Original Article

DOI: 10.14235/bas.galenos.2026.82504
Bezmialem Science

The Relationship Between Preoperative Care Dependence and Postoperative Comfort Level in Patients with Hip Replacement

Kalça Protezi Olan Hastalarda Ameliyat Öncesi Bakım Bağımlılığı ile Ameliyat Sonrası Konfor Düzeyi Arasındaki İlişki

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ABSTRACT

Objective: Assessment of an individuals' need for care in the preoperative period and implementation of structured care supported by evidence-based practices are important to improve patient comfort in the postoperative period. The present study investigated how preoperative care dependency is associated with postoperative comfort in patients undergoing hip replacement surgery.

Methods: A descriptive correlational study was carried out with 120 patients at a training and research hospital in Türkiye between July 2021 and April 2022. Data were collected using an "Information Form", the "Care Dependency Scale", and the "Post Hip Replacement Comfort Scale".

Results: The patients' mean age was 68.56±14.75 years, and 72.5% (n=87) were female. The patients' mean scale scores of "Care Dependency Scale" and "Post Hip Replacement Comfort Scale" were 66.16±17.48 and 3.51±0.50, respectively. A weak yet statistically significant positive relationship was found between the scales (r=0.339, p<0.001), indicating that lower preoperative care dependency was associated with higher postoperative comfort.

ÖZ

Amaç: Ameliyat öncesi dönemde bireylerin bakım gereksinimlerinin değerlendirilmesi ve kanıta dayalı uygulamalarla desteklenen yapılandırılmış bakımın uygulanması, ameliyat sonrası dönemde hasta konforunu artırmak için önemlidir. Bu çalışma, kalça protezi ameliyatı geçiren hastalarda ameliyat öncesi bakım bağımlılığı ile ameliyat sonrası konfor arasındaki ilişkiyi incelemeyi amaçlamaktadır.

Yöntemler: Bu tanımlayıcı ve ilişki arayıcı çalışma, Temmuz 2021 ile Nisan 2022 tarihleri arasında Türkiye'deki bir eğitim ve araştırma hastanesinde 120 hasta ile yürütülmüştür. Veriler Bilgi Formu, Bakım Bağımlılığı Ölçeği ve Kalça Protezi Sonrası Konfor Ölçeği kullanılarak toplanmıştır.

Bulgular: Hastaların yaş ortalaması 68,56±14,75 yıl ve %72,5'i (n=87) kadındı. Bakım Bağımlılığı Ölçeği ve Kalça Protezi Sonrası Konfor Ölçeği toplam puan ortalamaları sırasıyla 66,16±17,48 ve 3,51±0,50 idi. Bakım Bağımlılığı Ölçeği ve Kalça Protezi Sonrası Konfor Ölçeği puanları arasında istatistiksel olarak anlamlı ve pozitif yönde zayıf bir ilişki bulundu (r=0,339, p<0,001). Bu ilişki, ameliyat öncesi daha düşük bakım bağımlılığının ameliyat sonrası daha yüksek konforla ilişkili olduğunu göstermektedir.

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Cite this article as: İbrahimoğlu Ö, Özkan B, Kuş İ, Öğütlü Ö. The relationship between preoperative care dependence and postoperative comfort level in patients with hip replacement. Bezmialem Science. [Epub Ahead of Print]

Received: 11.08.2025
Accepted: 09.02.2026
Epub: 08.01.2026

ABSTRACT

Conclusion: Evaluating patients' care needs during the preoperative period may support postoperative comfort. These findings underscore the importance of tailored nursing interventions to address preoperative care dependency.

Keywords: Patient comfort, perioperative care, perioperative nursing

ÖZ

Sonuç: Ameliyat öncesi dönemde hastaların bakım ihtiyaçlarının değerlendirilmesi ameliyat sonrası konforu destekleyebilir. Bu bulgular, ameliyat öncesi bakım bağımlılığını ele almak için kişiye özel hemşirelik girişimlerinin önemini vurgulamaktadır.

Anahtar Kelimeler: Hasta Konforu, perioperatif bakım, perioperatif hemşirelik

Introduction

Hip replacement surgery involves removing of the head of the femur and the acetabulum, and replacing them with artificial parts. Hip replacement surgery is indicated for a variety of conditions, primarily fractures of the femur and acetabulum, as well as primary and secondary osteoarthritis, avascular necrosis, ankylosing spondylitis, tumors, and congenital hip dislocation. The aim is to relieve the patient's pain and improve hip joint mobility (1). It is a major surgical procedure with a high risk of complications during both the preoperative and postoperative periods (2).

Determining an individual's care needs before and after surgery is critical to care management. The primary goal is to help the individual regain their ability to care for themselves independently (3). Patients who are dependent on others for care require more caregivers than independent patients. Therefore, it is crucial to determine the care needs and level of dependency of the individuals for whom nurses are responsible to improve the quality of nursing care. Moreover, knowledge of patients' care needs is fundamental to planning and managing nursing care. When determining these needs, the level of care dependency of patients is an important indicator (4).

Patients' care needs before hip replacement surgery are primarily related to mobility restrictions and extend to the entire perioperative period (1). Patients are often faced with physiological problems such as decreased appetite, pressure injuries, constipation, and orthostatic hypotension due to limited mobility. They may also experience psychological problems. These include delirium, anxiety, depression, and sleep disturbances. Social problems may also arise, such as distancing oneself from family and surroundings, and alterations in role functioning (5). This has a negative impact on patients' well-being (6).

The concept of comfort was first defined by nursing theorist Kolcaba (7) in 1991. In nursing care, comfort means attending to a patient's needs. Providing patient comfort accelerates healing and improves patient care outcomes (7). During surgery, especially in the postoperative period, patient comfort is primarily affected by postoperative pain. However, comfort is also influenced by environmental factors, such as temperature, light, and noise in the hospital setting; sociocultural factors including effective communication and patient education; and psychospiritual factors such as self-concept, sexuality, and self-awareness (8). In addition, comfort can be affected by many factors during the preoperative, intraoperative, and postoperative periods (9). These preoperative factors can affect the patient comfort during the postoperative period. These factors include the patient's physiological and psychological readiness for surgery, their fear of anaesthesia and surgery, the effectiveness of preoperative education, and their dependence on nursing care due to preoperative illness or disability (8).

Nurses care for patients with varying levels of dependency. It is crucial to assess patients' level of dependency in order to determine their nursing care needs, plan nursing interventions, assist in improving their abilities, and develop appropriate discharge plans. This ensures patient's comfort (10,11). It is expected that the pre-existing dependency on care resulting from the current illness or disability will decrease as the postoperative recovery process progresses. Consequently, an improvement in patient comfort is expected as dependency decreases. No prior research was identified exploring how preoperative care dependency relates to postoperative comfort in hip replacement patients. For this reason, the present study was conducted to evaluate that relationship.

Methods

Design and Sample

A descriptive correlational study was carried out with 120 patients at an orthopaedics and traumatology clinic of a training and research hospital in Türkiye between July 2021 and April 2022. An a priori power analysis was conducted using G*Power 3.1 with a two-tailed test, a significance level of $\alpha=0.05$, and a statistical power of $1-\beta=0.80$. Based on these assumptions and a medium effect size, the required minimum sample size was calculated as 115 participants. A non-probability, consecutive sampling method was used. Patients who met the inclusion criteria and were admitted to the orthopaedics and traumatology clinic during the data collection period were invited to participate in the study, and those who volunteered were included. Inclusion criteria were as follows: individuals who had to have undergone hip

replacement surgery, aged between 18 and 95 years, had no psychiatric illness or learning disability, had no hearing or vision problems, were cognitively able, spoke and could read Turkish, and expressed their willingness to participate in the study. This study was reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology statement.

Preoperative Patient Information

In the study setting, all patients scheduled for hip replacement surgery routinely received standardized preoperative information as part of usual care. This information was provided by the responsible nurse and/or physician during the preoperative hospitalization period and included explanations about the surgical procedure, anaesthesia, postoperative pain management, early mobilization, use of assistive devices, and basic self-care activities. The information was delivered verbally and supported by routine written materials when available. No additional or study-specific educational intervention was implemented as part of this research.

Data Collection Tools

Patients were seen in the service one day before and two days after the surgery. The "Information Form" and the "Care Dependency Scale" (CDS) were completed the day before surgery, and the "Post Hip Replacement Comfort Scale" (PHRCS) was completed on the second day after surgery. The form took about 15 minutes to complete.

Information Form: It contains a total of 18 questions covering demographics (e.g., age, gender, marital status, body mass index, employment status, education level, presence of chronic diseases, smoking and alcohol consumption habits, use of assistive devices such as walkers or canes, and previous surgeries) and perioperative characteristics (e.g., reason for surgery, previous hip replacement surgeries, and type of surgery, anaesthesia, and analgesia). The form was developed by the researchers based on a review of the relevant literature and routine clinical assessment practices in orthopaedic and perioperative care. The patients' pain levels were assessed using the "Visual Analogue Scale", in which they marked a point on a 10-cm line ranging from "no pain" to "worst pain".

CDS: This scale is based on Virginia Henderson's framework of human needs. It was developed by Dijkstra et al. (11) to assess patients' care dependency situations. The scale's validity and reliability were studied in Türkiye by Hakverdioğlu-Yönt et al. (12). It is a 5-point Likert scale consisting of 17 items covering activities of daily life. The lowest possible score is 17, and the highest possible score is 85. A high score indicates that patients can meet their care needs independently, while a low score indicates that they rely on others to do so. In the Turkish version of the scale, the Cronbach's alpha was 0.91 (12). This study found that Cronbach's alpha for the scale was 0.971.

PHRCS: Saray Kilic and Tastan (6) developed the scale for assessing patient comfort during the hospital stay after hip replacement surgery in 2017, and the scale was designed to be administered on postoperative day 2, which corresponds to the period when early postoperative recovery stabilizes and patient comfort can be reliably evaluated. Consisting of 26 items, it had a single factor and a 5-point Likert scale. The total score was divided by the number of items to obtain the average score. The highest possible average score is 5, and the lowest is 1; a higher total score indicates greater patient comfort. In the original development study, Cronbach's alpha was reported as 0.758 (6). The Cronbach's alpha for the scale was 0.846 in this study.

Statistical Analysis

The data analysis for this study was performed using SPSS-21.0 statistical software program (IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp.). The Kolmogorov-Smirnov test was used to assess whether the data conformed to a normal distribution. For the statistical analysis of the data, descriptive methods were used. These methods included the mean, standard deviation, frequency, minimum and maximum. Due to the non-normal distribution of the data, Mann-Whitney U, Kruskal-Wallis, and Spearman correlation tests were used to evaluate links between descriptive characteristics and scale outcomes. The correlation coefficient "r" was interpreted and categorized as follows: 0-0.2=very weak, 0.2-0.4=weak, 0.4-0.6=moderate, and 0.6-0.8=strong. All statistical tests were conducted with a significance level set at $p<0.05$.

Ethical Approval

Ethics committee approval was obtained from the İstanbul Kent University Ethics Committee (approval number: 2021-05, date: 29.06.2021). Prior to the study, approval was obtained from the hospital, and written informed consent was obtained from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

Results

The mean age of the patients was 68.56±14.75 (min: 21, max: 94) years. Of these patients, 72.5% (n=87) were female. Of these patients, 58.3% (n=70) had fractures and 69.2% (n=83) underwent total hip replacement surgery. On the second day after surgery, the pain levels of patients were 4.85±2.44 (min: 0, max: 10), and the number of mobilizations was 1.86±1.24 (min: 0, max: 6). The other demographic and perioperative characteristics of the participants are shown in Tables 1 and 2.

The mean scale scores for patients on the CDS and the PHRCS were 66.16±17.48 (min: 19, max: 85) and 3.51±0.50 (min: 2.23, max: 4.46), respectively. There was a weak yet statistically significant positive relationship between the two scores (r=0.339) (p<0.001). As the level of patient care dependency decreases during the preoperative period, the level of postoperative comfort increases (Table 3).

Examining the relationship between certain patient characteristics and the total CDS and PHRCS scores revealed statistically significant relationship between CDS and patients' level of education (KWχ^2=9.648), marital status (Z=-2.553), and use of an assistive device (Z=-5.226) (p<0.05). It was determined that patients who were married, had a higher level of education, and did not use assistive devices had lower levels of care dependency. A statistically significant relationship was found between the PHRCS and patients' gender (Z=3.343), education level (KWχ^2=8.186), marital and employment status (Z=-4.002, Z=-2.752), chronic diseases (Z=-2.042), use of an assistive device (Z=-2.858), type of hip replacement and anaesthesia (Z=-3.690, Z=-2.265), and reason for surgery (KWχ^2=21.146) (p<0.05). Patients who were male, had a higher level of education, were employed, did not have a chronic disease and did not used assistive devices, had undergone total hip replacement surgery, and had received spinal anaesthesia reported higher postoperative comfort. There was a statistically significant and negative moderate relationship between CDS and age (r=-0.531). There was also a negative weak relationship between CDS and pain intensity on postoperative second day (r=-0.255). There was a positive moderate relationship between PHRCS and age (r=0.415), and negative moderate relationship between PHRCS and pain intensity on postoperative second day (r=-0.490) (p<0.05). Given that higher CDS scores indicate lower levels of care dependency, the negative correlation between CDS and age suggests that care dependency increases with advancing age. Similarly, the negative association between CDS and pain intensity indicates that higher care dependency is associated with increased postoperative pain. Furthermore, the negative relationship between pain intensity and PHRCS demonstrates that increased postoperative pain is associated with lower postoperative comfort levels (Table 4).

Table 1. Demographic characteristics of participants

		$\bar{X}$ ± (SD)	Min	Max
Age (years)		68.56±14.75	21	94
Body mass index (kg/m²)		28.53±4.91	15.63	41.42
			n	**%**
Gender	Female		87	72.5
	Male		33	27.5
Marital status	Married		75	62.5
	Single		45	37.5
Education level	Primary school		83	69.2
	High school		19	15.8
	University		18	15.0
Employment status	Employed		14	11.7
	Unemployed or retired		106	88.3
Chronical diseases	Yes		98	81.7
	No		22	18.3
Using an assistive device	Yes		62	51.7
	No		58	48.3
Previous surgery	Yes		90	75.0
	No		30	25.0

SD: Standard deviation

Table 2. Perioperative characteristics of participants

		n	%
Reason for surgery	Fracture	70	58.3
	Primary osteoarthritis	30	25.0
	Secondary osteoarthritis	6	5.0
	Avascular necrosis	2	1.7
	Congenital hip dislocation	12	10.0
History of hip replacement surgery	Present	20	16.7
	Absent	100	83.3
Hip replacement procedure types	Total hip replacement	83	69.2
	Partial hip replacement	37	30.8
Type of anesthesia	General	14	11.7
	Spinal	106	88.3
Type of analgesia	Epidural	18	15.0
	Patient controlled analgesia	5	4.2
	Others	97	80.8
	$\bar{X}$ ± (SD)	**Min**	**Max**
Pain intensity on postoperative day 2	4.85±2.44	0	10
Frequency of mobilization on postoperative day 2	1.86±1.24	0	6

SD: Standard deviation

Table 3. Average scores and correlations of the scales

Scales	$\bar{X}$ ± (SD)	Min-Max	r	p-value
Comfort score	3.51±0.50	2.23-4.46	**0.339**	**<0.001***
Care dependency score	66.16±17.48	19-85		

*: p<0.05 Spearman's correlation, SD: Standard deviation

Table 4. The relationship between participant characteristics and the dependency and comfort scores

		Care dependency scores		Comfort scores	
		$\bar{X}$ ± (SD)	Z_{MWU} p	$\bar{X}$ ± (SD)	Z_{MWU} p
Gender	Female	66.27±17.55	-0.168	3.41±0.50	**3.343**
	Male	65.85±17.55	0.867	3.76±0.40	**0.001***
Marital status	Married	69.96±14.39	**-2.553**	3.66±0.42	**-4.002**
	Single	59.87±20.33	**0.011***	3.26±0.53	**<0.001***
Employment status	Employed	73.43±9.87	-1.348	3.85±0.35	**-2.752**
	Unemployed	65.20±18.06	0.178	3.46±0.50	**0.006***
Chronical diseases	Yes	65.19±17.93	-1.230	3.46±0.51	**-2.042**
	No	70.45±14.93	0.219	3.71±0.37	**0.041***
Using an assistive device	Yes	59.03±17.36	**-5.226**	3.38±0.53	**-2.858**
	No	73.77±14.18	**<0.001***	3.64±0.43	**0.004***
Previous surgery	Yes	66.01±16.87	-0.790	3.53±0.49	-0.891
	No	66.60±19.50	0.430	3.43±0.53	0.373
Previous hip replacement surgery	Yes	65.00±20.24	-0.039	3.71±0.33	-1.705
	No	66.39±16.98	0.969	3.47±0.52	0.088
Type of hip replacement	Total	67.59±15.95	-0.723	3.63±0.45	**-3.690**
	Partial	62.94±20.36	0.470	3.24±0.52	**<0.001***
Type of anesthesia	General	59.36±16.76	-1.716	3.21±0.54	**-2.265**
	Spinal	67.06±17.45	0.086	3.55±0.48	**0.023***
		$\bar{X}$ ± (SD)	$KW\chi^2$ p	$\bar{X}$ ± (SD)	$KW\chi^2$ p
Education level	Primary school (a)	62.43±18.97	**9.647**	3.41±0.53	**8.186**
	High school (b)	75.42±8.99	**0.008***	3.74±0.34	**0.017***
	University (c)	73.55±9.76	**a<b,c****	3.70±0.35	**a<b****
Reason for surgery	Fracture (a)	63.17±19.93	2.787 0.594	3.34±0.53	**21.146** **<0.001*** **a<b,e****
	Primary osteoarthritis (b)	68.47±13.02		3.79±0.33	
	Secondary osteoarthritis (c)	72.17±18.13		3.45±0.37	
	Avascular necrosis (d)	75.50±0.71		3.42±0.71	
	Congenital hip dislocation (e)	73.25±7.39		3.81±0.22	
Type of analgesia	Epidural	72.94±12.83	2.563 0.278	3.58±0.39	0.483 0.785
	Patient controlled analgesia	69.60±9.55		3.61±0.49	
	Others	64.72±18.29		3.49±0.52	
		r	p	r	p
Age (years)		**-0.531**	**<0.001***	**0.415**	**<0.001***
Body mass index (kg/m²)		0.081	0.385	0.081	0.383
Pain intensity on postoperative day 2		**-0.255**	**0.005***	**-0.490**	**<0.001***
Frequency of mobilization on postoperative day 2		0.044	0.637	-0.020	0.831

*: p<0.05, **: Post-hoc analysis, Z_{MWU}: Mann-Whitney U, $KW\chi^2$: Kruskal-Wallis, r: Spearman correlation, SD: Standard deviation

Discussion

Assessing an individual's care needs and level of independence plays an important role in planning care and improving the quality of care provided. Comfort, experienced by patients as a sense of positivity and empowerment, is multidimensional. It encompasses not only the alleviation of physical discomfort, but also positive emotions such as confidence, a sense of competence and personal control, and feelings of being valued, cared for, safe, and at ease (13). Understanding the relationship between comfort and care dependency in patients undergoing orthopaedic surgery, where care dependency levels are expected to be influenced by the surgical process, may support nurses in optimizing care outcomes for patients undergoing orthopaedic surgery.

In this study, the mean total CDS score was 66.16±17.48 (min: 19, max: 85). Among literature studies using the same scale, Akyazı (14) reported a mean patient score of 40.26±12.73 for those undergoing orthopaedic surgery, while Akın Korhan et al. (15) reported a mean scale score of 73.79±18.11 for patients hospitalized in surgical clinics, and 68.45±22.77 for those hospitalized in internal clinics. Durgun et al. (16) reported a mean score of 69.12±17.80. The mean CDS score in the present study was higher than that reported by Akyazı (14), but slightly lower than those reported in some other surgical and medical patient populations (15,16). These differences may reflect variations in patient characteristics, particularly age, functional limitations, and underlying comorbidities. These patients typically experience long-standing pain, reduced mobility, and progressive functional limitations prior to surgery, which can increase their dependence on others for daily activities even before hospitalization. In addition, hip replacement candidates are often older adults with multiple comorbid conditions, further contributing to increased care needs. The chronic nature of hip pathology and the prolonged period of functional impairment before surgery may therefore result in higher perceived care dependency compared with more heterogeneous surgical populations.

In this study, the mean total PHRCS score for patients was 3.51±0.50 (min: 2.23, max: 4.46), indicating a moderate level of perceived comfort among patients on the second postoperative day following hip replacement surgery. Saray Kilic and Tastan (6), who developed the PHRCS, reported a mean score of 3.64±0.43 when evaluating the effects of nursing interventions on patient comfort. Similarly, İbrahimoğlu et al. (17) reported that the overall mean score of the PHRCS was 3.58±0.40. The similarity of these findings suggests that early postoperative comfort levels after hip replacement are relatively consistent across different settings when standard perioperative and postoperative care protocols are applied. From a clinical perspective, the moderate comfort level observed on the second postoperative day may reflect the balance between effective pain control, early mobilization efforts, and ongoing physical discomfort related to surgical trauma, movement limitations, and fatigue. Although routine postoperative nursing care—including analgesia management, mobilization support, wound care, and patient education—likely contributes positively to comfort, patients may still experience residual pain, sleep disturbance, anxiety, and functional dependence at this early stage of recovery. This suggests that while standard care may help maintain a reasonable level of comfort, there remains potential for targeted supportive strategies that may enhance symptom control and psychosocial support during the early postoperative period.

It is expected that care dependency will decrease during the postoperative recovery process, resulting in increased patient comfort. This study found a weak yet statistically significant positive correlation between the CDS and the PHRCS ($r=0.339$) ($p<0.001$). This finding suggests that patients who were more care-dependent in the preoperative period also tended to report lower levels of comfort in the early postoperative period. Previous studies examining surgical patients' comfort and its influencing factors have similarly shown that the surgical experience and recovery process have a direct impact on patients' comfort levels (18,19). Furthermore, patients hospitalized in internal medicine clinics have been reported to have higher levels of care dependency (10,15), which may be related to advanced age, prolonged hospitalization, chronic illnesses, and multiple ongoing treatments.

According to the data obtained in this study, patients with a high level of education and who did not use assistive devices had a lower dependency level on preoperative care and higher postoperative comfort level. Köberich et al. (20) stated that there was no change in patients' care dependency levels after they received self-care education. Durgun et al. (16), however, stated that care dependency decreased as the level of education increased. This finding suggests that patients with higher levels of education may be better able to understand use routine preoperative information, enabling them to take responsibility for their own care and to maintain higher levels of independence. This, in turn, may positively influence their perceptions of comfort after surgery. Similarly, patients who did not require assistive devices prior to surgery reported lower preoperative care dependency and higher postoperative comfort. İbrahimoğlu et al. (17) likewise reported that patients using assistive devices before hip replacement surgery experienced lower perceptions of perioperative care and reduced postoperative comfort. The use of assistive devices before surgery often reflects more severe hip joint deformities and functional limitations. Greater deformity may increase care dependency in the preoperative period

and may also be associated with longer surgery duration, more complex procedures, prolonged hospitalization, and a higher likelihood of revision surgery (21,22), all of which may negatively affect postoperative comfort (23). This study also found that male patients and those without chronic diseases experienced higher levels of comfort, postoperatively. Büyükünalan Şahin and Rızalar (18) similarly reported that male patients experienced higher levels of postoperative comfort than female patients, which they attributed to women's greater domestic and caregiving responsibilities. Patients without chronic diseases experience greater postoperative comfort may be explained by lower symptom burden and fewer functional limitations among patients without chronic comorbidities, which may support better comfort perceptions in the postoperative period.

Untreated pain has been shown to reduce quality of life and may lead to withdrawal from active life (24). In the present study, higher postoperative comfort levels observed among patients receiving spinal anaesthesia may be related to its effectiveness in reducing pain perception during and after surgery. In addition, pain emerged as an important factor associated with both care dependency and comfort in the early postoperative period. Given that higher scores on the CDS indicate lower levels of care dependency, the negative association observed between CDS and age suggests that care dependency increases with advancing age, while postoperative comfort levels also increased with age (Table 4). Although advancing age is generally associated with reduced functional capacity and greater dependence on others for daily activities (15,25), older patients may report higher comfort levels postoperatively due to lower activity expectations, greater acceptance of physical limitations, or more intensive caregiving support. However, chronic conditions, use of assistive devices, and delayed mobilization may increase pain and functional impairment, which in turn can negatively affect comfort. Previous studies have shown that patients with chronic pain, delayed postoperative mobilization, and poorer functional status experience lower comfort levels following hip replacement surgery (26). Although hip replacement surgery can improve preoperative functional limitations and thereby enhance long-term comfort, postoperative pain related to surgical trauma may temporarily reduce comfort during the early recovery phase (27,28). Consistent with the findings of this study, Büyükünalan Şahin and Rızalar (18), Mondanaro et al. (29), and Aydıngülü and Arslan (30) reported a significant negative association between pain and comfort in the early postoperative period, with higher pain levels being associated with lower comfort. These findings highlight the importance of effective postoperative pain management as a key strategy for improving patient comfort.

Study Limitations

This study was conducted among patients undergoing hip replacement surgery at the orthopaedics and traumatology clinic of a training and research hospital in Türkiye; therefore, the findings cannot be generalized to other surgical populations. Another limitation is that care dependency and comfort were assessed only using self-reported instruments and were not complemented by objective functional or performance-based measures. Preoperative objective assessments of dependency (such as standardized functional performance tests) were not performed because many patients were older adults with advanced hip pathology, pain, and limited mobility, and additional physical assessments in the preoperative period were considered potentially burdensome and fatiguing for this population. In addition, time constraints and routine clinical workflows in the preoperative setting limited the feasibility of conducting extensive objective assessments. As a result, the study relied on patient-reported outcomes, which may be influenced by individual perception and reporting bias. Furthermore, postoperative comfort and pain were assessed at a single postoperative time point, as defined by the original scale protocol, which may limit the ability to capture longitudinal changes during the recovery process. Additionally, although significant associations were identified, the analyses were limited to bivariate comparisons. Potential confounding factors, including age, pain severity, surgical characteristics, and assistive device use, were not adjusted for in multivariable models. Future studies using multivariable analytical approaches are warranted to better clarify the independent contribution of preoperative care dependency to postoperative comfort.

Conclusion

This study highlights the close relationship between patients' preoperative care dependency and their postoperative comfort following hip replacement surgery. The findings underscore the importance of recognizing care dependency as a relevant factor influencing patients' recovery experiences and perceived comfort. From a clinical perspective, identifying patients with higher levels of dependency before surgery may help healthcare professionals anticipate which individuals are more likely to experience lower comfort in the early postoperative period and may therefore benefit from more individualized support and follow-up. These results contribute to the growing body of knowledge on patient-centered outcomes in orthopaedic surgery and emphasize the need to integrate assessments of care dependency and comfort into routine perioperative care planning. Future studies with larger and more diverse samples are recommended to further explore these relationships and to inform the development of targeted supportive strategies that may enhance patient comfort.

Ethics

Ethics Committee Approval: Ethics committee approval was obtained from the İstanbul Kent University Ethics Committee (approval number: 2021-05, date: 29.06.2021).

Informed Consent: Prior to the study, approval was obtained from the hospital, and written informed consent was obtained from all participants.

Footnotes

Authorship Contributions

Concept: Ö.İ., B.Ö., İ.K., Design: Ö.İ., B.Ö., İ.K., Ö.Ö., Data Collection or Processing: İ.K., Ö.Ö., Analysis or Interpretation: Ö.İ., B.Ö., Literature Search: Ö.İ., B.Ö., Writing: Ö.İ., B.Ö.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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