



THE EFFECT OF PATIENTS' COMFORT LEVELS ON SELF-CARE AGENCY AFTER TOTAL KNEE PROSTHESIS SURGERY

TOTAL DİZ PROTEZİ AMELİYATI SONRASI HASTALARIN KONFOR DÜZEYLERİNİN ÖZ BAKIM GÜCÜNE ETKİSİ

Bilge AVCI ¹, Ezgi SEYHAN AK ²

¹ Gebze State Hospital, Kocaeli, Türkiye

² Istanbul University, Cerrahpasa, Florence Nightingale Faculty of Nursing, Istanbul, Türkiye

ABSTRACT

Objective: Pain and restriction of movement after total knee arthroplasty surgery can also reduce the quality of life and self-care agency of the individual. This study was conducted to examine the relationship between patients' comfort levels and their self-care agency after total knee prosthesis surgery.

Methods: This descriptive and cross-sectional study was conducted with 109 patients who underwent total knee prosthesis in the orthopedic service of a public hospital between March 2023 and March 2024. Data were obtained using the Descriptive and Clinical Characteristics Form, General Comfort Scale, and Self-Care Agency Scale in the postoperative period. Data analysis was performed using SPSS software version 26.

Results: The total mean score of the patients on the GCS was 123.34 ± 15.31 , and the total mean score of the SCAS was 75.81 ± 14.11 . There was a statistically significant negative relationship between age and self-care agency ($r = -0.264$; $p = 0.006$). Postoperative pain was negatively associated with self-care agency ($\beta = -0.24$; $p = 0.006$), whereas education level ($\beta = 0.19$; $p = 0.011$) and general comfort ($\beta = 0.48$; $p < 0.001$) were positively associated with self-care agency.

Conclusion: As a result of this study examining the relationship between comfort levels and self-care agency in patients who underwent total knee arthroplasty, a positive association was found between patients' comfort levels and their self-care agency. It was also determined that both self-care agency and comfort levels decreased with increasing age. In addition, postoperative pain was negatively associated with self-care agency, whereas education level and general comfort were positively associated with self-care agency.

Keywords: Total Knee Prosthesis, Postoperative Period, Comfort, Self-Care Agency

ÖZET

Amaç: Total diz protezi sonrası ağrı ve hareket kısıtlılığı, bireyin yaşam kalitesini ve öz bakım yeteneğini de azaltabilir. Bu çalışma, total diz protezi ameliyatı sonrası hastaların konfor düzeyleri ile öz bakım gücü arasındaki ilişkiyi incelemek amacıyla gerçekleştirildi.

Yöntem: Bu tanımlayıcı çalışma, Mart 2023 ile Mart 2024 tarihleri arasında bir devlet hastanesinde ortopedi servisinde total diz protezi ameliyatı geçiren 109 hasta ile gerçekleştirildi. Veriler, ameliyat sonrası dönemde tanıtıcı ve klinik özellikler formu, genel konfor ölçeği ve öz bakım gücü ölçeği kullanılarak elde edildi. Veri analizi SPSS yazılımı sürüm 26 kullanılarak gerçekleştirildi.

Bulgular: Hastaların GKÖ toplam puan ortalaması 123.34 ± 15.31 , ÖBGÖ toplam puan ortalaması ise 75.81 ± 14.11 olarak bulundu. Hastaların yaşı ile öz bakım gücü arasında istatistiksel olarak anlamlı ve negatif yönde bir ilişki saptandı ($r = -0.264$; $p = 0.006$). Ayrıca ameliyat sonrası ağrı düzeyi ile öz bakım gücü arasında negatif yönlü, eğitim düzeyi ve genel konfor ile öz bakım gücü arasında ise pozitif yönlü ilişki olduğu belirlendi.

Sonuç: Bu çalışmada, total diz protezi ameliyatı geçiren hastalarda konfor düzeyi ile öz bakım gücü arasında pozitif bir ilişki olduğu saptandı. Yaş arttıkça hem konfor düzeyinin hem de öz bakım gücünün azaldığı belirlendi. Ayrıca ameliyat sonrası ağrının öz bakım gücü ile negatif, eğitim düzeyi ve genel konforun ise pozitif yönde ilişkili olduğu bulundu.

Anahtar Kelimeler: Total Diz Protezi, Ameliyat Sonrası Dönem, Konfor, Öz bakım gücü

Sorumlu Yazar / Corresponding Author: Ezgi SEYHAN AK, Associate Professor, Istanbul University, Cerrahpasa, Florence Nightingale Faculty of Nursing, Department of Surgical Diseases Nursing, Istanbul Türkiye. **E-mail:** esyhnak86@gmail.com

Bu makaleye atf yapmak için / Cite this article: Avcı, B., & Ak, E.S. (2026). The Relationship Between Patients' Comfort Levels and Self-Care Agency After Total Knee Arthroplasty. *Gevher Nesibe Journal of Medical & Health Sciences*, 11(1), 46-53. <http://doi.org/10.5281/zenodo.19801213>

INTRODUCTION

Total knee prosthesis (TKP) is a surgical treatment used in the management of functional limitations and pain caused by knee joint osteoarthritis (Bakır & Göktaş, 2023; Canovas & Dagneaux, 2018). According to OECD Health Statistics, the countries with the highest FFP surgery incidence rate are Switzerland (273/100.000 individuals), Finland (260/100.000 individuals) and Australia (252/100.000 individuals), respectively. In Turkey, this rate is determined as 90/100,000 individuals (OECD, 2023). Although total knee arthroplasty surgery is widely performed, patients may experience many problems such as post-operative pain, dependency in daily living activities, sleep problems and depression. The discomfort experienced by the patient during surgery or procedures is the main reason for the decrease in patient comfort. Disruption in daily living activities, sleep disorders and depression that accompany the disease after surgery negatively affect the patient's compliance with the treatment process and response to treatment, quality of life, course of the physical disease, length of hospital stay, mortality and morbidity. Therefore, it is very important to ensure the comfort of the patient after surgery. (Kaya & Karagözoglu, 2023; Tosun et al., 2022; Yılmaz et al., 2018).

Pain and restriction of movement after total knee arthroplasty surgery can also reduce the quality of life and self-care agency of the individual. Self-care agency is a combination of behavioral and power elements that determine a person's self-care agency in relation to protecting, maintaining and promoting health. Patients' comfort level and self-care agency are very important concepts for surgical nursing (Lai et al., 2019; Mandour et al., 2022; Kaya & Bilik, 2022).

Individuals who underwent total knee prosthesis have difficulty in performing daily living activities due to osteoarthritis in the preoperative period. Supportive nursing interventions are needed to increase patients' self-care abilities and meet their self-care needs independently in the postoperative period. It is thought that an effective counseling process will increase the patient's self-care agency, enhance the healing process and increase the quality of life (Kaya & Bilik, 2022).

The pain and limitation of movement observed after total knee arthroplasty surgery cause patients to be unable to meet their needs such as walking, going to the toilet, and taking a shower on their own for a certain period of time after the surgery, which causes patients to feel dependent (Özgür & Rızalar, 2021). This study was planned to examine the relationship between comfort levels and self-care agency in patients during the postoperative period after total knee prosthesis surgery. Since there are limited studies directly addressing this relationship in the literature, the findings are expected to contribute to nursing care by supporting individualized care planning and improving patient education strategies.

Research Questions

- What is the general comfort scale score mean of the patients after total knee prosthesis surgery?
- What is the mean self-care agency score of patients after total knee prosthesis surgery?
- Is there a relationship between the patients' general comfort scale scores and their self-care agency scores after total knee prosthesis surgery?
- What are the independent variables related to the general comfort scale and self-care agency of patients after total knee prosthesis surgery?

MATERIALS AND METHODS

The study was conducted as a descriptive and cross-sectional study to examine the relationship between patients' comfort levels and their self-care agency after total knee prosthesis surgery.

It was conducted between March 2023 and March 2024 with patients who had total knee prosthesis surgery in the orthopedic service of a public hospital. The population of the study consisted of patients who had total knee prosthesis surgery within the specified date range in the orthopedic service of a public hospital and met the inclusion criteria for the study. The sample size determined using the known universe sampling method with a confidence level of 95% had a margin error of 5% and gave a minimum required sample size of 109 patients. Patients over the age of 40, who had surgery for the first time with the diagnosis of osteoarthritis, who were conscious and oriented, who were not diagnosed with any psychiatric disease, who had no visual or hearing impairment, and who were hospitalized for at least two days after the surgery were included in the study. Patients with a history of cancer, patients diagnosed with delirium after surgery, and patients who developed complications during and after surgery were not included in the study. Data were obtained using the Descriptive and Clinical Characteristics Form, General Comfort Scale, and Self-Care Agency Scale in the postoperative period.

Descriptive and Clinical Characteristics Form was prepared by the researcher in line with the literature (Bakır & Göktaş, 2023; Kaya & Karagözoglu, 2023). The first part of this form consists of a total of 15 questions including age, sex, body mass index, diagnosis, marital status, education level, working status, income level, smoking and alcohol use, chronic diseases, type of anesthesia, surgical site, and continuous medication use, while the second part consists of 9 questions evaluating postoperative vital signs (body temperature, pulse, respiration, blood pressure), mobilization status, nutritional status, excretory status, sleep patterns, and pain level.

The General Comfort Scale, based on the Comfort Theory introduced by Kolcaba in 1992, was developed by Kolcaba in 2003 to evaluate patients' comfort levels. It was translated into Turkish and its validity and reliability were tested by Kuğuoğlu and Karabacak in 2008. The original version of the scale demonstrated a Cronbach's alpha reliability coefficient of 0.88, while the Turkish version reported a coefficient of 0.85. The scale is composed of 48 items, rated on a 4-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree. The total possible score ranges from 48 to 192, with a midpoint of 120. Higher scores indicate greater comfort. In the current study, the Cronbach's alpha coefficient was calculated as 0.920, indicating excellent internal consistency (Kubat Bakır & Yurt, 2020; Kuğuoğlu, 2014).

The Self-Care Agency Scale, originally created by Kearney and Fleischer in 1979, was adapted for the Turkish population by Nahcıvan in 1993, who also carried out validity and reliability studies. The adapted version consists of 35 items that assess an individual's ability to perform self-care. Responses are scored using a 5-point Likert scale, ranging from 0 (does not describe me at all) to 4 (describes me very well). Eight of the items (3, 6, 9, 13, 19, 22, 26, and 31) are negatively worded and require reverse scoring. The maximum score obtainable is 140, with higher scores reflecting a stronger self-care ability. The Cronbach's alpha value was 0.92 in the original adaptation study and 0.887 in this study, suggesting a high level of reliability.

After the patients who had total knee arthroplasty surgery and met the inclusion criteria for the study were informed and signed the Informed Consent Form, data were collected by face-to-face interview technique using the Descriptive and Clinical Characteristics Form, General Comfort Scale, and Self-Care Agency Scale at the 48th hour after the surgery. Data collection lasted 20-25 minutes for each patient.

Data Analysis

The assumption of normality for continuous variables was assessed using the Kolmogorov-Smirnov test. Categorical variables were summarized using frequencies and percentages (n, %), while continuous variables were presented as means and standard deviations. To evaluate the internal consistency of the scales utilized in the study, Cronbach's alpha coefficients were computed. For comparisons between two independent groups, the independent samples t-test was employed. When comparing more than two groups, one-way analysis of variance (ANOVA) was conducted, and in cases where a significant difference was identified, LSD post-hoc tests were applied to determine the specific group differences. The Pearson correlation test was used to assess the relationship between continuous variables. In addition, multiple linear regression analysis was performed to investigate the influence of independent variables on the dependent variables, specifically general comfort and self-care agency. Statistical significance was determined at a p-value less than 0.05, with a 95% confidence interval. All data analyses were conducted using SPSS software version 26.0 (IBM Corp., Armonk, NY, USA).

Ethical Approval

Ethics committee approval (Date:23.02.2023, No:2023/32) and institutional authorization were obtained prior to initiating the study. Participants were informed that the information they provided would be kept confidential, stored securely by the researchers, and used exclusively for academic purposes. Informed consent was obtained from all participants, both in written and verbal form. Additionally, necessary permissions were acquired for the use of the assessment scales included in the research.

RESULTS

A significant positive correlation was found between patients' self-care agency and their overall comfort level, including the sub-dimensions of relief, relaxation, and overcoming (Table 1).

Table 1. General Comfort Scale and Self-Care Scale scores and the Level of Relationship Between Them

No	Scale scores	Ort.±SD	Min.-Max.	1	2	3	4
1	GCS	123.34±15.31	83-165	NA			
2	GCS-Relief	41.61±5.00	30-54	0.866*			
3	GCS- Relaxation	41.90±6.42	24-58	0.950*	0.725*		
4	GCS- Overcoming	39.83±5.26	24-53	0.927*	0.686*	0.856*	
5	SCAS	75.81±14.11	41-120	0.670*	0.543*	0.669*	0.617*

*p<0.001; Pearson correlation, SD: Standard deviation, NA: Not available

There was a statistically significant and negative correlation ($r=-0,273$; $p=0,004$) between the age of the patients and the general comfort level; the general comfort level decreased as the age of the patients increased, the general comfort level of patients with ideal weight was better, the general comfort level of patients diagnosed with a chronic disease was statistically significantly lower ($t=2,505$; $p=0.014$), the general comfort level of patients who underwent spinal anesthesia was statistically significantly higher ($t=2.499$; $p=0.003$), and the general comfort level of patients with continuous medication use was statistically significantly lower ($t=2.212$; $p=0.029$) (Table 2).

Table 2. Mean GCS Scores of Patients According to Descriptive Characteristics (N=109)

Variables	Category	n	GCQ		P-value
			Mean±SD	Test value	
Age	Total	109	-	$r=-0.273$	0.004*
Sex	Woman	59	122.27±15.64	$t=0.790$	0.431
	Man	50	124.60±14.97		
BMI	Normal ¹	38	127.18±15.40	$F=3.277$	0.042*
	Overweight ²	48	123.31±13.95		<i>fark**=1>3</i>
	Obese ³	23	117.04±16.39		
Marital Status	Married	86	124.50±14.88	$t=1.540$	0.126
	Single	23	119.00±16.43		
Education level	Literate	32	120.81±16.10	$F=1.035$	0.359
	Primary school	55	123.38±13.76		
	Secondary school and above	22	126.91±17.67		
Working status	Yes	52	127.77±13.86	$t=2.990$	0.003*
	No	57	119.30±15.56		
Income	Less than expense	52	123.19±15.00	$F=0.146$	0.865
	Equivalent to expense	37	122.68±17.19		
	More than expenses	20	124.95±12.82		
Smoking	Yes	53	123.66±12.93	$t=0.212$	0.833
	No	56	123.04±17.37		
Alcohol use	Yes	28	120.64±13.54	$t=1.082$	0.282
	No	81	124.27±15.84		
Chronic disease	Yes	42	118.81±16.39	$t=2.505$	0.014*
	No	67	126.18±13.97		
Anesthesia type	Spinal	97	124.60±14.98	$t=2.499$	0.014*
	General	12	113.17±14.63		
Surgical site	Right	48	122.33±13.46	$t=0.607$	0.545
	Left	61	124.13±16.68		
Continuous medication use	Yes	51	119.94±15.80	$t=2.212$	0.029*
	No	58	126.33±14.33		

*p<0.05; r: Pearson correlation test, t: Independent samples t test, F: One-way ANOVA test, **:LSD post-hoc test, SD: Standard deviation

The analysis revealed a statistically significant negative correlation between patient age and self-care agency levels ($r = -0.264$; $p = 0.006$), suggesting that self-care agency declines with increasing age. Individuals with at least a secondary school education exhibited higher self-care agency scores. Moreover, those who were actively employed had significantly greater self-care agency ($t = 3.168$; $p = 0.002$). On the other hand, patients diagnosed with chronic diseases ($t = 2.232$; $p = 0.029$) and those requiring continuous medication ($t = 2.261$; $p = 0.026$) had notably lower self-care agency scores (Table 3).

Table 3. Mean SCAS Scores of Patients According to Descriptive Characteristics (N=109)

Variables	Category	n	SCAS		
			Mean±Sd	Test value	P-value
Age	Total	109	-	$r=-0.264$	0.006*
Sex	Woman	59	75.24±13.39	$t=0.456$	0.649
	Man	50	76.48±15.04		
BMI	Normal	38	77.16±13.79	$F=1.058$	0.351
	Overweight	48	76.54±14.47		
	Obese	23	72.04±13.84		
Marital status	Married	86	76.20±11.69	$t=0.404$	0.690
	Single	23	74.35±21.14		
Education level	Literate	32	71.28±13.01	$F=6.521$	0.002*
	Equivalent to expense	55	74.96±12.12		<i>fark**=3>1,2</i>
	More than expenses	22	84.50±16.88		
Working status	Yes	52	80.12±13.60	$t=3.168$	0.002*
	No	57	71.88±13.52		
Income	Less than expense	52	77.13±13.92	$F=0.566$	0.569
	Equivalent to expense	37	73.89±15.13		
	More than expenses	20	75.90±12.90		
Smoking	Yes	53	78.47±13.96	$t=1.942$	0.055
	No	56	73.29±13.92		
Alcohol use	Yes	28	76.50±12.22	$t=0.300$	0.765
	No	81	75.57±14.78		
Chronic disease	Yes	42	71.90±15.43	$t=2.232$	0.029*
	No	67	78.25±12.74		
Anesthesia type	Spinal	97	76.55±14.01	$t=1.565$	0.121
	General	12	69.83±14.11		
Surgical site	Right	48	75.56±15.42	$t=0.160$	0.873
	Left	61	76.00±13.12		
Continuous medication use	Yes	51	72.61±14.51	$t=2.261$	0.026*
	No	58	78.62±13.25		

* $p < 0.05$; r: Pearson correlation test, t: Independent sample t test, F: One-way ANOVA test, **:LSD post-hoc test, SD: Standard deviation

When the relationship between the independent variables and self-care agency was examined, postoperative pain ($\beta = -0.24$; $p = 0.006$) was negatively associated with self-care agency, whereas education level ($\beta = 0.19$; $p = 0.011$) and general comfort ($\beta = 0.48$; $p < 0.001$) were positively associated with self-care agency (Table 4).

Table 4. Independent Variables Associated with Patients' Self-Care Agency

Variables	B	SE	%95 Confidence Interval		β	T	p	VIF	Tol.
			Min	Max					
Constant value	16.35	17.77	-18.91	51.61		0.920	0.360		
Age	0.21	0.21	-0.20	0.62	0.09	1.016	0.312	1.87	0.53
Education level	3.90	1.50	0.92	6.87	0.19	2.597	0.011*	1.22	0.82
Working status (<i>I=yes;</i> <i>0=no</i>)	2.94	2.20	-1.43	7.32	0.11	1.337	0.184	1.35	0.74
Chronic disease (<i>I=yes;</i> <i>0=no</i>)	-0.41	3.85	-8.05	7.23	-0.01	-0.107	0.915	3.91	0.26
Continuous medication use (<i>I=yes;</i> <i>0=no</i>)	-3.34	3.57	-10.43	3.75	-0.12	-0.936	0.352	3.54	0.28
Urine output number	-0.44	2.05	-4.51	3.63	-0.02	-0.216	0.829	1.13	0.88
Pain level	-2.72	0.97	-4.65	-0.79	-0.24	-2.793	0.006*	1.59	0.63
General comfort level	0.45	0.08	0.28	0.61	0.48	5.380	<0.001*	1.78	0.56
Linear regression model summary	Model method=		Enter						
	F ₍₈₋₁₀₀₎ =		14.957; p<0.001						
	R ²		0.545						
	DW statistic=		2.086						
	Dependent variable=		Self-care agency						

*p<0.05; B=Unstandardized regression estimate, β =Standardized regression estimate, SE=Standard error, VIF=Variance inflation factor, Tol=Tolerance value, **:Reference value, DW=Durbin Watson test statistic

DISCUSSION

Based on the findings of this study, a significant positive relationship was found between patients' comfort levels and self-care agency following total knee arthroplasty. This finding suggests that patients who experience higher levels of comfort in the postoperative period are more capable of performing self-care activities independently. Increased comfort may reduce physical and psychological barriers, thereby facilitating patients' engagement in daily living activities.

In the present study, patients' comfort levels were found to be moderate. This finding is consistent with previous studies conducted in surgical populations (Kubat Bakır & Yurt, 2020). The relatively moderate comfort levels observed in this study may be attributed to the early postoperative period, during which patients frequently experience pain, limited mobility, and environmental stressors that negatively affect their overall comfort.

Similarly, patients' self-care agency levels were also found to be moderate. Previous studies have reported comparable findings among patients undergoing orthopedic procedures (Eliacık Özyıldırım, 2016). This situation can be explained by the temporary dependency experienced after surgery, as well as the physical limitations and emotional stress associated with the recovery process, which may hinder patients' ability to perform self-care activities effectively.

The study also revealed a significant negative relationship between age and both comfort level and self-care agency. This finding is in line with previous research indicating that advancing age is associated with decreased comfort and reduced functional capacity (Bozdemir et al., 2022; Durmaz, 2022; Özkan, 2022). Age-related physiological changes, increased prevalence of chronic diseases, and decreased adaptability to surgical stress may contribute to lower comfort levels and reduced self-care capacity among older individuals.

Furthermore, postoperative pain was found to be negatively associated with self-care agency. This finding is supported by previous studies demonstrating that pain interferes with mobility and daily functioning, thereby limiting patients' ability to perform self-care activities (Kaya & Karagözoglu, 2023; Uçan Owayolu et al., 2012; Pehlivan et al., 2015). In addition to physical limitations, pain may

also lead to psychological distress, which can further reduce patients' motivation and confidence in managing their own care.

From a clinical perspective, these findings highlight the importance of implementing individualized, comfort-oriented nursing interventions in the postoperative period. Effective pain management, early mobilization, and supportive care strategies may enhance patient comfort and, consequently, improve self-care agency. In this context, strengthening patient education programs and integrating comfort-based care models into clinical practice may contribute to better recovery outcomes and increased patient independence.

Limitations

This study is limited to patients who met the inclusion criteria and agreed to participate in the study conducted in a single public hospital. Additionally, data were collected within the first 48 hours after surgery, reflecting the acute postoperative phase. Therefore, the findings may not fully represent patients' long-term self-care capacity.

CONCLUSIONS

This study examined the relationship between comfort levels and self-care agency in patients who underwent total knee arthroplasty. A positive relationship was found between patients' comfort levels and their self-care agency. In addition, both comfort levels and self-care agency were found to decrease with increasing age. Postoperative pain was negatively associated with self-care agency, whereas education level and general comfort were positively associated with self-care agency.

Based on these findings, it is recommended that individualized care plans focusing on patient comfort should be developed. Improving the physical and psychological hospital environment, implementing effective multimodal pain management strategies, and strengthening pre- and postoperative patient education may enhance both comfort and self-care agency. In addition, providing targeted support for older patients, including physiotherapy and individualized counseling, may further contribute to improved recovery outcomes. Future studies are recommended to explore interventions aimed at enhancing comfort and self-care agency in different patient populations

Conflict of Interest

The authors have not reported any conflict of interest.

Author Contributions

Design of the Study: BA, ESA; Data Collection: BA; Data Analysis: BA, ESA; Writing the Article: BA, ESA; Article Submission and Revision: ESA

Financial Support

The authors declare that this study did not receive any funding.

REFERENCES

- Bakır, G. K., & Göktaş, S. (2023). The effects of motivational interviews about activities of daily living on physical adjustment and quality of life in elderly total knee arthroplasty patients: A randomised-controlled trial. Research Square. <https://doi.org/10.21203/rs.3.rs-2898357/v1>
- Bozdemir, H., Usta, E., Şimşek Yaban, Z., & Aygün, D. (2022). Evaluation of the factors affecting the comfort of patients who undergo surgery for breast cancer. *International Journal of Caring Sciences*, 15(1), 522–529.
- Bozkurt, M., & Nazik, E. (2021). Üriner inkontinansı olan kadınların konfor düzeyi ve öz bakım gücünün belirlenmesi. *Journal of Contemporary Medicine*, 11(2), 185–190. <https://doi.org/10.16899/jcm.759720>
- Canovas, F., & Dagneaux, L. (2018). Quality of life after total knee arthroplasty. *Orthopaedics & Traumatology: Surgery & Research*, 104(1), 41–46. <https://doi.org/10.1016/j.otsr.2017.04.017>
- Durmaz, B. N. (2022). Evaluation of the relationship between comfort and symptom severity, self-care behaviors and quality of life in heart failure patients [Master's thesis, Hacettepe University Health Sciences Institute].
- Eliacık Özyıldırım, N. (2016). Orthopaedics and traumatology service of the hospital with the diagnosis gonarthrosis, knee replacement surgery patients quality of life and the power of self-care [Master's thesis, Istanbul Okan University Health Sciences Institute].
- Eraydın, C., & Sunal, N. (2021). Stomalı hastalarda özbakım gücü ve etkileyen faktörler. *Akdeniz Tıp Dergisi*, 7(1), 57–64. <https://doi.org/10.17954/amj.2021.2677>

- Kaya, C., & Bilik, Ö. (2022). Effect of counseling on quality of life and self-care agency for patients who are scheduled for total knee replacement. *Clinical Nursing Research*, 31(3), 519–529. <https://doi.org/10.1177/10547738211058985>
- Kaya, D., & Karagözoglu, S. (2023). Lomber disk hernili bireylerde yaşanan ağrının özbakım gücüne etkisi ve bireylerin ağrı ile baş etme yöntemleri. *Etkili Hemşirelik Dergisi*, 16(3), 275–288. <https://doi.org/10.46483/jnef.1327396>
- Kubat Bakır, G., & Yurt, S. (2020). Cerrahi operasyon geçiren hastaların konfor düzeyinin değerlendirilmesi. *Sağlık ve Toplum*, 30(3), 158–165.
- Kuguoglu, S. (2014). Genel konfor ölçeğinin Türkçeye uyarlanması. *Florence Nightingale Journal of Nursing*, 16(61), 16–23.
- Lai, Y. F., Lin, P. C., Chen, C. H., Chen, J. L., & Hsu, H. T. (2019). Current status and changes in pain and activities of daily living in elderly patients with osteoarthritis before and after unilateral total knee replacement surgery. *Journal of Clinical Medicine*, 8(2), 221. <https://doi.org/10.3390/jcm8020221>
- Mandour, N. I., Shahin, E. M., Reheem, A. E., & Reheem, H. A. E. (2022). Quality of life for patients after total knee replacement surgery. *Port Said Scientific Journal of Nursing*, 9(1), 100–118.
- Nuraini, T., Gayatri, D., & Rachmawati, I. (2017). Comfort assessment of cancer patients in palliative care: A nursing perspective. *International Journal of Caring Sciences*, 10(1), 209.
- OECD. (2023). Hip and knee replacement. In *Health at a Glance 2023: OECD Indicators* (pp. 118–119). OECD Publishing. https://doi.org/10.1787/health_glance-2023-en
- Özgür, S., & Rızalar, S. (2021). Total diz protezi uygulanan hastalarda postoperatif ağrı yönetiminin incelenmesi. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 10(2), 237–246. <https://doi.org/10.37989/gumussagbil.889197>
- Özkan, B. (2022). The determination of relationship between self-care power and comfort level in patients undertaking abdominal [Master's thesis, Ondokuz Mayıs University Graduate Education Institute].
- Özsoy, H. (2022). The effect of active heating before total knee arthroplasty on postoperative body temperature and comfort [Doctoral dissertation, Ege University Health Sciences Institute].
- Pehlivan, S., Ersoy, S., Ugan, Y., & Fadiloğlu, Ç. (2015). Romatoid artritli hastalarda özbakım gücü ve etkileyen faktörler. *Ege Üniversitesi Hemşirelik Fakültesi Dergisi*, 31(1), 27–38.
- Sun, C., Jia, M., Wu, H., Yang, Q., Wang, Q., Wang, L., & Xu, H. (2021). The effect of comfort care based on the collaborative care model on the compliance and self-care ability of patients with coronary heart disease. *Annals of Palliative Medicine*, 10(1), 501–508. <http://dx.doi.org/10.21037/apm-20-2520>
- Terzi, B., & Kaya, L. (2017). Konfor kuramı ve analizi. *Anadolu Hemşirelik ve Sağlık Bilimleri Dergisi*, 20(1), 67–74.
- Tosun, H., Ödüz Özkaya, B., Uz, F., & Gül, A. (2022). Cerrahi girişim uygulanan hastalarda ağrı ve konfor ilişkisi. *Online Türk Sağlık Bilimleri Dergisi*, 7(1), 47–52. <https://doi.org/10.26453/otjhs.988106>
- Uçan Ovayolu, O., Ovayolu, N., & Karadağ, G. (2012). The relationship between self-care agency, disability levels and factors regarding these situations among patients with rheumatoid arthritis. *Journal of Clinical Nursing*, 21(1–2), 101–110. <https://doi.org/10.1111/j.1365-2702.2011.03710.x>
- Ünal Taşkın, E. (2011). The effect of pre- and post-operative counseling on self-care skills, functional status and pain in patients undergoing total knee prosthesis [Master's thesis, Dokuz Eylül University Health Sciences Institute].
- Yılmaz, E., Çeçen, D., Kızıl Togaç, H., Mutlu, S., Kara, H., & Aslan, A. (2018). Ameliyat sürecindeki hastaların konfor düzeyleri ve hemşirelik bakımları. *Manisa Celal Bayar Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi*, 5(1), 3–9.