91.5% spoke Turkish as their mother tongue and 72.9% became nurses willingly. The idea that the patient's culture should be known in nursing care was supported by 78%. In addition, it was determined that 93.8% provided care to people from different cultures in the clinics where they worked, 67.8% lived in a region where people from different cultures lived and 53.1% lived in Konya for the longest time (Table 1).

Table 1. Distribution of Findings Related to Sociodemographic and Professional Characteristics of Nurses (n=177)

	n	%
Gender		
Female	142	80.2
Male	35	19.8
Age		
18-24 age	58	32.8
25-34 age	85	48
35-44 age	21	11.9
45+ age	13	7.3
Education level		
High school graduate	24	13.6
University graduate or higher	153	86.4
Marital status		
Married	59	33.3
Single	118	66.7
Place of residence		
City centre	172	97.2
Off-centre	5	2.8
Family Type		
Nuclear family	146	82.5
Extended family	25	14.1
Divorced	6	3.4
Hometown		

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Konya	90	50.8
Ankara	7	4
Hatay	7	4
Mersin	6	3.4
Adana	5	2.8
Other	62	35
Origin		
Turkish	149	84.2
Kurdish	22	12.4
Arab	4	2.3
Other	2	1.1
Mother tongue		
Turkish	162	91.5
Kurdish	12	6.8
Arabic	3	1.7
Nursing preference status		
Willingly	129	72.9
Unintentionally	48	27.1
Should the patient's culture be known in nursing care?		
Yes	138	78
No	39	22
Have you cared for someone from a different culture in your clinic?		
Yes	166	93.8
No	11	6.2
Do you have neighbours from different cultures in the area where you live?		
Yes	120	67.8
No	57	32.2
Longest lived in		
Konya	94	53.1
Kayseri	20	11.3
İstanbul	9	5.1
Ankara	8	4.5
Aksaray	5	2.8
Other	41	23.2

Summary statistics are given as Number (Percentage) values.

Table 2. Distribution of Scores on the CQS and CBI-24 Scales for Nurses (n=177)

		Ort±SS	Min/Maks
CQS	**Total Score**	94.42±16.62	47/140
	Metacognitive	22.41±3.95	8/28
	Cognitive	23.89±7.44	7/42
	Motivational	22.75±6.08	5/35
	Behavioural	25.85±5.63	10/35
CBI-24	**Total Score**	127.06±14.09	71/144
	Being Respectful	31.70±3.87	17/36
	Assurance	41.97±5.11	28/48
	Commitment	25.88±3.42	13/30
	Knowledge and Skills	27.50±3.06	13/30

Summary statistics are given as mean ± standard; minimum and maximum, values.

Nurses' CQS sub-dimension total mean scores were as follows: metacognitive sub-dimension mean score 22.41±3.95, cognitive sub-dimension mean score 23.89±7.44, motivational sub-dimension mean score 22.75±6.08, behavioural sub-dimension mean score 25.85±5.63. The total mean scores of the CBI-24 sub-dimensions were as

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follows: respectfulness sub-dimension mean score 31.70±3.87, assurance sub-dimension mean score 41.97±5.11, commitment sub-dimension mean score 25.88±3.42 and knowledge and skills sub-dimension mean score 27.50±3.06 (Table 2).

Table 3. Comparison of the Mean Scores of Cultural Intelligence Scale and Caring Behaviours Scale with Sociodemographic and Occupational Characteristics of Nurses (n=177)

	CQS Ort±SS	Test	CBI-24 Ort±SS/ Mean Rank	Test
Gender				
Female	94.44±16.60	t=-0.768	127.29±12.88	t=0.359
Male	96.85±18.69	p=0.443	126.11±18.38	p=0.721
Age				
18-24[a]	97.10±17.71	F=5.749	128.75±15.06/ 97.13*	KW=6.467
25-34[b]	97.51±13.47	**p=0.001**	124.40±14.66/ 78.91*	p=0.091
35-44[c]	84.23±19.93	(a>c, b>c)	131.23±8.3/ 101.38*	
45+[d]	85.46±16.17		130.15±10.47/98.69*	
Education level				
High school graduate	98.87±17.53	t=1.255	131.12±12.27	t=1.525
University graduate or higher	94.30±16.45	p=0.211	126.42±14.28	p=0.129
Marital status				
Married	87.66± 17.53	t=-4.085	128.71±11.65	t=1.201
Single	98.55±14.94	**p=0.000**	126.23±15.14	p=0.272
Place of residence				
City centre	94.57±16.51	t=-1.629	126.80±14.15	t=-1.443
Off-centre	106.80±17.85	p=0.105	136±8.71	p=0.151
Family Type				
Nuclear family[a]	93.28±15.89	F=4.168	126.67±13.99	F=0.577
Extended family[b]	102.60±19.34	**p=0.017**	127.96±15.67	p=0.563
Divorced[c]	102.66±12.43	(b>a)	132.66±9.26	
Hometown				
Konya	94.46±16.89	F=1.632	126.88±14.88	F=0.858
Ankara	95.14±20.11	p=0.154	123.85±16.68	p=0.511
Hatay	111.00±7.83		136.28±10.62	
Mersin	99.83±9.86		126.66±13.76	
Adana	89.40±13.01		121.00±11.59	
Other	93.73±16.71		127.15±13.18	
Origin				
Turkish	93.30 ± 16.69 / 84.01*[a]	KW=11.577	127.38± 14.00/ 90.20*[a]	KW=9.791
Kurdish	101.27±12.64/ 108.93*[b]	**p=0.009**	121.40 ± 14.01/ 67.13*[b]	**p=0.020**
Arab	114.75± 7.76 / 154.13*[c]	(b>a)	140.50± 3.87/ 140.50*[c]	(a>b, c>b)
Other	105.50 ± 27.57 / 111.00*[d]		138.50 ± 7.77/ 135.75*[d]	
Mother tongue				
Turkish	94.17±16.69	F=2.376	127.15±14.30	F=1.109
Kurdish	101.66±12.69	p=0.072	122.91±11.07	p=0.347
Arabic	119.50±6.36		141.50±0.70	
Nursing preference status				
Willingly	94.82±17.11	t=-0.120	126.84±14.69	t=-3.335
Unintentionally	95.16±15.40	0.905	127.64±12.44	p=0.738
Should the patient's culture be known in nursing care?				
Yes	95.07±16.40	t=0.238	126.37±14.49	t=-1.219
No	94.35±17.58	p=0.812	129.48±12.44	p=0.189
Have you cared for someone from a different culture in your clinic?				
Yes	95.25±16.61	t=1.033	127.00±14.20	t=-0.227
No	89.90±16.62	p=0.303	128.00±19.90	p=0.820
Do you have neighbours from different cultures in the area where you live?				
Yes	96.35±17.16	t=1.678	126.35±15.13	t=-1.071
No	91.89±15.13	p=0.095	128.56±11.58	p=0.286
Longest lived in				
Konya	93.92±17.17	F=1.404	127.54 ± 14.22 / 90.92*	KW=10.018

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Kayseri	98.05±13.20	p=0.225	121.75 ± 15.35 / 69.60*	p=0.075
İstanbul	100.44±12.85		135.33 ± 11.18 / 121.94*	
Ankara	89.75±19.76		126.25 ± 14.03 / 85.94*	
Aksaray	109.60±11.14		135.60 ±16.56 / 126.00*	
Other	93.66±16.89		125.85 ± 12.70 / 82.50*	

t: Independent groups t-test, F: One-way analysis of variance in independent groups (further analysis Tukey HSD), KW: Kruskall Wallis H test (further analysis Dunnett's C) * Non-normally distributed cases are included in the table, p: Test significance value

While a significance relationship was found between the nurses' age, marital status, family type and origin and the mean total score of the cultural intelligence scale ($p<0.05$), no significant relationship was found between gender, educational status, place of residence, hometown, mother tongue, nursing preference status, knowledge of the patient's culture in nursing care, experience of caring for patients from different cultures in the clinic, contact with people from different cultures in the area where they live and the city where they have lived the longest ($p>0.05$). It was determined that the mean scores of the cultural intelligence scale of nurses in the 18-24 age group were significantly higher than those in the 35-44 age group (a>c, $p<0.05$), and the mean scores of the cultural intelligence scale of nurses in the 25-34 age group were significantly higher than those in the 35-44 age group (b>c, $p=0.004$). In the subsequent analysis, it was found that the mean scores on the cultural intelligence scale of nurses with an extended family type were considerably greater than those of nurses with a nuclear family type ($p<0.05$). In the further analysis, it was determined that the mean score of the cultural intelligence scale of nurses with Kurdish origin was significantly higher than those with Turkish origin ($p<0.05$) (Table 3).

A consistent difference was found between nurses' origins and overall mean scores on the caring behaviours scale ($p<0.05$). In the further analysis, it was determined that the mean scores of the care behaviors scale of the participants with Turkish origin were significantly higher than those with Kurdish origin ($p<0.05$), and the mean scores of the care behaviors scale of the participants with Arab origin were significantly higher than those with Kurdish origin ($p<0.05$).

No significant difference was found between the total mean scores of the caring behaviour scale and gender, age, educational status, marital status, place of residence, hometown, family type, mother tongue, nursing preference status, knowing the patient's culture in nursing care, experience of caring for patients from different cultures in the clinic, being in contact with people from different cultures in the living area and the longest lived city ($p>0.05$) (Table 3).

Table 4. The Relationship Between Nurses' Scores from CQS and CBI-24 Scales (n= 177)

		CQS				
CBI-24		**Total Score**	Metacognitive	Cognitive	Motivational	Behavioural
Total Score	r	**0.292**	**0.446**	0.082	0.176	**0.251**
	p	**0.000****	**0.000****	0.279	0.019	**0.001****
BeiRespectful	r	**0.307**	**0.449**	0.100	**0.171**	**0.275**
	p	**0.000****	**0.000****	0.185	**0.023***	**0.000****
Assurance	r	**0.283**	**0.383**	0.100	**0.188**	**0.232**

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	p	**0.000****	**0.000****	0.187	**0.012***	**0.002*****
Commitment	r	**0.292**	**0.391**	0.136	**0.173**	**0.275**
	p	**0.000****	**0.000****	0.072	**0.021***	**0.000****
Knowledge	r	**0.157**	**0.408**	-0.068	0.086	**0.174**
and Skills	p	**0.037****	**0.000****	0.366	0.258	**0.020***

Spearman Correlation analysis was used. *p<0.05; **p<0.01, r=Correlation Coefficient

The relationship between the scores obtained from the Cultural Intelligence and Care Behaviours Scales is shown in Table 4.The relationship between the total score of the Care Behaviours Scale and the total score of the Cultural Intelligence Scale is weak, the relationship between the CBI-24 respectfulness, assurance, commitment sub-dimension and the CQS total score average is weak, the relationship between the CBI-24 knowledge skill sub-dimension and the CQS total score average is very weak, the relationship between the CQS metacognitive sub-dimension and the CBI-24 respectfulness, assurance, A weak positive correlation was found between CQS motivational sub-dimension and CBI-24 total score and its sub-dimensions, a very weak positive correlation was found between CQS behavioural sub-dimension and CBI-24 total score, assurance, knowledge skill sub-dimension, and a weak positive correlation was found with respectfulness and commitment sub-dimensions (p<0.05). On the other hand, a high correlation was found between CQS cognitive sub-dimension and CBI-24 total score, a very high correlation with respectfulness sub-dimension and assurance sub-dimension, and a negative moderate non-significant correlation with CBI-24 knowledge skill sub-dimension (p>0.05) (Table 4).

DISCUSSION

The study was conducted to examine the effect of nurses' level of cultural intelligence toward patients from different cultures on patient care behaviors. The study found that the mean CQS total score of the nurses was 94.92±16.62 and the highest score among the sub-dimensions was in the behavioral sub-dimension. Individuals with high cultural intelligence have the behavior of adapting to differences more easily and communicating with individuals from different cultures more easily. It is necessary to be willing and patient to have cultural intelligence and to develop this intelligence (Aslan & Kizir, 2019). Kant and Ünal (2017), in their study, determined the mean CQS score of nurses to be 90.79±18.70. In Durna and Altay (2023), it was determined that the mean CQS score of nurses was 40.00±9.180 and the highest score among the sub-dimensions was in the cognitive sub-dimension. In the study of Aslan and Kizir (2019), it was found that the mean CQS score of nurses was 99.02 and the highest score among the sub-dimensions was in the behavioral and motivational sub-dimension. The fact that the level of cultural intelligence in our study is higher than the studies in the literature suggests that the fact that the majority of nurses participating in the study have undergraduate and graduate education and that all universities today have masses of students from different countries, ethnic groups, and cultural traditions and that

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concepts such as culture and intercultural nursing are included in the course content may be effective. In our study, the mean score of the caring behaviors scale was 127.06±14.09, and the caring behaviors were found to be at a moderate level. When the mean scores of the sub-dimensions of the scale were compared in the study, it was found that the highest score was in the assurance dimension. The World Health Organization (WHO) states that trust is the most important factor in providing quality healthcare services to patients (WHO, 2019). Trust is an important issue in the nurse-patient relationship, as the patient is in a vulnerable position due to changes in health status and general functioning. Trust improves care and helps to reduce the patient's stress level. Gül and Arslan (2021) found that the mean score of the caring behavior scale in their study was 150.79±21.81, and the mean score was lower than in our study. The fact that the mean scores of nurses' caring behaviors were at a medium level suggests that some of the nurses have some qualities that can be developed in terms of caring behaviors, while others do not.

In our study, when the cultural intelligence level of nurses was examined according to the age factor, it was found that the mean cultural intelligence scale scores of nurses in the age group of 18-24 years were significantly higher than those in the age group of 35-44 years, and the mean cultural intelligence scale scores of nurses in the age group of 25-34 years were significantly higher than those in the age group of 35-44 years. In the studies of İşçi et al. (2013) and Aksoy (2012), it was found that there was no significant difference between age and the total score and subdimensions of the cultural intelligence scale. Recently, the inclusion of the concepts of culture, intercultural nursing, and awareness in the nursing curriculum from the 1st year may be effective in the high mean scores of the cultural intelligence scale of nurses in the young population. In the study, no significant difference was found between the groups in the evaluation of the mean scores of the nurses' caring behavior scale according to age. Similar to our study, Erenoğlu et al. (2019) found that age was not an effective factor on care behavior. Çolak Okumuş and Uğur (2017) found that with increasing age of nurses, there was an increase in the scores of the knowledge skills subdimension of the care behavior scale. The results of the study suggest that it may be more important for nurses to have the necessary knowledge and skills and professional competence in caring behaviors than sociodemographic characteristics.

In the study, the mean cultural intelligence score of single individuals was significantly higher than that of married individuals. When the mean scores of the nurses' caring behavior scale were evaluated according to marital status, no significant difference was found between the two groups. Similar to our study, Gül and Dinç (2018) and Erenoğlu et al. (2019) reported that there was no significant difference between the care behavior scores of married and single nurses. Although there are no studies in the literature comparing marital status and cultural intelligence, the

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fact that single individuals have fewer responsibilities than married individuals with children suggests that they may have more effective time to develop their cultural intelligence skills.

In the study, when the mean cultural intelligence scores of nurses were examined according to their family types, it was found that the mean scores of the cultural intelligence scale of nurses with extended family type were significantly higher than those of nurses with nuclear family type. Tahnal (2017), in his study with healthcare professionals, stated that factors such as the number of people in the family and who they live with at home do not affect the cultural intelligence scores of healthcare professionals (Tahnal, 2017). Our research findings are not similar to the literature, suggesting that the high cultural intelligence scores of nurses living in extended families may be due to living in a multicultural environment with more than one generation.

In the study, when the origin of nurses and their mean scores of cultural intelligence were analyzed, it was found that the mean scores of nurses of Kurdish origin were significantly higher than those of nurses of Turkish origin. In a study conducted with university students, no difference was found between ethnic origin and the mean score of the cultural intelligence scale (Wang et al., 2021). Our research result is not similar to the literature and suggests that the development and improvement of cultural intelligence may be influenced by many factors such as personality traits, intercultural communication, and the ability to see things from a broad perspective. When the mean scores of nurses' origin and caring behaviors were examined in the study, it was found that the mean scores of the caring behaviors scale of nurses of Turkish origin were significantly higher than those of nurses of Kurdish origin, and the mean scores of the caring behaviors scale of nurses of Arab origin were significantly higher than those of nurses of Kurdish origin. There is no study in the literature that examines the effect of nurses' origin on nursing behaviors. However, based on the fact that quality nursing care is related to nurses' professional knowledge and skills and personality traits, it is assumed that nurses of Turkish and Arab origin will have higher mean scores by improving themselves in these areas.

In the study, the mean cultural intelligence score of male nurses was higher than that of female nurses. However, the difference was not statistically significant. Güngör et al. (2023) investigated the cultural intelligence level of students studying in the field of health and found that the intelligence level of male students was higher than that of female students (Güngör et al., 2023). In support of our research findings, Abaslı and Polat (2019), Uludağ and Deveci (2018) found that the cultural intelligence level of males was higher. There is also a study in the literature that gender does not affect the level of cultural intelligence (Okuyan, 2019). Gender roles and societal expectations may direct males towards certain cultural skills, which may lead to higher performance of males in these skills. From this perspective, the higher cultural intelligence scores of male nurses can

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be seen as a finding that reflects gender differences. In our study, no significant difference was found between the two groups in the evaluation of the nurses' mean scores on the caring behavior scale according to gender. Other studies in the literature have stated that gender does not affect care behavior (Erenoğlu et al., 2019; Dığın & Kızılcık Özkan, 2021; Trinidad et al., 2019). The results of the study are similar to the literature and suggest that caregiving behaviors do not differ by gender and that nurses care about caregiving regardless of gender.

The study found that as nurses' levels of cultural intelligence increased, so did their caring behaviors. There is no study in the literature to determine the relationship between cultural intelligence and caring behaviors. Cultural intelligence is a characteristic that develops and promotes cultural sensitivity. It has emerged with globalization and is generally defined as a person's ability to adapt to different cultures and effectively manage interactions with different cultures (Göl & Erkin, 2019). Cultural intelligence helps individuals to better understand and cope with professional demands and perspectives, and to build strong relationships with culturally diverse individuals (Wang et al., 2021). In this context, nurses' ability to identify cultural differences, intercultural communication, and view events from a broad perspective, improve their foreign language skills, and increase their level of cultural intelligence will have a positive impact on their nursing behaviors.

Limitations of the Study

The limitation of the study is that the results are valid only for the participants who participated in the study, it was conducted in a single province and cannot be generalised to all nurses.

CONCLUSION

This study was conducted to examine the effect of nurses' cultural intelligence levels towards patients from different cultures on patient care behaviors. The results of the research showed that the nurses' cultural intelligence scores were at a good level and their caring behaviours were at a moderate level, and as their cultural intelligence scores increased, so did their caring behaviours. This suggests that nurses can better understand the behaviours and attitudes of patients with intercultural differences and that they have a level of cultural intelligence and care behaviours that can contribute to the effectiveness, quality and efficiency of care. It was determined that the cultural intelligence levels of nurses aged 25-34, single, with a large family type and of Kurdish origin were significantly higher, and the care behaviors of nurses of Turkish and Arab origin were significantly higher. In hospitals and health care institutions, it is recommended to increase the level of cultural intelligence of nurses by increasing cooperation between nurses from different cultures by using each other's experiences and different cultural perspectives, by providing opportunities to experience care behaviours in different cultures by observing them live, and by investigating other potential factors that

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influence the cultural intelligence of nurses and care behaviours.

Conflict of Interest: The authors declare that they have no known competing financial interests or personal relationships that could influence the work reported in this article.

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OUTCOMES OF WARFARIN THERAPY FOR SECONDARY PREVENTION OF ISCHEMIC STROKE: A RETROSPECTIVE, FOLLOW-UP STUDY[1]

İSKEMİK İNMENİN İKİNCİL KORUNMASINDA VARFARİN TEDAVİSİNİN SONUÇLARI: RETROSPEKTİF BİR TAKİP ÇALIŞMASI

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Abstract: Aim: Anticoagulant prophylaxis is recommended because cardioembolic ischemic stroke is associated with worse functional outcomes, increased recurrence rates, and higher mortality. This study aimed to investigate the rates of recurrent ischemic attacks and bleeding complications in patients receiving warfarin following ischemic stroke.

Method: In this retrospective analysis, a total of 181 individuals who were initiated on warfarin therapy following an ischemic stroke were included in the study. These patients were subsequently monitored for a duration spanning from 1 month to as long as 16 years. The acute ischemic stroke diagnosis was established using the Trial of Org 10172 in Acute Stroke Treatment classification criteria. Patient follow-up periods, international normalized ratio (INR) levels, ischemic events, and bleeding were recorded and evaluated.

Results: In the patient cohort, 97 (53.6%) were women and 84 (46.4%) were men. The recurrent ischemic stroke rate was 7.2%, major bleeding rate was 3.3%, and minor bleeding rate was 12.7%. While the average INR value during recurrent ischemic stroke was 1.69±0.31, the average INR value during bleeding complications was observed to be 3.15±1.38. The rate of minor bleeding was related to duration of warfarin use and non-valvular atrial fibrillation.

Conclusion: Our results show that long-term warfarin use and non-valvular atrial fibrillation are risk factors for bleeding.

Keywords: Ischemic Stroke, Warfarin, Anticoagulant, Ischemic Attacks

Öz: Amaç: Kardiyoembolik iskemik inme daha kötü fonksiyonel sonuçlar, artmış nüks oranları ve daha yüksek mortalite ile ilişkili olduğu için antikoagülan profilaksisi önerilmektedir. Bu çalışmanın amacı, iskemik inme sonrası varfarin alan hastalarda tekrarlayan iskemik atak oranlarını ve kanama komplikasyonlarını araştırmaktır.

Yöntem: Bu retrospektif çalışmaya iskemik inme sonrası varfarin başlanan ve 1 ay ile 16 yıl arasında takip edilen 181 hasta dahil edildi. Akut iskemik inme tanısı Trial of Org 10172 in Acute Stroke Treatment sınıflamasına göre konuldu. Hastaların takip süreleri, uluslararası normalleştirilmiş oran (INR) düzeyleri, iskemik olaylar ve kanama kaydedildi ve değerlendirildi.

Bulgular: Hasta kohortunun 97'si (%53.6) kadın ve 84'ü (%46.4) erkekti. Tekrarlayan iskemik inme oranı %7,2, majör kanama oranı %3,3 ve minör kanama oranı %12,7 idi. Tekrarlayan iskemik inme sırasında ortalama INR değeri 1.69±0.31 iken, kanama komplikasyonları sırasında ortalama INR değeri 3.15±1.38 olarak gözlendi. Minör kanama oranı varfarin kullanım süresi ve non-valvüler atriyal fibrilasyon ile ilişkiliydi.

Sonuç: Sonuçlarımız uzun süreli varfarin kullanımının ve non-valvüler atriyal fibrilasyonun kanama için risk faktörü olduğunu göstermektedir.

Anahtar Kelimeler: İskemik İnme, Varfarin, Antikoagülan, İskemik Ataklar

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INTRODUCTION

Stroke is a medical condition with a bleak outlook, impacting over 12 million individuals globally on an annual basis, as reported by Hindsholm et al. (Hindsholm et al., 2023). In the United States alone, close to 795,000 individuals experience a stroke annually with a total annual cost of more than $34 billion (Shah et al., 2022). Ischemic stroke, which affects more than 11 million people worldwide each year, accounts for 85% of strokes and is the most common (Boot et al., 2020). As per the criteria established by the Trial of Org 10172 in Acute Stroke Treatment (TOAST) study, ischemic stroke can be attributed to five distinct etiological factors, which include cardioembolism, small vessel blockage, atherosclerosis in large arteries, other well-defined causes, and origins that cannot be determined (Adams et al., 1993). The frequency of cardioembolic stroke, which constitutes approximately 30% of ischemic strokes, is gradually increasing. Causes of cardiac-related stroke include arrhythmias such as atrial fibrillation, atrial flutter and sick sinus syndrome, left atrial appendage, left atrial or ventricular thrombus, endocarditis, mitral stenosis, bioprosthetic or mechanical valve, heart tumors such as fibroelastoma and myxoma (Chew & Piccini, 2023; Dakay et al., 2018; Sloane & Camargo, 2019).

Non-valvular atrial fibrillation (NVAF) stands out as the leading contributor to cardioembolic strokes (Ferro, 2003). NVAF affects 2-3% of the population and is the most frequent arrhythmia in the US and Europe (Kirchhof, 2017). Ischemic stroke caused by NVAF is associated with worse functional outcomes, increased recurrence rates, and higher mortality (Gao & Passman, 2022). Hence, it is of utmost significance to implement preventive measures in order to avert recurrent incidents in individuals who have experienced cardioembolic strokes due to non-valvular atrial fibrillation (NVAF) (Song et al., 2021). Current clinical recommendations advise the use of long-term oral anticoagulant (OAC) therapy for specific ischemic stroke patients, as indicated by Hindricks et al. (Hindricks et al., 2021). Research has demonstrated that OAC treatment can reduce the likelihood of ischemic stroke by around two-thirds, as observed in the study by Ruff et al. (Ruff et al., 2014). In addition, it has also been shown that percutaneous left atrial appendage occlusion, which lowers bleeding risk and mortality, may be an alternative to oral anticoagulants (Chen et al., 2021; Paiva et al., 2021).

Warfarin, dabigatran, apixaban, rivaroxaban and edoxaban are commonly used anticoagulant agents (Bir & Kelley, 2021). The efficacy of warfarin as the primary anticoagulant for preventing secondary cardioembolic strokes, has been confirmed in many randomized studies (Kamel & Healey, 2017; Song et al., 2021). Nevertheless, factors like the elevated bleeding risk associated with warfarin utilization and the requirement for rigorous international normalized ratio (INR) monitoring restrict its application (Cha et al., 2017; Jung et al., 2015). In NVAF studies for

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primary and secondary prevention, it is recommended that the INR value be between 2.0 and 3.0 for maximum protection from ischemic stroke in patients receiving anticoagulant treatment. An INR value below 2.0 results in an increase in the risk of ischemic stroke (Go et al., 2003). It has been shown that the average annual major bleeding rates are 0.9%-2.7% and the average annual fatal bleeding rates are 0.07%-0.7% (Kahwati et al., 2022). The primary objective of this investigation was to assess the adverse outcomes, such as the recurrence of ischemic strokes and bleeding events, among patients who had experienced ischemic strokes arising from various underlying causes and were currently under warfarin therapy.

MATERIALS AND METHODS

Patients diagnosed with first or recurrent acute ischemic stroke as a result of clinical and radiological evaluation at the Neurology Clinic of Başkent University Faculty of Medicine and who were receiving on warfarin or antiplatelet therapy together with warfarin were included in this retrospective study. Approval for the study was received from the clinical ethics committee of Başkent University (KA11/254). The diagnosis of acute ischemic stroke was made according to the TOAST classification. Ischemic stroke risk factors were determined using techniques such as brain magnetic resonance imaging (MRI), diffusion MRI, carotid MR angiography, electrocardiography (ECG), echocardiography and Holter. A total of 249 patients, receiving warfarin alone or antiplatelet therapy together with warfarin, were evaluated retrospectively. Sixty-eight patients who did not come for follow-up were excluded from the study. One hundred eighty one patients receiving warfarin treatment and were followed up were included in the study. It was observed that a patient was under follow-up in our department because she had been using warfarin for 16 years.

Duration of warfarin use, regular INR monitoring, recurrent vascular events and bleeding complications, and INR values during recurrent vascular events and bleeding complications were recorded in detail. Patients were grouped as those using warfarin for less than 1 year, between 1-5 years, and over 5 years. The regular INR group was composed of patients who came for monthly INR monitoring. The irregular INR group comprised cases with INR control that took more than a month. The optimal INR value was determined as 2-3. Bleeding requiring the administration of two or more units of erythrocyte suspension, cerebral hemorrhage, and bleeding requiring urgent transfusion were considered major bleeding complications. All other bleeding was recorded as minor bleeding complications. Risk factors of patients with

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recurrent ischemic stroke were determined through examinations and re-categorized according to the TOAST classification.

Statistical Analysis

SPSS software version 15.0 was performed for statistical analyses. Numerical data were summarized using mean, standard deviation, median, and the range of values. Categorical variables were summarized by presenting the count and percentage. The normal distribution of numerical variables was assessed using the Kolmogorov-Smirnov test, and the homogeneity of variances among groups was assessed using the Levene test. To compare numerical variables among more than two groups, parametric tests like one-way analysis of variance or Welch analysis of variance were utilized, while the non-parametric Kruskal-Wallis test was applied when appropriate. Pairwise comparisons were made using Tukey's HSD, Games-Howell, and Bonferroni-corrected Mann-Whitney U tests. Categorical variables were compared between groups using the Chi-square test. Statistical significance was set at a p-value less than 0.05.

RESULTS

In the study, 97 (53.6%) of the patients were women and 84 (46.4%) were men. Among the recurrent vascular events during warfarin use, recurrent ischemic stroke was observed in 7.2% of the patient group, transient ischemic attack was observed in 0.6%, acute myocardial infarction was observed in 1.1% and splenic embolism was observed in 0.6%. Major bleeding complications were determined in six (3.3%) of the patients and minor bleeding complications were determined in 23 (12.7%). Of the patients who developed major bleeding complications, three had gastrointestinal tract bleeding, two had subdural hematoma, and one had a rectus muscle hematoma. Minor bleeding complications included epistaxis (n=11), hematuria (n=6), hematochezia (n=3), intramuscular hematoma (n=1), ecchymosis (n=1), and vaginal bleeding (n=1). During follow-up, two patients died of subdural hematoma, six patients died of sepsis, and two patients died of cardiac reasons. These two patients who developed subdural hematoma were not included among the major bleeding complications, and the outcome of death was evaluated separately. When major bleeding complications and cerebral-related deaths were considered together, the fatal complication rate was found to be approximately 4.4% (Table 1).

Table 1. Distribution of Recurrent Vascular Events, Bleeding Complications and Mortality of the Patients Included in the Study

	Number (n)	Percentage (%)
Recurrent vascular events		
Ischemic CVD	13	7.1
TIA	1	0.6
MI	2	1.1
Systemic embolism	1	0.6

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Bleeding complications		
Major	6	3.3
Minor	23	12.7
Mortality		
Cerebral	2	1.1
Non-cerebral	8	4.4

CVD: Cerebrovascular disease, **TIA**: Transient ischemic attack, **MI:** Myocardial infarction

Recurrent ischemic stroke was observed in 4.7% of patients using warfarin for less than one year, in 5.4% of patients using warfarin for 1-5 years, and in 10.9% of patients using warfarin for more than 5 years. There was no significant difference between the groups. While there was no significant difference in the rates of major bleeding complications according to the duration of warfarin use, minor bleeding complications were observed more frequently as the duration of warfarin use increased (p = 0.023). No significant relationship was found between the death rates of both cerebral and non-cerebral causes according to the duration of warfarin use (Table 2).

Table 2. Recurrent Vascular Events, Bleeding Complications and Mortality Rates According to Warfarin Treatment Durations

	≤1 year (n=43)	**1-5 years (n=74)**	**>5 years (n=64)**	***p* value**
Ischemic CVD	2 (4.7%)	4 (5.4%)	7 (10.9%)	0.363
TIA	0 (0%)	1 (1.4%)	0 (0%)	0.407
MI	0 (0%)	1 (1.4%)	1 (1.6%)	0.576
Systemic embolism	-	-	1 (1.6%)	0.352
Major bleeding	1 (2.3%)	3 (4.1%)	2 (3.1%)	0.873
Minor bleeding	3 (7%)	6 (8.1%)	14 (21.9%)	**0.023**
Cerebral deaths	0 (0%)	1 (1.4%)	1 (1.6%)	0.576
Non-cerebral deaths	1 (2.3%)	1 (1.4%)	6 (9.4%)	0.060

CVD: Cerebrovascular disease, **TIA**: Transient ischemic attack, **MI:** Myocardial infarction.

When risk factors for bleeding complications were evaluated, minor bleeding complications were observed in 27.3% of those with a history of NVAF, while minor bleeding complications were observed in 10.7% of those without NVAF. The difference was found to be statistically significant (p = 0.040). No significant association of other risk factors with bleeding complications was observed (Table 3).

Table 3. Bleeding Complication Rates According to Risk Factors

		Major Complication		**Minor Complication**	
		Number (%)	**p**	**Number (%)**	**p**
Gender	Men (n=84) Women (n=97)	4 (%4.8) 2 (%2.1)	0.418	14 (%16.7) 9 (%9.3)	0.206
Hypertension	No (n=44) Yes (n=137)	1 (%2.3) 5 (%3.6)	1.000	6 (%13.6) 17 (%12.4)	1.000
Coronary Artery Disease	No (n=119)	3 (%2.5)	0.414	15 (%12.6)	1.000

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	Yes (n=62)	3 (%4.8)		8 (%12.9)	
Diabetes Mellitus	No (n=124) Yes (n=57)	5 (%4) 1 (%1.8)	0.667	13 (%10.5) 10 (%17.5)	0.230
Hyperlipidemia	No (n=128) Yes (n=53)	4 (%3.1) 2 (%3.8)	1.000	19 (%14.8) 4 (%7.5)	0.273
Cerebrovascular Disease	No (n=152) Yes (n=29)	6 (%3.9) 0 (%0)	0.591	16 (%10.5) 7 (%24.1)	0.064
Atrial Fibrillation	No (n=159) Yes (n=22)	6 (%3.8) 0 (%0)	1.000	17 (%10.7) 6 (%27.3)	***0.040***
Hypothyroidism	No (n=163) Yes (n=18)	6 (%3.7) 0 (%0)	1.000	22 (%13.5) 1 (%5.6)	0.477
Chronic Liver Failure	No (n=169) Yes (n=12)	6 (%3.6) 0 (%0)	1.000	22 (%13) 1 (%8.3)	1.000
History of TIA in the last 6 months	No (n=169) Yes (n=12)	5 (%3) 1 (%8.3)	0.341	23 (%13.6) 0 (%0)	0.368
Malignancy	No (n=177) Yes (n=4)	6 (%3.4) 0 (%0)	1.000	22 (%12.4) 1 (%25)	0.422
Connective Tissue Disease	No (n=178) Yes (n=3)	6 (%3.4) 0 (%0)	1.000	23 (%12.9) 0 (%0)	1.000
Hyperthyroidism	No (n=179) Yes (n=2)	6 (%3.4) 0 (%0)	1.000	22 (%12.3) 1 (%50)	0.239
Obesity	<30 (n=151) ≥30 (n=30)	5 (%3.3) 1 (%3.3)	1.000	18 (%11.9) 5 (%16.7)	0.547
Cigarette	No (n=154) Yes (n=27)	5 (%3.2) 1 (%3.7)	1.000	17 (%11) 6 (%22.2)	0.120
Alcohol	No (n=177) Yes (n=4)	6 (%3.4) 0 (%0)	1.000	23 (%13) 0 (%0)	1.000

When the etiology of cases with recurrent ischemic stroke was regrouped according to TOAST, there was no significant difference between the initial etiology and the etiology of recurrent ischemic stroke (p = 1.000) (Table 4).

Table 4. TOAST Relationship Between Initial and Recurrent Ischemic Stroke

	Initial TOAST classification	
	Cardioembolic	Undefined etiology
TOAST classification of recurrent events		
Cardioembolic	9 (90%)	1 (10%)
Undefined etiology	2 (50%)	2 (50%)

Some (40.3%) of the patients only received warfarin, 57.5% received warfarin + aspirin, and 2.2% received warfarin + clopidogrel. Patients using antiplatelets together with warfarin additionally had coronary artery disease. No statistically significant findings were found in terms of recurrent ischemic events and bleeding complications between these treatment groups (Table 5).

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Table 5. Rates of Recurrent Ischemic Events and Bleeding Complications According to Different Treatment Groups

	Recurrent Ischemic Events		Major Bleeding		Minor Bleeding	
	n (%)	*p*	n (%)	*p*	n (%)	*p*
Warfarin (n=73)	5 (6.8%)		3 (4.1%)		8 (11%)	
Warfarin+Aspirin (n=104)	7 (6.7%)	0.532	3 (2.9%)	0.792	14 (13.5%)	0.703
Warfarin+Clopidogrel (n=4)	1 (25%)		0 (0%)		1 (25%)	

Recurrent ischemic stroke was observed at a rate of 7.1% among those who regularly monitored INR monthly, and at a rate of 8.3% among those who monitored INR irregularly. In patients with regular INR monitoring, major bleeding was detected in 3.6% and minor bleeding was detected in 13%. Among patients with irregular INR monitoring, a minor bleeding complication was observed in one patient. No significant difference was detected between the groups. The mean INR value in patients with major bleeding complications was 3.15±1.38. It was observed that two of these patients had subdural hematoma even though their INR levels were within the optimum INR values (2.35 and 2.87). However, these two patients were in the group using warfarin + aspirin due to undefined etiology. It was observed that the mean INR value in patients with minor bleeding complications was 3.19±1.54. An INR value above the optimum limit is a risk factor for bleeding complications, but complications can also occur when it is within therapeutic limits. It was determined that the INR level at the time of recurrent stroke was below 2 in 11 of the 13 patients who had recurrent ischemic stroke. The INR level of a patient who had a transient ischemic attack was 3.4 (Table 6).

Table 6. INR Values During Recurrent Ischemic Events and Bleeding Complications

INR value during recurrent ischemic events	1.69±0.31 1.74 [1.00 – 2.08]
INR value during major bleeding complications	3.15±1.38 2.68 [2.04 – 5.80]
INR value during minor bleeding complications	3.19±1.54 2.54 [1.64 – 8.00]

(Values are Given as Mean±SD, Median [Min-Max])

Paroxysmal atrial fibrillation (PAF) was detected by Holter in 48.8% of patients with normal sinus rhythm on ECG. This finding shows that PAF can be detected in a majority of patients with normal sinus rhythm on ECG, and that Holter should be performed in suspected patients (Table 7). Recurrent ischemic stroke was observed in 9.7% of patients with no history of AF but with AF detected on their ECG and in 6.3% of patients with normal sinus rhythm. Recurrent ischemic stroke was detected in 10.8% of the patients with PAF detected in Holter.

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Table 7. Comparison of ECG and Holter Findings

		Holter			
		N/A	**NVAF**	**NSR**	**PAF**
ECG	**Chronic NVAF**	22	0	0	0
	New diagnosis NVAF	26(83.9%)	2(6.5%)	0	3(9.7%)
	NSR	36(28.3%)	2(1.6%)	24(18.9%)	62(48.8%)
	Sinus bradycardia	0	1	0	0

ECG: Electrocardiography, **NVAF:** Non-valvular atrial fibrillation, **NSR:** Normal sinus rhythm, **PAF:** Paroxysmal atrial fibrillation

DISCUSSION

This study focused on assessing the occurrences of recurrent ischemic strokes and bleeding events among individuals receiving warfarin treatment following an initial ischemic stroke. Among the patients, major bleeding was observed in 3.3%, while minor bleeding was observed in 12.7% of cases. Notably, minor bleeding was linked to the prolonged use of warfarin and the presence of non-valvular atrial fibrillation (NVAF).

Stroke prevention is a top priority due to its status as a major global cause of both fatalities and neurological impairments. More precisely, patients with non-valvular atrial fibrillation (NVAF) face a fivefold increase in their risk of experiencing an ischemic stroke, but this risk soars to a factor of 17 in individuals with atrial fibrillation (AF) coupled with mitral stenosis (Wolf et al., 1978). Lansberg et al (Lansberg et al., 2012) reported that the annual hemorrhagic transformation in patients using OAC was between 0.6% and 1% 32. Within two weeks after NVAF-induced stroke, the risk of developing early recurrent cerebral embolism was reported to be approximately 0.1% and 1.3% per day (Hart et al., 1983). In the RAF investigation, which involved the assessment of 1,029 patients, the recurrence rate of ischemic events was determined to be 7.6%, major bleeding was 1.4%, and symptomatic cerebral bleeding was 3.6% (Paciaroni et al., 2015). According to the RAF study, it is advisable to begin anticoagulant therapy within a timeframe of four to 14 days for preventing recurrent ischemic strokes, with the exception of patients who have large ischemic lesions linked to cerebral hemorrhage. According to findings by Mac Grory et al. (Mac Grory et al., 2019), the resumption of oral anticoagulant (OAC) therapy in patients with atrial fibrillation (AF) following a cardioembolic stroke is advised to be delayed until at least 48 hours have passed, as there is a risk of recurrence. In cases of valvular AF, individuals not receiving OAC therapy face an eightfold greater incidence of embolic events compared to those who are on OAC therapy. As a result, it is highly advised to utilize oral anticoagulants (OACs) for the purpose of secondary stroke prevention in individuals who have experienced cardioembolic strokes (Bir & Kelley, 2021).

Warfarin holds the position as the most commonly employed oral anticoagulant across the globe, serving both primary and

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secondary roles in preventing ischemic strokes. Bleeding or thromboembolism may occur as a result of the use of warfarin, which has a narrow therapeutic window (Ma et al., 2022). While warfarin reduces the risk of ischemic stroke in patients with NVAF by approximately 66 percent, it may cause a slight increase in the rate of major bleeding or intracerebral hemorrhage by 1.4%-4.5% per year (Kim et al., 2009; Marti-Fabregas & Mateo, 2009). The recurrence rate in the first year after cardioembolic ischemic stroke is approximately 10%. In the studies of Ravvaz et al. (Ravvaz et al., 2021), it was determined that 558 (7.67%) of 7,274 newly diagnosed AF patients who receiving warfarin treatment experienced bleeding or ischemic events. Bleedings (4.97%) were detected twice as frequently as ischemic events (2.71%). Gastrointestinal bleeding was observed in 198 patients, intracranial bleeding was observed in 29 patients, other major bleeding was observed in 134 patients, transient ischemic attack was observed in 182 patients and systemic embolic events were observed in 15 patients. Since warfarin is superior to aspirin in preventing stroke in NVAF patients, anticoagulant treatment is also recommended in valvular AF (Bir & Kelley, 2021). In the European Atrial Fibrillation Trial investigation, involving the assessment of 1,007 patients who had experienced ischemic stroke and had NVAF, it was observed that the recurrence of ischemic strokes decreased by 66% among those treated with warfarin and by 14% among those using aspirin. The reported annual risk rates for ischemic stroke were 4% for the warfarin group, 10% for the aspirin group, and 12% for the placebo group ("Silent brain infarction in nonrheumatic atrial fibrillation. EAFT Study Group. European Atrial Fibrillation Trial," 1996). An examination comparing warfarin to standard-dose direct oral anticoagulants (DOACs) revealed that there were no discernible distinctions between the two groups in relation to the risk of major bleeding, with rates of 5.94% and 5.05%, respectively. However, patients receiving DOACs exhibited a reduced likelihood of experiencing fatal bleeding and intracranial bleeding. Moreover, researchers observed a higher risk of major gastrointestinal bleeding in patients treated with standard DOAC than in patients treated with warfarin, 2.54% versus 1.95%, respectively. In the same study, it was reported that the risk of major bleeding in patients taking low-dose DOACs (4.34%) was lower than in patients taking warfarin (5.94%) (Carnicelli et al., 2022). In the study where 2,337 patients were evaluated between January 1, 2015 and December 31, 2020, 315 (13.4%) patients experienced another ischemic stroke attack. In the same study, ischemic stroke was observed in 12.6% of those taking warfarin, 12.8% of those taking DOACswitch, and 8.7% of those taking fixed DOACsame within one year. Within one year, 5.3% of those taking warfarin, 1.6% of those taking DOACswitch and 1.5% of those taking DOACsame had intracranial hemorrhage (Ip et al., 2023).

In our investigation, we noted significant bleeding issues in 3.3% of the patients, minor bleeding incidents in 12.7%, and

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recurrent ischemic episodes in 7.2% of the cases. Of the patients who developed major bleeding complications, three were gastrointestinal system bleeding, two were subdural hematoma, and one was rectus muscle hematoma. The mortality rate during follow-up was 5.5% (2 patients due to subdural hematoma, 6 patients due to sepsis, and 2 patients due to cardiac reasons). When major bleeding complications and cerebral-related deaths were evaluated together, the fatal complication rate in our study was determined as 4.4%. The incidence of recurrent ischemic attacks was related to the duration of warfarin use. In our study, no significant difference was determined in recurrent ischemic stroke between the patient groups receiving warfarin and warfarin plus aspirin treatment (n=73, n=104, respectively) (6.8% vs. 6.7%, respectively). This may be due to keeping the INR values between 2.0 and 3.0 in both groups. There was no notable distinction observed in the incidence of major bleeding complications among the treatment groups. Combination therapy can be applied in patient groups at high risk for concomitant coronary artery disease and ischemic stroke, as long as the INR level is kept at the optimum level. As a matter of fact, we frequently encounter combination therapy applications in our clinical practice. The bleeding rates and recurrent ischemic attack rates we obtained in our study are similar to previous study results.

For patients taking warfarin, the dose should be carefully adjusted and careful and consistent INR monitoring should be performed. Because the effectiveness of warfarin depends on therapeutic INR control. The ideal INR range is 2.0–3.0 (2.5–3.5 in the presence of a mechanical valve), and the effectiveness of warfarin decreases when INR falls below 2.0 (Gong et al., 2022). According to the American Heart Association (AHA), monthly INR control is necessary to keep the INR value between 2.0-3.0, but longer follow-ups, such as a 2-month break, may be recommended in patients whose INR value remains stable (European Heart Rhythm et al., 2006). Song et al (Song et al., 2021) compared the effects of hirudin plus aspirin and warfarin in patients with ischemic stroke due to NAVF. The INR values in the warfarin group at 1, 2, 3, 6, 9 and 12 months were observed to be 2.00, 1.98, 2.20, 2.34, 1.97 and 2.42, respectively. In the same study, the time in therapeutic range (TTR) of patients taking warfarin was determined to be 66.5% and the INR value was determined to be < 2 in 31.4% ± 19.3% of the total treatment period. A sole patient experienced an INR value exceeding 3 for a duration of 1.3 months, and this particular individual encountered a non-fatal intracranial hemorrhage three months after the onset of the stroke. In the study, where 77.9% of the patients achieved INR stability, seven (6.25%) major complications were identified in the hirudin plus aspirin group and 14 (12.84%) major complications in the warfarin group. In the study where the INR was kept between 2.0 and 3.0 throughout the study, the recurrent ischemic stroke rate was observed to be 2.57% in the warfarin group. In another study, it was determined that the risk of bleeding in chronic liver patients with

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an INR value of < 3 was higher than in warfarin users. It has been reported that as the INR value increases above 3, the risk of bleeding in warfarin users increases (Afzal et al., 2022). Similar to our study, in a retrospective study by Moriyasu et al. (Moriyasu et al., 1993), 68 patients who had previously had a cardioembolic ischemic stroke and were under warfarin treatment were followed for 39±27 months for recurrent stroke and bleeding complications. While recurrent ischemic stroke was observed in three patients (4.4%), major bleeding complications were detected in 12 patients (17.6%). In the same study, the average INR value during recurrent ischemic stroke was determined as 2.2 and the average INR value during bleeding complications was determined as 3. In our study, while the average INR value during recurrent ischemic stroke was 1.69±0.31, the average INR value during bleeding complications was determined as 3.15±1.38. Recurrent ischemic stroke was observed at a rate of 7.1% among those who regularly monitored INR monthly, and at a rate of 8.3% among those who monitored INR irregularly. This result suggests that regular INR monitoring will reduce the rate of recurrent ischemic stroke.

The limitations of our study are that it is retrospective, single-center, has a limited follow-up period, no TTR calculation, no randomization, and a small number of patients. Our results should be confirmed with prospective studies with larger sample sizes and longer follow-up periods.

In conclusion, we evaluated the recurrent stroke attacks and bleeding complications in patients receiving warfarin after ischemic stroke that we followed in our clinic. Rates of recurrent stroke attacks and bleeding complications were consistent with previous studies. NAVF and long-term warfarin use were determined as risk factors for minor bleedings. Monthly INR monitoring and keeping INR between 2.0 and 3.0 is important for the effectiveness of warfarin.

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PALYATİF BAKIM MERKEZİNDE YATAN AKCİĞER KANSERLİ HASTANIN ROPER, LOGAN, TIERNEY HEMŞİRELİK MODELİ EŞLİĞİNDE DEĞERLENDİRİLMESİ: OLGU SUNUMU[1]

EVALUATION OF A PATIENT WITH LUNG CANCER IN A PALLIATIVE CARE CENTER IN ACCORDANCE WITH THE ROPER, LOGAN, TIERNEY NURSING MODEL: A CASE REPORT

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Öz: Akciğer kanseri, yüksek görülme sıklığı, teşhis ve tedavisinde ileri teknoloji gerektirmesi ve ek sağlık hizmetlerine gereksinim duyulması ile, dünyada sağlık bakım sisteminde önemli derecede yük oluşturmaktadır. Dünyada ve ülkemizde hızla artan akciğer kanserli terminal dönem hastalarda, hastanın bakımını ve bağımsızlığını desteklemek, mevcut sorunlara çözüm yolları bulmak oldukça kapsayıcı yaklaşım gerektirmektedir. Hemşireliğin en önemli işlevlerinden biri olan bakım, hızla değişen ve gelişen sağlık alanında hemşirelik uygulamalarında göz ardı edilmemesi gereken bir kavramdır. Bakım planının bireysel farklılıklar, hastalığın seyri ve hasta tipleri arasındaki farklılıklar göz önünde bulundurularak bireyselleştirilmiş hemşirelik bakımı felsefesi ile düzenlenmesi gerekir. Bu doğrultuda Günlük Yaşam Aktivitelerine Dayanan Hemşirelik Modeli, bireylere bütüncül yaklaşımla bakımı sistematize ederek gruplandırmakta ve bu aktiviteleri bireyin kendi başına, bağımsız bir şekilde ne kadar yapabildiğini tanılamaya olanak sağlamaktadır. Bu şekilde bireyin ölüm öncesi sürecini insan onuruna yaraşır şekilde geçirmesine olanak tanınabilmektedir.

Amaç: Bu olgu sunumunda palyatif bakım merkezinde yatan akciğer kanserli hastanın "Roper, Logan, Tierney Hemşirelik Modeli" eşliğinde tanılanması, değerlendirilmesi ve hemşirelik sürecinin yönetimi amaçlanmıştır.

Yöntem: Türkiye'de bir şehir hastanesi palyatif bakım merkezinde yatan 67 yaşında erkek hasta, "Akciğer ca" tanısı ile tedavi ve rehabilitasyon görmektedir. Hasta rehabilitasyon sürecinde holistik yaklaşımla ele alınarak günlük yaşam aktivitelerine dayalı hemşirelik modelinin katkısıyla tanılanmış, hemşirelik süreci yönetilmiş, hastada tespit edilen hemşirelik tanıları, bu tanılara uygun girişimler planlanmış ve uygulanmıştır. Olgu sunumu çalışması açıklanmış ve hastanın yasal vasisinden sözlü ve yazılı bilgilendirilmiş gönüllü onam alınmıştır.

Bulgular: Sistematize edilen verilerin analizinden sonra problemler daha net ortaya konmuş ve çözüm odaklı yaklaşımlar geliştirilmiştir.

Sonuç: Günlük yaşam aktivitelerine dayanan hemşirelik modelinin hemşirelik sürecinde uygulanmasının, bakım kalitesini artırdığı gözlenmiştir.

Anahtar Kelimeler: Akciğer Kanseri, Hemşirelik Bakımı, Hemşirelik Modeli, Roper Logan Tierney

Abstract: Lung cancer creates a significant burden on the health care system in the world, with its high incidence, the need for advanced technology in diagnosis and treatment, and the need for additional health services. Supporting the patient's care and independence and finding solutions to existing problems in the rapidly increasing number of terminal stage patients with lung cancer in the world and in our country require a very comprehensive approach. Care, one of the most important functions of nursing, is a concept that should not be ignored in nursing practices in the rapidly changing and developing field of health. The care plan should be designed with an individualized nursing care philosophy, taking into account individual differences, the course of the disease, and differences between patient types. In this direction, the Nursing Model Based on Daily Living Activities systematizes and groups care for individuals with a holistic approach and allows the individual to diagnose how much he can do these activities on his own and independently. In this way, the individual can be allowed to go through the pre-death process in a manner worthy of human dignity.

Aim: In this case report, it is aimed to diagnose, evaluate and manage the nursing process of a lung cancer patient hospitalized in a palliative care center in accordance with the "Roper, Logan, Tierney Nursing Model".

Method: A 67-year-old male patient, hospitalized in a city hospital palliative care center in Turkey, is receiving treatment and rehabilitation with the diagnosis of "Pulmonary Disease". During the rehabilitation process, the patient was handled with a holistic approach and diagnosed with the contribution of the nursing model based on daily life activities, the nursing process was managed, the nursing diagnoses identified in the patient and interventions appropriate to these diagnoses were planned and implemented. The case report study was explained and verbal and written informed consent was obtained from the patient's relative.

Results: After the analysis of the systematized data, the problems were revealed more clearly and solution-oriented approaches were developed.

Conclusion: It has been observed that the application of the nursing model based on daily life activities in the nursing process increases the quality of care.

Keywords: Lung Cancer, Nursing Care, Nursing Model, Roper Logan Tierney

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GİRİŞ

Nancy Roper, Winifred W. Logan ve Alison J. Tierney 1970'li yıllarda, hemşirelik bakımının planlı sunumu ve bireylere bütün özellikleri ile yaklaşmada akılcı bir yöntem olarak kullanılabilecek olan Yaşam Aktivitelerine Dayalı Hemşirelik Modelini oluşturmuşlardır. Nancy Roper'in 1976 yılında yayınladığı, "Clinical Experience in Nurse Education"da, hemşireliğin öz benliğinde günlük yaşam aktiviteleri olduğu, bireylerin yaşamının devamlılığı için hemşirelik bakımından faydalandıkları, hemşirelerin de mesleklerini yürütürken bireyleri yaşamda tutmak için çaba gösterdikleri betimlenmiştir (Bulut & Güler Demir, 2017). Nancy Roper, 1976 yılında Logan ve Tierney'i bu modelin gelişimini amaçlayarak birlikte çalışmaya davet etmiş ve akabinde de Roper-Logan-Tierney Modeli gelişmeye ve şimdiki şeklini almaya başlamıştır (Pektekin, 2013). Roper- Logan-Tierney'in birlikteliklerinde oluşturduğu çalışmalar da "The Elements of Nursing" isimli kitapta yayınlamıştır (Adıgüzel, 2021). Yaşam modeli hemşirelik eğitimi ve klinik uygulamada oldukça sık kullanılan önemli modellerden biridir (Vicdan vd., 2015). Bu modelin temel amacı hemşirelik bakımı ve girişimleri için hemşirelere yol haritası çizerek rol model olmaktır. Model bireyi yalnızca hastalığı ile ilgili değil bir bütün olarak bütünsel yaklaşımla ele alır. Hemşirelik sürecinin uygulanmasında uygun bir temel oluşturmaktadır. Model 5 bileşenden oluşmaktadır (Karadağ vd., 2017).

Yaşam süresi; yaşam fertilizasyonla başlar ve bireyin doğumundan ölümüne kadar olan süreçte yaşamın beş aşaması vardır. Bebeklik, çocukluk, ergenlik, yetişkinlik ve yaşlılık (Karadağ vd., 2017).

Günlük yaşam aktiviteleri; bireylerin yaşamını etkin şekilde sürdürmelerini sistematik bir yaklaşımla tanılayan 12 başlık halinde sıralanmıştır (Atabek Aştı & Karadağ, 2019). Bu başlıklar; güvenli çevrenin sağlanması ve sürdürülmesi, iletişim, solunum, beslenme, boşaltım, kişisel temizlik ve hijyen, vücut sıcaklığının kontrolü, hareket, çalışma ve eğlence, cinselliği ifade etme, uyku ve ölümdür (Atabek Aştı & Karadağ, 2019). Günlük yaşam aktiviteleri birbirini destekleyen, etkileyen iç içe geçmiş yapılardır. Tüm aktiviteler birbirini etkilemektedir. Örneğin, boşaltım ya da solunum aktivitesi yeterli seviyede gerçekleştirilemeyen durumlarda yeme-içme aktivitesi de gerçekleştirilemez. Hepsi, yaşamın farklı bir boyutudur ve bir aktivitede meydana gelecek olan sorun diğer aktiviteler üzerinde ciddi etkilere yol açabilir (Pektekin, 2013). Solunum aktivitesi, modelde özellikle üzerinde durulmuştur ve solunum aktivitesinin yaşamın temel taşı olduğu ve vazgeçilmez bir bileşeni olduğu belirtilmiştir (Albayrak vd., 2013; Bulut & Güler Demir, 2017). Günlük yaşam aktiviteleri bireylerin günlük yaşamlarını sürdürmedeki bağımsızlığını destekler. Bireyin bağımsız fonksiyonlarını etkileyen, sağlık iyilik halini azaltan sorunları saptamada ve uygun hemşirelik girişimleri ile sorunların giderilmesinde hemşirelere yol göstermektedir (Tosun, 2018).

Günlük yaşam aktivitelerini etkileyen faktörler; modelde fiziksel, psikolojik, sosyal-

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kültürel, çevresel, politik ve ekonomik faktörler olarak açıklanmıştır (Vicdan vd., 2015). *Fiziksel Faktörler;* bireyin yaşı, cinsiyeti, bilişsel yetenek düzeyi, vücut ağırlığı, fiziksel aktivitesindeki bağımlılık ve bağımsızlık dizgesi, uzun süreli ve iyileşmeyen hastalıkları ve terminal hastalıkları gibi faktörleri barındırır (Albayrak vd., 2013). *Psikolojik Faktörler*; bireyin stres ve anksiyete seviyesini, duygu durumunu, inançlarını, değerlerini, davranışlarını, karakterini yansıtan faktörlerdir (Vicdan vd., 2015). *Sosyo-Kültürel Faktörler*; kültür yapısındaki farklılıkları, anadili, örf ve adetleri, iş-meslek yapısını, toplumsal değer yargılarını vb. içeren faktörlerdir (Karadağ vd., 2017). *Çevresel Faktörler*; bireyin yaşadığı ortam özelliklerini, çevre kirliliği ve bu kirlilikle karşılaşmasını, iklim ve coğrafi özellikleri vb. içeren faktörlerdir (Vicdan vd., 2015). *Politik ve Ekonomik Faktörler*; bireyin gelir gider durumu, meslek, sağlık güvencesinin varlığı, var olan sağlık ve destek hizmetleri, ekonomik durumunu kapsar (Albayrak vd., 2013).

Bağımlılık ve bağımsızlık dizgesi; Roper ve arkadaşlarına göre bağımlılık ve bağımsızlık, yaşam süresi ve yaşam aktivitelerinden ayrılmaz bir bütündür. Bireyin belli yaşam aktivitelerini bağımsız bir şekilde yerine getiremediği, kısıtlı kalındığı yaşam dönemleri vardır. Yeni doğanlar ve bebekler bakımını üstlenen bireylere, yetişkinlere tam olarak bağımlıdırlar. Bu bağımlılık çocukluk döneminde yarı bağımlılığa, yetişkinlik döneminde bağımsızlığa ve yaşlılık ya da hastalık durumlarında tekrar bağımlılığa doğru ilerleyen bir süreçtir (Pamuk Cebeci & Köşgeroğlu, 2019). Bireyler yaşamda kalabilmek için, solunum destek sistemine bağımlı olabilirler ya da hareket edebilmek için tekerlekli sandalye kullanmak zorunda kalabilirler. Birey yaşam süresi boyunca farklı deneyimler yaşayarak bağımlılık ve bağımsızlık dizgesi arasında sürekli değişim yaşar.

Bireyselleştirilmiş hemşirelik bakımı; her birey yaşam aktivitelerini farklı bir şekilde yaşayarak gerçekleştirmektedir. Yaşam aktiviteleri gerçekleştirilirken, her bireyin bireyselliği; yaşam süresinin aşaması, bağımlılık/bağımsızlık derecesi tarafından etkilenir ve çeşitli biyolojik, psikolojik, sosyo-kültürel, çevresel ve siyasi ve ekonomik faktörün etkisiyle de şekillenir. Her birey, kendini çok değişik biçimde ifade edebilir. Her birey eşsiz ve tektir. Bu benzersizlik durumunu etkileyen farklılıklar; bireyin yaşam aktivitelerini nasıl ve ne sıklıkta yerine getirdiği, bireyin bu aktiviteleri nerede ve ne zaman meydana getirdiği, bireyin bu aktiviteleri niçin özel bir yolla yerine getirdiği, bireylerin yaşam aktiviteleri hakkında neler bildiği ve bireylerin yaşam aktivitelerine ait sahip olduğu davranışlar olarak sayılabilir (Bulut & Güler Demir, 2017; Williams, 2017).

Hemşirelik sürecinin yönetiminde bir model kuram eşliğinde hasta tanılama önerilmektedir (Velioğlu, 1999; Birol, 2013; NANDA International 2024). Bu makalede de palyatif bakım merkezinde yatan akciğer kanserli hastanın "Roper, Logan, Tierney Hemşirelik Modeli" eşliğinde değerlendirilmesi amaçlanmış, NANDA-I'a

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göre hemşirelik tanıları belirlenmiş ve olgu sunumu şeklinde verilmiştir. Olgu olarak üzerinde çalışılan hastadan veya yasal vasisinden çalışma öncesinde kendi rızası doğrultusunda, resmi prosedürlere uygun ve tıbbi etik çerçevede sözlü ve yazılı izin alınmıştır. Çalışma Helsinki Deklarasyonu ilkelerine uygun olarak yürütülmüştür.

OLGU SUNUMU

Akciğer kanseri, yüksek görülme sıklığı, teşhis ve tedavisinde ileri teknoloji gerektirmesi ve ek sağlık hizmetlerine gereksinimi ile dünyada önemli derecede sağlık yükü oluşturmaktadır (Düzen & Göktaş, 2021). Literatür incelendiğinde gelişmekte olan ülkelerde tütün ve türevlerini kullanma alışkanlıklarındaki yükseliş ve sanayileşme ile aynı doğrultuda akciğer kanseri sıklığının da arttığı bildirilmektedir (Thandra et al., 2021; Canadian Cancer Society Canadian Cancer Statistics, 2021). Akciğer kanseri epidemiyoloji çalışmalarında, risk faktörleri arasında tütün içimi, sigara dumanına maruz kalma, radyoaktif radon gazına maruz kalma, asbest ve diğer kanserojenlere maruz kalmanın yanı sıra hava kirliliği ve yaşlanma (Chen, 2023), HIV ve Tb enfeksiyonu gibi çevresel maruziyetler, esrar içme, elektronik sigara, ısıtılmış tütün ürünleri gibi birçok etken sayılmakta ve COVID-19'un riski artırdığı varsayılmaktadır (Thandra et al., 2021). Tüm bu etkenler içerisinde akciğer kanserinin %85 gibi bir oranda nedeninin tütün kullanımı ile ilişkili olduğu bildirilmektedir (Canadian Cancer Society Canadian Cancer Statistics, 2021; WHO, 2022).

Yapılan çalışmalarda erkeklerde akciğer kanseri görülme sıklığının kadınlara göre iki kat fazla olduğu da savunulmaktadır (Lin et al., 2023; Chen, 2023). Ülkemizde kanser verilerine bakıldığında erkeklerde yaşa göre standardize edilmiş kanser hızına göre %57.7 ile en sık görülen kanser türü akciğer kanseridir. Kadın nüfusunda ise bu durum %9.8 ile beşinci sırada yer almaktadır (Sağlık Bakanlığı, 2021). Son yıllarda, özellikle Kanada, Norveç, İsveç gibi gelişmiş ülkelerde hükümetler tarafından tütün kontrolünün uygulamaya konmasıyla, hatta DSÖ Tütün Kontrolü Çerçeve Sözleşmesi ile de sigara içme oranlarının azaldığı bildirilmekte, daha fazla ülkede bu oranın azalması beklenmektedir (Health Canada, 2002; Government of Norway Tobacco Control Act, 2013; The Public Health Agency of Sweden Tobacco, 2022).

Bu olgu sunumu Türkiye'de bir kamu hastanesinde 20.05.2021 ile 25.05.2021 tarihleri arasında Helsinki Deklarasyonu ilkelerine uygun olarak yürütülmüştür. Olgu olarak üzerinde çalışılan hastadan veya yasal vasisinden çalışma öncesinde kendi rızası doğrultusunda, resmi prosedürlere uygun ve tıbbi etik çerçevede sözlü ve yazılı izin alınmıştır. Olgumuz A.T. 67 yaşında, erkek "Akciğer ca" tanısı ile palyatif bakım merkezinde tedavi görmektedir. Eşi 6 sene önce vefat etmiş, 3 çocuğa sahip olup iki kızıyla birlikte ilçede yaşamaktadır. Akciğer kanser tanısı almadan önce aktif olarak çiftçilik yapmakta olan A.T.'nin sigara öyküsü vardır. 45 yıl boyunca 20 adet/gün sigara tüketmiştir. Alkol öyküsü ve alerji öyküsü bulunmamaktadır. Daha önce hastanede yatış deneyimi ve düzenli kullandığı ilacı yoktur.

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Aile öyküsünde bilinen kanser geçmişi yoktur.

A.T. yaklaşık 6 ay öncesinde yoğun ve geçmeyen öksürük, nefes darlığı, kanlı sekresyon şikayetleriyle ilde bulunan üniversite hastanesine başvurmuş, yapılan tetkikler, tomografi, bronkoskopi ve biyopsi sonucunda akciğer ca tanısı konulmuştur. Ek kronik hastalık olarak 10 yıldır hipertansiyonu mevcuttur. A.T. aynı hastanede kemoterapi tedavisine alınmıştır. Kemoterapi tedavisi devam ederken klinik tablosu kötüleşmiş ve yoğun bakım ünitesinde entübe edilmiş, 20 günün sonunda trakeostomi açılmıştır. Yoğun bakım ünitesinde 22 gün trakeostomi ile takip edilmiş, daha sonra aile üyelerine ve kızlarına gerekli bilgilendirme yapılarak hastanın artık palyatif bakım merkezinde tedavi ve bakım sürecinin devam edeceği bilgisi verilmiştir. A.T. palyatif bakım merkezi olan başka bir hastaneye sevk edilmiştir.

Hastanın sevk edildiği hastanede üniteye kabulünde bilinci konfüze (karmaşık), yer-zaman kavramı bulunmamaktadır. Ajitasyonu(huzursuzluk) mevcuttur. Kan basıncı 117/45 mm/Hg (düşük), nabız 94/dk (hızlı), vücut sıcaklık değeri 36.9 °C (normal), oksijen satürasyonu T-tüp ve 3-4 lt/dk oksijen desteği ile %94 olarak ölçülmüştür. Glaskow Koma Skalası (GKS) 14 (orta düzeyde bilinç düzeyine sahip) olarak değerlendirilmiştir. Koksikste 2. derece basınç ülseri mevcuttur. Hastanın palyatif bakım merkezine kabulü öncesinde ne kadar süre hareketsiz kaldığı ya da pozisyonlama yapılıp yapılmadığı bilgisi mevcut değildir. Hasta oral beslenememekte Total Paranteral Nutrisyon (TPN) ile beslenmektedir. Solunum ritmi düzensiz ve hırıltılı solunum mevcuttur. Sekresyon koyu kıvamlıdır. Cilt kuru, kızarık, soluktur. Parmaklarda çomaklaşma vardır. Ağız mukozası kuru ve aftlar mevcuttur. İdrar boşaltımını 14 Fr foley sonda ile sağlamaktadır. Saatte 100 ml idrar çıkışı vardır. Konstipasyonu mevcuttur, son gaita deşarjı 5 gün önce gerçekleşmiştir. Alt ektremitede gode bırakan ikinci derece ödemi mevcuttur. Beden Kitle İndeksi (BKİ): 17.37 (zayıf) olarak değerlendirilmiştir. Hasta hareket edememekte, sadece yatak içi pasif hareket edebilmektedir.

Kan parametreleri Referans Değerleri (21.04.2021): WBC: 9.69; RBC: 3.39; HGB:10.2; HCT: 31.2; MCV: 92.2; MCH: 30; PLT: 390; Sedimantasyon (mm/saat): 81; PT Zamanı (sn): 11.6; PT-INR: 0.97; Albümin: 25.9; Alt(U/L): 27; Ast (U/L): 52; Bun (mg/dL): 89.7; Kreatinin (mg/dL): 2.03; Ürik asit (mg/dL): 11.1; Total Protein(g/dL): 54.3; Bilirubin Total (mg/dL): 0.68; Bilirubin Direk (mg/dL): 0.34; CRP mg/L: 98.0; Glukoz (mg/dL): 95; Kalsiyum (mg/dL) 8.3; Magnezyum (mmol/L): 2.1; Fosfor (mg/dL): 3.6; Demir (mg/dL): 22; Total Demir Bağlama Kapasitesi: 127; Klor (mg/dL): 101; pH: 7.435; PCO2 (mm/Hg): 40.5; PO2 (mm/Hg): 79.28; HCO3 (mEq/L): 27.2; ctHb: 15.1; sO2: 48.9; cK+: 3; cNa+: 130

Hastanın üniteye kabulü ile birlikte anılan sorunlara yönelik hekimi tarafından tedavi planı oluşturulmuş, hemşiresi tarafından tedavi ve bakım girişimleri uygulanmıştır. Palyatif bakım ünitesinde takip edildiği süre içerisinde medikal tedavisi şu şekilde düzenlenmiştir: 1000 ml %5 Dextroz %0.45

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NaCl (inf, 40cc/h), 1500 ml Oliclinomel N-4 550 E (inf 60cc/h), Dipeptiven 200 mg/1 ml (inf 24 saat), Asist amp. (IV) 3x2, Zofer 4 mg amp. (IV) 3x1, Parol 1000mg flk. (inf.) 4x1, Contramal 100 mg amp. (inf.) 3x1, Lasix amp. (IV) 2x1, Nörodol 5 mg amp. (İnf) 2x1, Pandev 40 mg flk (IV) 2x1, Durogesic flaster 25 mcg (TTS) 72 saat aralıklı, Morphine HCl 10 mg (SC) 2x ½, Clexane 0.4 ml (SC) 1x1, Cernevit flk. (İnf) 1x1, Pulmicort 0.5 mg (inh.) 2x1, Combivent 0.5+2.5 mg (inh.) 4x1, Serex 100 mg tabl. (PEG) 1x1, Serex 50 mg tabl. (PEG) 1x1, Seralin 50 mg tabl (PEG) 1x1, Cubison mama (60 mama/ 40 su).

Hastada yatışının 2. gününde önceki tetkik sonuçlarına göre CRP artışı (98.0'dan 101.2'ye yükselmiştir) ve akciğer sekresyonunda artış görülmüştür. Akciğer sekresyon kültürü ve CRP sonucuyla birlikte enfeksiyon hastalıkları uzmanı tarafından Tazobactam 4x3.375 mg, Vanco 1 gr 2x1 antibiyotik tedavisi başlanmıştır, tedavi 14 gün sürmüştür. Daha sonra kontrol CRP değeri, idrar kültürü ile enfeksiyon hastalıkları uzmanı danışılmış ve Meropenem 1 gr 3x1 14 gün süreyle devam etmiştir.

Hasta yatışının 5. gününde beslenme şeklinin düzenlenmesi için yakınlarının bilgilendirilmesi yapılarak yazılı onamları alınmış ve perkütan endoskopik girişim (PEG) planlanmıştır. Yatışının 8. gününde PEG açılmış ve kanama gibi komplikasyonlar açısından takip edilmiştir. Komplikasyona rastlanmamasının ardından ilk 24 saat 20 cc mama 20 cc su şeklinde beslenmeye başlanmıştır. Batında distansiyon, gastrointestinal sorun bulguları açısından gözlenmesinin ardından soruna rastlanmamıştır ve kademeli nutrisyon artışı sağlanmıştır. Palyatif bakım ünitesinde 36 gün takip edilmiştir. 25.05.2021 tarihinde 45 dakika resüsitasyona rağmen exitus olmuştur.

TARTIŞMA

Akciğer kanserinde en yüksek risk faktörü olarak sigara kullanımı bildirilmektedir (Thandra et al., 2021). Dünya genelinde 1.2 milyar kişinin sigara kullanıcısı olduğu ve bugünkü eğilimin devam etmesi halinde 2030 yılında yaklaşık 2 milyar kişinin sigara içicisi olacağı tahmin edilmektedir (Özet vd., 2020; Tusad, 2023). Diğer etkenler dış çevreden ve bireyin mesleğinden dolayı karşılaştığı etmenlerdir (Chen, 2023). Mesleki veya çevresel kaynaklı maruziyet oluşturan iyonizan radyasyon, nikel-krom gibi bazı ağır metaller, arsenik, kristal silis tozu gibi çeşitli zararlı maddeler de akciğer kanserlerine neden olabilmektedir (Bayram, 2019). Hava Kirliliği, endüstrinin yoğun olduğu yerleşim bölgelerinde görülen hava kirliliği ve hem açık hem de kapalı mekanlarda fosil yakıtların ve havadaki partikül maddelerin yanmasıyla ortaya çıkan kanserojenler akciğer kanseri için risk oluşturmaktadır (Özet vd., 2020). Uzun süren enfeksiyon tablosunun da akciğerde oluşabilecek sekel karsinogenez sürecine neden olduğu bildirilmektedir (Ergelen & Cağatay Çimşit, 2013). Akciğer kanseri tanısının konulmasında yaşanan teknolojik gelişimlere, gelişen ve değişen tedavi yaklaşımları tedavi seçeneklerine rağmen akciğer kanseri tanısına sahip bireylerde bozulmuş fiziksel ve fonksiyonel düzey, yaşam kalitesinin düşmesi, depresyon ve anksiyete düzeylerinde yükselme

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gözlemlenmektedir (Satar, 2019). Bu nedenle akciğer kanserli bireylerin semptomlarının yönetiminde global olarak kabul gören yaklaşım multidisipliner yaklaşımdır (Satar, 2019). Akciğer ca tanılı olgu Roper, Logan ve Tierney'in geliştirdiği hemşirelik bakım modeline göre tanılanmış ve planlanan bakım süreci uygulanmıştır.

Günlük Yaşam Aktivitelerine Dayanan Hemşirelik modeli; sağlıklı ve hasta bireylere uygulanabilir olması ile hemşireliğin koruma ve rahatlatma fonksiyonlarına odaklanması nedeniyle kullanılabilirliği yüksek bir hemşirelik modelidir (Karadağ vd., 2017). Birçok farklı yaştaki hasta grubuna verilen bakımda kullanılabilmektedir. Covid-19 tanısına sahip bireye bu model doğrultusunda bakım ve hemşirelik girişimleri uygulayan araştırmacılar tarafından bu modelin Covid-19 hastalığına sahip bireylerde hemşireler tarafından kullanılabilir olduğu sonucu saptanmıştır (Kızıltan & Usta, 2020; Özdelikara & Babur, 2020). Bir diğer çalışma da Tip-2 diyabet tanılı hasta üzerinde bu model uygulanmıştır. Verilen hemşirelik bakımı sonucunda olgunun kan şekeri seviyesi optimal sınırlarda tutulmuş, etkilenen günlük yaşam aktivitelerinde iyilik haline yaklaşma sağlanmıştır (Bulucu Böyüksoy vd., 2016). Kronik böbrek yetmezliği olan bir başka çocuk vakada, hemşirelik bakımında uygulanan bu model doğrultusunda çocuğun aile yaşamlarının fonksiyonel olarak sürdürülmesi desteklenmiş, çocuk hastanın düşünce ve kaygılarını daha rahat ifade etmesi, sosyalleşmesi ve tedaviye uyum sağlaması kolaylaşmıştır (Akkoyun & Arslan, 2019).

Yaşam Süresi

Akciğer kanserleri genellikle 65 yaş ve üstü bireylerde görülmekte ve çoğunlukla sigara kullanımıyla ilişkilendirilmektedir (Thandra, et al., 2021). Uluslararası Kanser Araştırma Ajansı (IARC) tarafından 2018 yılında oluşturulan veri tabanına göre, 185 ülke ve 36 kanser türü görülme ve ölüm oranları bildirilmiş olup, erkeklerde ölümlerde akciğer kanserinin ilk sırada yer aldığı ve kadınlarda ölümlerin üçüncü en büyük nedeninin akciğer kanseri olduğu rapor edilmiştir. 2018'de yaklaşık 9,6 milyon kanser ölümü rapor edilmiş ve bunların yaklaşık 1,8 milyonu ölümle sonuçlanmıştır (Bray, et al., 2018). Akciğer kanserleri; tüm dünyada kanserden ölümler içerisinde ilk sırada yer almaktadır (IARC, 2021). 2020'de 19.3 milyon yeni vaka ve 10.0 milyon ölüm bildirilmiştir (IARC, 2021). Ülkemizde 2020 yılında akciğer kanserli yeni vaka sayısı 41.264 olarak bildirilmiştir. Bu sayının 34.207 gibi bir bölümü erkek bireylerde görülmüştür (Sağlık Bakanlığı, 2021).

Olgu 67 yaşındadır. Yaşam süresinin ileri yaş bölümünde yer almaktadır. Olgunun sigara öyküsünün olması da kronik hastalık riskini desteklemektedir. Kanser evresinin ve klinik tablosunun sonucunda olgunun yaşam süresi olumsuz etkilenmiştir, kısalmıştır.

Günlük Yaşam Aktiviteleri

Güvenli Çevrenin Sağlanması ve Sürdürülmesi

Yaşam aktiviteleri içerisinde önemli bir noktada bulunan güvenli çevre kavramı;

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bireyin içinde bulunduğu ve dış ortamını saran çevre ile bir bütündür. Bireyin tüm yönleriyle sağlığını sürdürebilmesi; diğer günlük yaşam aktivitelerini yerine getirebilmesi için güvenli bir çevre elzemdir (Akkoyun ve Arslan, 2019; Wilkinson ve Barcus, 2020).

Olguda klinik tablodaki kötüleşme nedeniyle hareket kısıtlılığı gelişmiş, ajitasyon, huzursuzluk oluşmuş, yataktan düşme gerçekleşebileceği öngörülmüş, gerekli tedbirler alınmıştır. Olgunun değerlendirmesinde İtaki Düşme Riski Değerlendirme Ölçeğinden 19 puan alması ile bulgulanan 'düşme riski' hemşirelik tanısı konulmuştur. Hasta yatağının başına ve hasta odasının kapısına düşme riski figürü asılmıştır. Düşme olayı yaşanmaması için yanında sürekli refakatçi kalması sağlanmıştır. Yatak kenarlıklarının hepsi kaldırılmıştır. Ajitasyonu nedeniyle basit fiziksel tespit uygulanmıştır. Hemşire istasyonuna yakın bir odaya alınmıştır. Refakatçilere düşme konusunda eğitim verilmiş ve hemşire çağrı butonu öğretilmiştir (Birol, 2013; Şen vd., 2016). Düşme riskine karşın uygulanan hemşirelik girişimleri sonucunda, hasta palyatif bakım ünitesinde yattığı süre içerisinde düşmemiştir. Tüm anılan tedbirler sayesinde hastanın güvenli bir çevrede bakım ve tedavi alması sağlanmıştır.

İnvaziv bakım ekipmanları (damar yolu, foley sonda, PEG, trakeostomi), uzun süre hastanede yatış, inkontinans nedeni ile 'enfeksiyon riski' tanısı konulmuştur. Olguda yatışının 2. Gününde enfeksiyon kontrolü ve tedavisi açısından farmakolojik ajanlar kullanılmış, enfeksiyon kontrolü açısından asepsi kurallarına uyulmuş, tek kişilik odaya alınmış, hasta oda kapısına temas izolasyonu sembolü asılmış, oda sık sık havalandırılmış, hasta refakatçilerine hijyen kuralları öğretilmiştir. Perine hijyeni, üriner katater bakımı sağlanmıştır (Kızıltan & Usta, 2020; Özdelikara & Babur, 2020). Tüm bu hemşirelik girişimleri neticesinde olgunun kliniğe yatışının 14. gününde enfeksiyon belirti ve bulguları ortadan kalkmıştır.

Olgunun koksix bölgesinde 2. derece basınç ülseri ile bulgulanan, akciğer kanser semptomları ve halsizlik, yorgunluk ile ilişkili immobilizasyona bağlı 'deri bütünlüğünde bozulma' hemşirelik tanısı konulmuştur. 2. derece olan basınç ülserinin evresinin ilerlememesi ve cildin onarımı için; 2 saatte bir hastanın pozisyonu değiştirilmiş; çarşaflarının katlanmamış, düzgün ve kuru olmasına dikkat edilmiş; basınç noktaları yastıklarla desteklenmiş, yatağına havalı yatak serilmiş, haftada bir kez yardımlı banyoda vücut temizliği yapılmış, beslenme destek tedavisi etkili biçimde yürütülmüş, gaita kontaminasyonu oluşmaması açısından hasta bezi sık aralıklarla değiştirilmiştir. Kurumun yara bakım komitesinin önerilerine uygun olarak bariyer krem ile cilt nemli tutularak olgunun konforu sağlanmıştır (Birol, 2013, Damak & Karakoç Kumsar, 2020). Hemşirelik girişimleri sonucunda yatışını 14. gününde cildin iyileşmeye başladığı gözlemlenmiştir.

Olgunun yüzünü buruşturması, inleme benzeri sesler çıkarması, huzursuz ve ajitasyonunun bulunması ile bulgulanan, akciğer kanseri ile ilişkili 'kronik ağrı'

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hemşirelik tanısı konulmuştur. Hasta tek kişilik odaya alınmıştır. Ses, ışık, gürültü gibi dış stresörler elimine edilmiştir. Hekim orderına göre analjezik tedavisi uygulanmıştır. Ağrılı işlemler mümkün olduğu kadar analjezik tedavisinden sonra uygulanmıştır (Bulucu Böyüksoy vd., 2016; Özdelikara & Babur, 2020). Ağrıya yönelik uygulanan non-farmakolojik ve farmakolojik girişimler neticesinde ağrının giderildiği ancak farmakolojik ajanın etkisi geçtiğinde ağrının tekrar başladığı gözlemlenmiştir. Olgu; güvenli çevrenin sağlanması ve sürdürülmesini yarı bağımlı olarak sürdürmüştür.

İletişim Aktivitesi

İnsanlar birbirleriyle ve çevreleriyle iletişim halinde olan sosyal canlılardır (Atabek Aştı, 2020; Birol, 2013). İnsanların iletişimi sözlü veya sözsüz olabilir. Hemşire- hasta arasında olması gereken iletişim türü terapötik iletişimdir (Travelbee, 1971). Bu nedenle terminal dönemde hasta ve yakınlarına karşı hemşire anlayışlı, nazik bir iletişim şekli benimsemelidir (Atabek Aştı, 2020; Birol, 2013).

Olgu ile ilk karşılaşmadan itibaren iletişim sorunları saptanmıştır. Olguda saldırgan davranışlar sergileme, sözel iletişim kuramama ile bulgulanan, trakeostomi varlığı, bilinç durumunun konfüze olması ile ilişkili 'sözel iletişimde bozulma' hemşirelik tanısı konulmuştur. Hastaya terapötik şekilde yaklaşım sağlanmıştır. Hastaya daha fazla zaman ayırarak sözel uyaranlar verilmiştir. Alternatif sözlü olmayan iletişim yollarından (yazı, resim, müzik, vb.) yararlanılmaya çalışılmıştır (Ağaçdiken Alkan vd., 2019; Atabek Aştı, 2020). Palyatif bakım ünitesi psikoloğu ile ekip çalışması içerisinde süreç yönetilmiştir. Planlanan ve uygulanan hemşirelik bakımı sonucunda sözel uyaranlara olumlu tepkiler vermiştir.

Olguda ajitasyon varlığı ile bulgulanan; yeni bir kliniğe yatış, mevcut bakım ekipmanlarından rahatsızlık ile ilişkili 'anksiyete' hemşirelik tanısı konulmuştur. Bu tanı bağlamında tedavi ekipmanlarına uyumunu sağlamak için hastaya ve refakatçilerinin bilgilendirilmesi sağlanmış, hastayla iletişim kurulduğu durumlarda odası, kliniği, bakım veren ekip üyeleri tanıtılmıştır. Çevrenin sessiz ve sakin olması açısından monitör sesleri ayarlanmıştır (Şen vd., 2016; Terzi & Kaya, 2011). Destekleyici, güvene dayalı hemşire-hasta ilişkisi sağlanmıştır. Palyatif bakım ünitesi psikoloğu ile iş birliği yapılmıştır. Hekim istemi doğrultusunda sedatif tedavisi uygulanmıştır. Planlanan bakım doğrultusunda anksiyete seviyesi anlamlı ölçüde azalmıştır.

Solunum Aktivitesi

Bireylerin dünyaya gelmesiyle başlayıp ölüm anına kadar devam eden solunum süreci yaşamsal öneme sahiptir (Ekinci & Akyürek, 2020). Solunum diğer aktivitelerin sürdürülebilirliği için önemlidir (Tusad, 2023). Akciğer kanserinin solunum sistemi üzerindeki dispne, öksürük, hırıltılı solunum, vb. gibi evresine bağlı olarak yıkıcı etkileri vardır (Ekinci & Akyürek, 2020, Tusad, 2023).

Olgunun solunuma yardımcı trakeostomisinin bulunması, mevcut akciğer kanseri tıbbi tanısı, koyu ve fazla miktarda akciğer sekresyonu nedeniyle "Gaz

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değişiminde bozulma", "akut ağrı", "spontan solunumda bozulma" ve "etkisiz hava yolu temizliği" tanıları konulmuştur (Birol, 2013; Vicdan vd., 2015). Hastanın yatışından itibaren T-tüp ve 3-4 lt/dk oksijen desteği sağlanmıştır. Solunum hız ve derinliğinin sürekli gözlemi için monitörize edilmiştir. Hava yolu açıklığını sağlamak için sık postural drenaj uygulanmıştır. Solunum şekli, solunum sesleri ve sekresyon takibi akabinde derin trakeal aspirasyon uygulanmış ve refakatçilerine de aseptik tekniklere uyarak etkili solunumun devamı açısından uygun aspirasyon eğitimi verilmiştir. Solunumu rahatlatıcı pozisyonlardan sıklıkla faydalanılmıştır (Atabek Aştı, 2020; Atabek Aştı & Karadağ, 2019; Birol, 2013). Girişimlerin yanı sıra solunumu rahatlatıcı medikal tedavi etkili biçimde yürütülmüştür. Olgu solunum aktivitesini bağımlı olarak yerine getirmiştir.

Beslenme Aktivitesi

Bireylerin hayatta kalmasını sağlamak, metabolik enerji gereksinimlerini karşılamak, vücuttaki onarım süreçlerinin sürekliliğini sağlamak için beslenmeye ihtiyacı vardır (Albayrak vd., 2013; Tosun, 2018).

Olgu akciğer kanseri tanısı öncesinde yaşam sürecinde hipertansiyona bağlı tuzsuz diyet ile beslenmektedir. Ancak mevcut klinik tablosunda yutma fonksiyonunun azalması, yutmayı reddetmesi; BKİ 17.37 (zayıf) olması ile bulgulanan iştahsızlık ile ilişkili 'beden gereksiniminden az beslenme', 'yutma güçlüğü' hemşirelik tanıları konulmuştur (Birol, 2013). Tanılar doğrultusunda hastanın beslenme gereksinimi saptanmış ve hekim tarafından PEG planlaması yapılmıştır. PEG açılmasının ardından uygun beslenme solüsyonuyla enretal beslenme sağlanmıştır. 24 saatlik aldığı çıkardığı sıvı miktarı izlenmiş ve kaydedilmiştir. AÇT balansı dengeli olarak bulunmuştur.

Olguda kıvamlı-koyu sekresyon ile bulgulanan; enteral beslenme, yutma bozukluğu ile ilişkili; 'aspirasyon riski' hemşirelik tanısı almıştır (Terzi & Kaya, 2011). Hastanın enteral beslenme sırasında yatak başı 30-45° yükseltilmiştir. Beslenme solüsyonu yavaş hızda, az basınç uygulanarak verilmiştir. Besleme sonrasında yatak başı 15 dakika indirilmemiş ve sonrasında lateral pozisyonda takip edilmiştir. Sık derin trakeal aspirasyon ve nazo/orofarengeal aspirasyon yapılmıştır. Bağırsak sesleri dinlenmiş, tolerasyon durumu değerlendirilmiştir (Birol, 2013; Vicdan vd., 2015). Beslenme aralıkları ve besin miktarı hastanın tolerasyonuna göre belirlenmiştir. Hemşirelik girişimleri sonucunda hastada aspirasyon gelişmemiştir. Olgu beslenme aktivitesini bağımlı olarak yerine getirmiştir.

Boşaltım Aktivitesi

Boşaltım aktivitesi üriner ve bağırsak yolu ile gerçekleşen bir olaydır (Tosun, 2018). Metabolik atıklar bedenden boşaltım yolu ile atılır (Tosun, 2018). Yaşam sürecinin erken döneminde kazanılan ve refleks olarak oluşan bir durumdur. Yaşlılıkla birlikte bağımlı olarak gerçekleştirme riski artabilir. Temel ve mahremiyete önem verilmesi gereken bir aktivitedir (Albayrak vd., 2013; Tosun, 2018).

Olgunun üniteye kabulünde boşaltım aktivitesini foley sonda ile karşıladığı belirlenmiş ve yattığı süre boyunca foley

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sonda ile takip edilmiştir. Üriner katetere ilişkin "enfeksiyon riski" tanısı konulmuş ve tanıya yönelik tıbbi asepsiye uyularak sık sık perine bakımı ve üriner kateter bakımı verilmiştir. İdrar torbası yatak altındaki askıya asılmıştır. Ağrı, idrar rengi, miktarı açısından değerlendirilmiştir (Birol, 2013; Terzi & Kaya, 2011). Enfeksiyon belirti ve bulgusuna rastlanmamıştır.

Son bağırsak boşaltımının 5 gün önce olması nedeniyle 'konstipasyon' hemşirelik tanısı konulmuştur. Hastanın beslenmesinde hekim istemi doğrultusunda enretal beslemeye geçilmiş, solüsyon içeriği lifli seçilmiştir. Sıvı alım miktarı artırılmıştır. Bağırsak sesleri dinlenmiştir. Laksatif tedavi istem doğrultusunda yürütülmüştür. Fiziksel aktiviteyi artırmak amacıyla yatak içi egzersizler planlanmıştır (Birol, 2013; Terzi & Kaya, 2011). Hastada tüm bu girişimler neticesinde bağırsak boşaltımı gerçekleşmiştir.

Olgunun gün içinde neredeyse her bez değişiminde yumuşak gaita olması ile bulgulanan; bilişsel bozukluğundan dolayı sfinkter kontrolünün olmaması, üriner boşaltımını üriner kateterle gerçekleştirmesi ile ilişkili 'gaita inkontinansı' ve 'idrar yapma şeklinde değişiklik' hemşirelik tanısı konulmuştur (Birol, 2013; Terzi & Kaya, 2011).

Hastanın enteral ve parenteral olarak aldığı sıvıların ve çıkardığı idrar miktarının takibi yapılmıştır. Defekasyon zamanı, uygulanan yöntemler kaydedilmiştir (Bilge & Beji, 2018). Hasta boşaltım aktivitesini yarı bağımlı şekilde gerçekleştirmiştir.

Kişisel Temizlik ve Giyinme Aktivitesi

Sözel olmayan bir iletişim türü olarak ele alınan kişisel giyinme ve temizlik aktivitesi bireyin cinsiyetinden, sosyo-kültürel özelliklerinden, bilinç düzeyinden etkilenmekte ve beden hijyenini içine almaktadır (Vicdan vd., 2015; Wilkinson & Barcus, 2020).

Olgunun cildinde ve mukozalarında kuruluk, döküntü, vücut salgısı ile bulgulanan; olgunun konfüze ve immobil olması ile ilişkili 'özbakım eksikliği sendromu' hemşirelik tanısı konulmuştur. Tanı nedeniyle; hastaya sık sık ağız bakımı verilmiştir. Yattığı süre boyunca klinik durumu ağırlaşana kadar haftada bir yardımlı banyoda tüm vücut banyosu yaptırılmıştır. Kıyafetlerinin, el ve tırnaklarının temizliğine özen gösterilmiş sık sık silme banyosu şeklinde vücut bölümleri yıkanmıştır. Günlük perine ve üriner kateter bakımı yapılmıştır (Atabek Aştı, 2020; Atabek Aştı & Karadağ, 2019). Hasta kişisel temizlik ve giyinme aktivitesini bağımlı olarak sürdürmüştür.

Vücut Sıcaklığının Kontrolü

Bireyin canlılığının devamı için vücut sıcaklığı belirli bir seviyede kalması gerekir (Bayram, 2019). Hipotermi ve hipertermi durumları giderilmediğinde yaşamı tehdit edebilir (Bayram, 2019). Yaşam süresinin ilk ve yaşlılık dönemlerindeki bireyler risk altında sayılabilir (Tosun, 2018). Olgunun klinikte takip edildiği süre boyunca yaşamsal bulguları, beden ısısı, sıvı elektrolit dengesi takip edilmiştir ve beden ısısında değişikliğe rastlanmamıştır. Hasta bu aktiviteyi bağımsız sürdürmüştür.

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Hareket Aktivitesi

Büyük kas gruplarıyla birlikte ayakta durma, yürüme gibi mobilizasyonu sağlayarak bireye bağımsızlık sağlar (Tosun, 2018). Hareket aktivitesi ile diğer yaşam aktivitelerini de bağımsız yerine getirmek arasında yakın bir ilişki vardır (Tosun, 2018).

Akciğer kanserlerinde ilerleyici solunum sistemi rahatsızlıkları nedeniyle kişilerin fiziksel aktiviteleri de etkilenir (Karadağ vd., 2017). Olguda yorgunluk, dispne ile bulgulanan; mevcut bakım ekipmanları, immobilizasyon ile ilişkili 'fiziksel harekette bozulma' 'aktivite intoleransı' hemşirelik tanıları konulmuştur (Birol, 2013; Vicdan vd., 2015). Hava yolu açıklığını sağlamak için uygun pozisyon verilmiştir. Hastanın aktivite durumu gözlemlenmiş ve fizyoterapist eşliğinde fiziksel hareket aktivitelerini artırma planlanmıştır. Aktiviteleri sonrası uygun dinlenme periyodları sağlanmıştır. Gece rahat uyuması için ışık, ses faktörleri elimine edilmiştir (Atabek Aştı, 2020; Atabek Aştı ve Karadağ, 2019). Yatak içinde aktif-pasif egzersizler yaptırılmıştır. Olgu yardım ile fiziksel hareketlerini gerçekleştirebilmektedir. Bu aktiviteyi bağımlı olarak gerçekleştirmiştir.

Çalışma ve Eğlence Aktivitesi

Çalışma ve eğlence aktivitesi bireyler için farklı anlamlar ifade edebilir. Geçim kaynağı olabilecek bir aktivite kimi bireyler için hobi olabilir (müzik, edebiyat, heykel, vb.) (Atabek Aştı, 2020; Birol, 2013)

Olgu akciğer kanseri nedeniyle geçim kaynağı olan çiftçilik mesleğini gerçekleştirememekte ve bağımlı olarak sürdürmektedir. 'Etkisiz Rol Performansı', 'Boş Vakitlerini Geçirme Aktivitelerinde Yetersizlik' hemşirelik tanısı konulmuştur. Günün sabah ve öğle saatlerinde enstrümental müzik dinletisi yapılmıştır (Atabek Aştı & Karadağ, 2019).

Cinselliği İfade Etme

Bireylerin dış görünüşü, kıyafet seçimi, aile içi ve sosyal rolleri, cinsiyet rollerini kapsayan cinselliği ifade etme aktivitesi yalnızca seksüel aktivite olarak adlandırılmamaktadır (Atabek Aştı, 2020).

Olgu kimliği ve dış görünüşüyle uyumludur. Ajitasyonu, bilinç durumunun konfüze olması nedeni ile bu aktivite bünyesinde iletişim kurulamadığı için girişimler planlanamamıştır.

Uyku ve Dinlenme Aktivitesi

Bireyin stres faktörlerinden uzaklaşması, beden onarımının sağlanması için uyku gereksinimi vardır (Atabek Aştı, 2020). Uyku aktivitesine ihtiyaç bireyler arasında değişmekle birlikte elzem bir aktivitedir (Albayrak vd., 2013). Uyku aktivitesini yerine getirmede oluşan sorunlar birey sağlığını olumsuz yönde etkilemektedir (Albayrak vd., 2013).

Olgunun yaşam süresi içerisinde yaşlılık evresinde olduğu için uyku gereksinimi azalmıştır. Olguda ağrının uykuya dalma ve uykuyu sürdürmede olumsuz etkisinin gözlenmesi, sık sık uyanma ile bulgulanan; akciğer kanseri sebebiyle yaşadığı dispne, öksürük, artmış sekresyon, ajitasyon, monitör sesleri ile ilişkili 'Uyku Örüntüsünde Bozulma' hemşirelik tanısı konulmuştur (Birol, 2013).

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Olgunun kliniğe, dış ortama uyumunu sağlamak için monitör sesleri ayarlanmıştır. Gece ışıklandırma, gürültü seviyesi azaltılmıştır. Ağrılı işlemler gündüz saatlerinde planlanmıştır. Gündüz uyumaması için refakatçisi ile iletişim yolları artırılmıştır. Temizlik personellerinin gece gürültü yapmaması konusunda uyarılarda bulunulmuştur. Uykuya yardımcı farmakolojik ajanların hekim istemi doğrultusunda uygulaması sağlanmıştır (Atabek Aştı & Karadağ, 2019).

Girişimler doğrultusunda hastanın rahat uyuduğu, gece daha uzun süreler uykuyu sürdürdüğü, sık sık uyanma periyodlarının azaldığı gözlemlenmiştir. Olgu uyku aktivitesini yarı bağımlı olarak sürdürmüştür.

Ölüm

Ölüm aktivitesi tüm yaşam sürecinin sonlandığının bir ifadesidir (Atabek Aştı, 2020). Olgunun terminal dönemde olması, bilinç durumunu konfüze olması, sözel iletişime geçilememesi nedeni ile ölüm aktivitesi değerlendirilememiştir.

Olgu 25.05.2021 tarihinde 45 dakika resüsitasyona rağmen exitus kabul edilmiştir. Kurum sisteminden ölüm kartı doldurulmuştur. Olgunun tüm bakım ekipmanları, mönitör bağlantıları çıkarılmış ve kanama kontrolü yapıldıktan sonra temiz pansumanla kapatılmıştır. Hareketi önleyecek şekilde sabitlendikten sonra çarşafa sarılmış, gerekli önlemler alınarak en kısa süre içerisinde kurum morguna nakli sağlanmıştır. Olgunun yakınlarına, olgu ölüm sürecindeyken etkili baş etme yöntemleri anlatılmıştır. Yas süreci anlatılarak, gerekli durumlarda psikolojik destek alabilecekleri kurum bilgisi verilmiştir.

SONUÇ

Olgu günlük yaşam aktivitelerine dayanan hemşirelik modeli doğrultusunda tanılanmış, değerlendirilmiş ve tespit edilen problemler neticesinde, hemşirelik tanıları konulmuş ve gerekli girişimler planlanmıştır. Olgunun klinik durumundaki ağır seyir nedeniyle mümkün olabilen ve yukarıda değinilen bakım girişimleri uygulanmıştır. Yaşamının son döneminde olduğu anlaşılan olgunun, son günlerini olabildiğince ağrısız ve daha konforlu geçirmesi sağlanmıştır. Günlük yaşam aktivitelerine dayanan hemşirelik modelinin hemşirelik sürecinde uygulanmasının, bakım kalitesini artırdığı gözlenmiştir. Bu noktada modelin hemşirelerin bakım planlarına dahil edilmesini önermekteyiz.

Etik Kurul Raporu ve Kurum İzni: Olgudan (Yasal Vasisinden) sözlü ve yazılı izin alınmıştır.

Yazar Katkısı: Çalışmada fikir, ana düşünce, yöntem, veri toplama, analiz, yazma, son okuma Sevil PAMUK CEBECİ'ye ve Mihraç TOPÇU'ya aittir. Çalışma için herhangi bir kişi ya da kurum/kuruluştan mali destek alınmamıştır.

Yazar Notu: Bu çalışma 21-22 Ekim 2023 Tarihinde İstanbul'da düzenlenen 7. Uluslararası Hemşirelik ve İnovasyon Kongresi'nde (özet metin) Sözel Bildiri olarak sunulmuştur.

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EXTENDED ABSTRACT

Objective: The aim of the article is to discuss a lung cancer patient receiving inpatient treatment in a palliative care center as a case report and to evaluate it in the light of the Roper, Logan and Tierney Nursing Model. **Method:** A 67-year-old male patient, hospitalized in a city hospital palliative care center in Turkey, is receiving treatment and rehabilitation with the diagnosis of "Pulmonary Disease". During the rehabilitation process, the patient was handled with a holistic approach and diagnosed with the contribution of the nursing model based on daily life activities, the nursing process was managed, the nursing diagnoses identified in the patient and interventions appropriate to these diagnoses were planned and implemented. The case report study was explained and verbal and written informed consent was obtained from the patient's legal guardian. **Results:** Daily Living Activities; *Ensuring and Maintaining a Safe Environment*: A nursing diagnosis of 'fall risk' was made in the case due to the presence of movement limitation, agitation and a score of 19 on the Itaki Fall Risk Assessment Scale. A nursing diagnosis was made of 'deterioration in skin integrity' due to immobilization associated with lung cancer symptoms and weakness and fatigue, which was detected with a 2nd degree pressure ulcer in the coccyx region of the patient. A nursing diagnosis of 'chronic pain' associated with lung cancer was made, as the patient grimaced, made moan-like sounds, and was restless and agitated. *Communication Activity*: Communication problems have been identified since the first encounter with the case. In the case, a nursing diagnosis was made of 'impairment in verbal communication', which was associated with aggressive behavior and inability to communicate verbally, the presence of a tracheostomy, and confusion in the state of consciousness. *Respiratory Activity:* The presence of a tracheostomy to assist breathing, the current medical diagnosis of lung cancer, and dark and excessive lung secretions, diagnoses of "impairment in gas exchange", "acute pain", "impairment in spontaneous breathing" and "ineffective airway clearance" were made. *Nutritional Activity:* The patient had been eating a salt-free diet due to hypertension throughout his life before the diagnosis of lung cancer. However, in his current clinical picture, decreased swallowing function, refusal to swallow; Nursing diagnoses of 'feeding less than body requirements' and 'difficulty swallowing' were made, associated with the lack of appetite detected with a BMI of 17.37 (underweight). In the case, it was detected with viscous-dark secretion; enteral nutrition, associated with swallowing disorder; 'Aspiration risk' was diagnosed as nursing. *Excretory Activity:* It was determined that the patient had excretory activity with a Foley catheter upon admission to the unit and was monitored with a foley catheter throughout his stay. A diagnosis of "infection risk" was made regarding the urinary catheter. A nursing diagnosis of 'constipation' was made because the last bowel evacuation occurred 5 days ago. *Personal Cleaning and Dressing Activity*: Dryness on the patient's skin and mucous membranes, rash, and body

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secretions; A nursing diagnosis of 'self-care deficit syndrome' was made, which was associated with the patient being confused and immobile. *Control of Body Temperature*: During the patient's follow-up in the clinic, vital signs, body temperature, and fluid electrolyte balance were monitored and no change in body temperature was observed. *Movement Activity:* Detected in the patient with fatigue and dyspnea; Nursing diagnoses of 'impairment in physical movement' and 'activity intolerance' related to existing care equipment and immobilization were made. *Work and Recreational Activity*: Due to lung cancer, our patient cannot perform his livelihood, farming, and continues to be dependent. A nursing diagnosis of 'Ineffective Role Performance' and 'Inadequacy in Leisure Activities' was made. Expressing Sexuality is compatible with the phenomenon's identity and appearance. Interventions could not be planned as communication could not be established within this activity due to his agitation and confused state of consciousness. *Sleep and Rest Activity*: The negative effect of pain on falling asleep and maintaining sleep was observed in the case, and was detected by frequent awakenings; A nursing diagnosis was made of 'Disruption in Sleep Pattern' related to dyspnea, cough, increased secretion, agitation and monitor sounds due to lung cancer. *Death: A*ctivity could not be evaluated due to the fact that the patient was in the terminal period, the consciousness level was confused, and verbal communication was not possible. **Conclusion:** Maintenances planned by grouping are more functional and comprehensive during the implementation phase. At this point, it is recommended that nurses include the Nursing Model Based on Daily Living Activities in their care plans.

Dergimiz 2011 yılında yayın hayatına başlamıştır. Başta spor bilimleri olmak koşulu ile sağlık bilimleri ve spor bilimlerinin ortak kabul ettiği alandan yayınlar kabul edilmektedir. Günümüz koşullarında teknolojinin getirdiği kolaylık ve bilimsel çalışmalara duyulan ihtiyaç nedeni ile dergimiz bu anlamda duyulan eksikliği bir nebze olmak koşulu ile gidermeye çalışmak amacıyla yayın hayatına girmiştir. Dergimiz başta spor bilimleri, spor eğitimi, sporcu sağlığı, sağlık yönetimi, spor hekimliği, tıp tarihi ve etik, sporcu beslenmesi, spor psikolojisi, spora yönelik tıbbı ve biyolojik bilimler "doping" gibi bilim dallarından yayın kabul etmektedir. Ayrıca bu ana bilim anabilim dallarının alt bilim dallarında yapılan çalışmaları kendi alanında uzman hakemlerin değerlendirmesi ve olumlu sonuç alan çalışmaların yayınını kabul etmektedir. Farmakoloji bilimi içerisinde yer alan fakat sporcu ve sporcu sağılığına yönelik çalışmalar da yine dergimizde kabul edilip değerlendirmeye alınmaktadır. Spor ve sporculara yönelik adli bilimler alanında yapılan çalışmalar da yine dergimiz bünyesinde kabul edilerek değerlendirmeye alınmaktadır. Gerçek anlamda bilimsel nitelik taşıyan, bilim dünyasına bilimsel anlamda hizmet edecek ve katkı sağlayacak çalışmalar ve bu çalışmalara ilişkin araştırma, derleme ve çeviri içerikli yayınları dergimiz kabul etmekte olup bünyesinde yayınlamaktadır.

Dergimiz yılda dört sayı çıkarmakta olup her bir sayı yılın üç ayında bir basılı olarak yayınlanmaktadır. Dergimiz çalışma prensibi doğrultusunda her alana ait çalışmaya eşit ve adil şekilde yer vermektedir. Dergimize gelen çalışmalar iki ayrı alan uzmanı hakem tarafından değerlendirilmekte olup bu değerlendirme süresi hakemlerin iş yoğunluğu kapsamında iki aylık süreci kapsamaktadır. İki ayrı hakemden onay alan çalışmalar dergimizin yayın kurulu onayı ile sıraya alınarak basılı şekilde yayınlanmaktadır. Dergimizde yazım kuralları apa sistemine göre düzenlenmekte olup, örnek bir makale formatı sistemden indirilmek koşulu ile yazarlar tarafından kullanılabilmektedir. Editör makamı derginin her türlü sisteminden sorumlu olup, hiçbir hakem ve yazar yükümlülüğünü taşımamaktadır. Yazarlar kendi hür irade ve bilgileri doğrultusunda yayın yapma hakkına sahip olup yayına kabul edilip yayınlanan çalışmalar konusunda bütün yükümlülüğü kabul etmiş bulunmaktadır. Dergimiz yayıncı ve okuyucu arasında bir köprü vazifesi yüklenmiştir. Dergimiz ve yayınlar hakkında değerlendirme yapan hakemler yayınlanan yayın hakkında hukuki bir yükümlülüğe sahip değildir. Her türlü yükümlülük yazarlara aittir. Dergimiz hiçbir yayın hakkında hakemler üzerinde etki ve zorlayıcı bir yaptırıma sahip değildir. Hiçbir çalışma bir başka çalışmaya karşı öncelik hakkına sahip değildir. Her bir çalışma kendi açısından aynı koşul ve şartlara tabidir. Bir öncelik ve ayrıcalığı bulunmamaktadır. Hiçbir yazar değerlendirme yapan hakem hakkında bilgi sahibi olamaz ve hakemler üzerinde yüküm lülük oluşturamaz. Dergi yönetimi ve editör hiçbir çalışmanın öncelikli olduğunu belirleyemez ve hiçbir yazara öncelik veremez. Sistem her çalışma ve her yazar için aynı koşul ve şartlarda işletilir. Dergimizin yazım dili İngilizce'dir.

Dergimiz uluslararası nitelikte olup bu niteliklere sahip çalışmaları kabul eder. Bir başka dergiye herhangi bir nedenle gönderilmiş çalışmalar dergimizde yayınlanmak amacıyla kabul edilse bile tekzip yayınlanmak koşulu ile red edilir. Dergimize gönderilen her bir çalışmanın hakkı yazar tara ından dergimize verilmiştir. Yazar bunu peşinen kabul etmiştir. Bu durum ve koşullar; yayın dergimizin sistemine yüklendiğinde işletilmeye başlanır. Bunun için yazarlardan özel bir beyan ve imza alınmaz. Oluşan veya oluşabilecek hukuki sorunlarda dergimizin hukuk danışmanları dergimiz ve dergimiz hakemlerini korumak adına her türlü işlemi tek taraflı olarak yapma hakkına sahiptir.

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