

# Exploring Lived Experiences of Patients Following Total Knee Replacement Surgery in Peshawar, Pakistan

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## Original Article

### ARTICLE INFORMATION

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### ABSTRACT

**Introduction:** When someone has severe knee joint deterioration, mostly from osteoarthritis, total knee replacement (TKR) is a common surgical procedure used to treat pain and restore mobility. While clinical metrics such as pain reduction and functional improvement are frequently reported, the subjective experiences of patients throughout the TKR journey are often overlooked.

**Objective:** This study explores lived experiences of patients following total knee replacement surgery and determines challenges faced by TKR surgery patients.

**Methodology:** This was a qualitative Phenomenology study carried out in the district of Peshawar. A total of twelve participants were selected from a tertiary care hospital in Peshawar. Patients of both genders undergoing TKR surgery and the age range between 18 to 65 were included in the study. Before data collection, permissions were granted from the hospitals concerned. Interviews were conducted to collect the data from the participants. Data was analyzed using thematic analysis.

**Results:** A total of 20 codes were extracted and all these codes were arranged in a way to extract 10 categories and 5 themes. The extracted themes were the Emotional Challenges Pre-Surgery, Physical Challenges Post-Surgery, Rehabilitation and Mobility Adjustment, Social and Psychological Adjustment, and Personal Satisfaction and Quality of Life Post-TKR.

**Conclusion:** This study provides valuable insights into the unique perception and challenges of patients following TKR surgery. The findings can inform healthcare institutions, policymakers, and nursing educators in developing targeted strategies and programs to support and care patients of TKR surgery that can ultimately improve the quality of healthcare services and patient outcomes in the region.

### Introduction:

There are several facets of living with chronic knee osteoarthritis pain, including psychological and social ones like pain catastrophizing, depression, activity avoidance, and social support, as well as biological ones like inflammation and subchondral bone loss. The main goal of current treatment approaches is to manage pain associated with these biological components using techniques including joint-specific exercises, drugs, and, in extreme situations, joint replacement surgery (1).

Nonetheless, the degree of pain and disability that people with osteoarthritis perceive frequently does not match the degree of joint destruction observed in imaging tests, suggesting that factors other than biological ones play a role in their experience. Moreover, knee replacement surgery is not always successful; just 40% of patients say they are pain-free two years after the treatment, and 20% are unhappy with the results a year later (2). Over 700,000 total knee replacements (TKRs) were performed in the USA in 2014, and the number is expected to rise in the years to come, making it one of the most common orthopaedic surgeries. For patients with advanced knee arthritis, TKR aims to reduce pain, improve quality of life, and restore functionality. It is acknowledged as an economical and

therapeutically successful technique. Even so, a sizable portion of patients are still unhappy with their TKR results (3).

To further illustrate the worth of these operations, orthopedic leaders have pushed for changes in the way patient satisfaction is documented. Prior orthopedic studies on patient satisfaction have demonstrated poor methodological quality and a dearth of defined metrics for gauging patient happiness. Initiatives from the Affordable Care Act and the Centers for Medicare and Medicaid Services (CMS) in the United States have brought attention to the importance of patient satisfaction and proposed linking satisfaction reports to reimbursement procedures (4). Over 67,000 total knee arthroplasty (TKA) procedures were performed in Canada in 2016–17, making it the most common joint replacement procedure. The majority of patients undergoing this procedure have osteoarthritis, a disorder whose incidence rises with age, suggesting that demographic trends would likely boost demand for TKA (5). From 2015 to 2016, Canada experienced a 16% increase in TKA procedures over five years. A concerning statistic is that about 20% of TKA patients report dissatisfaction with their surgical outcomes (6). This issue is particularly relevant in the context of healthcare's shift toward patient-centered care, which emphasizes the importance of previously overlooked outcomes like patient

satisfaction and quality of life. Viewing patient dissatisfaction through a patient-centered lens suggests that a 20% dissatisfaction rate indicates a need for improvements in care. Understanding the factors that drive patient satisfaction could inform initiatives aimed at enhancing TKA programs(7).

Studies have looked at how several clinical and patient-reported metrics before and after surgery relate to patient satisfaction following total knee arthroplasty. Knee-related problems (pain, stiffness, inflammation, and stiffness), self-reports of physical and mental health, unfulfilled pre-surgery expectations, complications, pain catastrophizing, and patient demographics (age, gender, and work status) are all factors that are frequently linked to dissatisfaction (8).

Chronic pain is described as pain that continues and becomes troublesome for three to six months after total knee arthroplasty (TKA), when the level of the pain usually stabilizes. Even though some patients may experience pain relief for up to a year following surgery, those who continue to experience pain three to six months later frequently express dissatisfaction with their results. The development of chronic pain and impairment may be avoided with early care during this subacute stage (9). The term "chronic pain" refers to discomfort that persists and becomes bothersome for three to six months following total knee arthroplasty (TKA), after which the pain normally subsides. Patients who continue to have pain for three to six months after surgery often feel disappointment with their outcome, despite the fact that some patients may receive pain relief for up to a year after surgery. Early treatment during this subacute stage may prevent the development of chronic pain and disability (10).

Approximately 20,000 people may experience chronic pain annually in the UK, where there are roughly 100,000 primary TKA operations performed annually. Given that some patients may be reluctant to disclose their suffering, the true prevalence of chronic pain may be substantially greater than these figures. The number of patients with chronic pain is anticipated to increase as the need for TKA is predicted to increase in the future (11).

By examining the lived experiences of TKR patients, this study aims to provide insights into their expectations, coping mechanisms, and recovery processes. Understanding these aspects is essential for developing targeted interventions that enhance patient education, psychological support, and overall care strategies. Ultimately, a more comprehensive understanding of patient experiences can lead to improved health outcomes and increased patient satisfaction, contributing to a more holistic approach to TKR care. This study is much significant because there are a huge population who are at risk and may need TKR surgery, therefore this study will help Healthcare professionals and policy makers to design best strategies for them. Information from this study will contribute to enhancing the self-care abilities of patients by enriching healthcare professionals regarding care and counselling their needs and demands. This study will follow Dorothea Orem's Self Care Deficit Theory and Virginia Henderson's Need Theory as theoretical frameworks.

Furthermore, this study had two objectives.

1. To explore lived experiences of patients following total knee replacement surgery
2. To determine challenges faced by TKR surgery patients

The significance of this study lies in its potential to deepen our understanding of the lived experiences of patients undergoing total knee replacement (TKR) surgery. As one of the most common orthopedic procedures, TKR is seeing increased demand due to an aging population and a rise in osteoarthritis cases (12). Therefore, it is essential to explore the personal narratives of patients. This study aims to investigate their expectations, coping strategies, and recovery processes to identify key factors that impact patient satisfaction and health outcomes. By understanding the challenges faced by TKR patients, targeted interventions can be developed to meet their specific needs. Improving patient education, providing psychological support, and implementing customized care strategies can enhance the recovery experience, thereby increase patient satisfaction and promote a more patient-centered approach to care.

### Material and Methods

This qualitative phenomenological study was conducted to explore nurses' perceptions regarding the experiences of patients following total knee replacement (TKR) surgery in Khyber Pakhtunkhwa (KPK). A qualitative phenomenological approach investigates a particular phenomenon in-depth by examining individuals' experiences, perspectives, and narratives (13). This method is often employed in the early stages of research to generate insights, develop theories, or formulate hypotheses.

The study was conducted in tertiary care hospitals in Peshawar, with participants recruited from Khyber Teaching Hospital (KTH). This research was a mandatory component of the Post RN BScN degree program in nursing and was completed within a six-month duration, from September 2024 to December 2024. The sample size was determined using the principle of data saturation, meaning data collection continued until no new information or themes emerged. Ultimately, 10 participants constituted the final sample size.

A purposive sampling technique was used to select participants for the study. The inclusion criteria comprised patients of both genders aged between 18 and 65 years who had undergone TKR surgery. Patients younger than 18 were considered too few for inclusion, while those older than 65 were mostly psychologically impaired. In the initial phase, ethical approval was granted by the Hayatabad Institute of Health Sciences, affiliated with Khyber Medical University. Additionally, permission was obtained from the administrative authorities of the tertiary care hospital, and informed consent was secured from all participants before commencing the study.

Data collection was carried out through semi-structured in-depth interviews (IDIs) using a semi-structured interview guide. To ensure accuracy and comprehensiveness, all data points were meticulously documented through audio recordings and field notes. Each interview lasted approximately 30 minutes. The interviews were conducted in Urdu and Pashto, facilitating effective communication and enabling participants to share their perspectives more comfortably. Probing questions were incorporated to gain deeper insights into the participants' experiences.

The audio-recorded interviews were subsequently transcribed and translated into English. Data were analyzed using Braun and Clarke's six-phase thematic analysis framework (14). The first phase involved familiarization with the data, including

transcribing, reviewing, rereading the data, and noting initial ideas. The second phase focused on generating initial codes by identifying key features of the data and categorizing them into meaningful codes. In the third phase, codes were organized into potential themes, with all relevant data collated under each theme. The fourth phase involved reviewing and refining the themes to ensure clarity and coherence. In the fifth phase, themes were clearly defined and named, and a thematic map was created. Finally, the sixth phase involved synthesizing the findings into a comprehensive narrative, producing the final report.

In qualitative research, rigor is assessed through validity and reliability (15). The credibility, transferability, dependability, and confirmability of findings ensure the study's trustworthiness (16). To enhance credibility, the study employed purposive sampling to select a diverse and representative group of nurses with varying backgrounds, levels of experience, and healthcare settings. This deliberate selection ensured a thorough exploration of patient experiences and perceptions.

To further validate the research, data collection involved in-depth, semi-structured interviews to capture detailed accounts of patient experiences. Additionally, member checking was conducted to confirm the accuracy and authenticity of the data, ensuring that the findings reliably represented participants' perspectives. Through these strategies, the study established a high level of rigor, enhancing the reliability and applicability of its conclusions for future research, policy development, and clinical practice.

### Results and Findings:

The data were analyzed using thematic analysis. A total of 20 codes were extracted, which were systematically arranged into 10 categories and further consolidated into five overarching themes. The identified themes include Emotional Challenges Pre-Surgery, Physical Challenges Post-Surgery, Rehabilitation and Mobility Adjustment, Social and Psychological Adjustment, and Personal Satisfaction and Quality of Life Post-TKR.

**Theme 1: Emotional Challenges Pre-Surgery:** The first theme, "Emotional Challenges Pre-Surgery," was derived from two categories: pre-surgical anxiety and psychological distress. This theme encapsulates the emotional difficulties patients encountered before undergoing TKR surgery, including fear, uncertainty, and stress related to the procedure and its outcomes.

**Theme 2: Physical Challenges Post-Surgery:** The second theme, "Physical Challenges Post-Surgery," emerged from two categories: pain management and physical recovery barriers. Patients shared their experiences of managing post-surgical pain and the obstacles they faced in their physical recovery, highlighting the challenges of regaining mobility and dealing with discomfort.

**Theme 3: Rehabilitation and Mobility Adjustment:** The third theme, "Rehabilitation and Mobility Adjustment," was developed from two categories: adaptation to new mobility and lifestyle adjustments. This theme focuses on patients' rehabilitation journey, their efforts to regain movement, and the modifications they had to make in their daily lives to accommodate their new physical condition.

**Theme 4: Social and Psychological Adjustment:** The fourth theme, "Social and Psychological Adjustment," was derived from two categories: social and emotional impact and self-perception changes. This theme explores how patients adjusted socially and psychologically after surgery, including changes in their relationships, emotional well-being, and self-image.

**Theme 5: Personal Satisfaction and Quality of Life Post-TKR:** The final theme, "Personal Satisfaction and Quality of Life Post-TKR," was extracted from two categories: satisfaction with the surgical outcome and managing expectations. This theme reflects patients' overall contentment with the results of their surgery and how they navigated their expectations regarding recovery and post-surgical life.

### Discussion of the Findings:

In this study the data analysis reveals various challenges faced during the pre-surgical, post-surgical, and rehabilitation stages of knee replacement surgery. Before surgery, emotional challenges such as anxiety about pain, recovery uncertainty, and concerns over potential dependence and surgical risks were common. After surgery, physical difficulties focused on managing pain and overcoming barriers to mobility and swelling, which hindered daily activities. Rehabilitation required patients to adapt to assistive devices, relearn movement, and adjust their lifestyles to regain independence. Social and psychological changes included shifts in family dynamics, social interactions, and self-image, often coupled with emotional vulnerability. Ultimately, while many patients were satisfied with reduced pain and improved mobility after surgery, some faced unmet expectations and had to adjust to a "new normal," balancing better quality of life with ongoing limitations.

Similarly, a study was conducted in Australia to explore the experiences of individuals living with knee replacement. Seven primary themes emerged, including the multifactorial causes of the condition, pain as a central aspect of the experience, impacts on daily activities, social and emotional effects, interactions with healthcare providers, and life adjustments made by those affected. Pain management strategies varied, ranging from medications and lifestyle changes to alternative therapies, though many viewed joint replacement as the ultimate solution. Participants highlighted the condition's progressive nature, attributing it to factors like aging, trauma, or heavy manual labour, with cares often advocating for medical interventions. The psychosocial impact, encompassing emotional struggles and changes in social engagement, was a prominent aspect of living with knee osteoarthritis (2, 17).

Similarly, the quality and consistency of satisfaction reporting following total knee replacement (TKR) vary widely. This systematic review aimed to (1) assess the existing literature on patient satisfaction post-TKR, (2) evaluate the quality of the evidence, and (3) identify factors influencing satisfaction. A MEDLINE search identified 1,219 studies, of which 208 studies involving 95,560 patients met the inclusion criteria. The studies, primarily published in the last three years, often measured satisfaction using an ordinal scale, with 13% utilizing a validated satisfaction survey. Approximately 83% of studies reported satisfaction rates above 80%(18). The main predictor of satisfaction was post-operative functional outcomes, while pre-operative anxiety and depression were the most common factors linked to dissatisfaction. Overall, while



there is a growing body of research on TKR satisfaction, many studies suffer from lower evidence quality and inconsistent measurement methods, with post-operative pain relief and functional recovery being key factors in achieving satisfaction(3).

In contrast another study was conducted in the United Kingdom, although many patients experience positive outcomes, around 20% of individuals continue to suffer from chronic pain following total knee arthroplasty (TKA). Chronic pain after TKA can severely impact all aspects of health-related quality of life, leading to functional limitations, emotional distress, depression, poor general health, and social isolation. To fully understand the characteristics and impact of this pain, a comprehensive and multidimensional assessment approach is necessary. Past evaluations of chronic pain have been inadequate, but there is an increasing trend toward using validated patient-reported outcome measures (5). Risk factors for chronic pain can be identified before surgery, during the procedure, or in the immediate postoperative period (19). Understanding these factors is crucial for developing targeted interventions and improving patient care. Although the exact causes of chronic pain after TKA remain unclear, research is expanding, showing that it arises from a combination of biological, surgical, and psychosocial factors (20). Managing chronic pain remains complex, and it is recommended that treatment approaches be individualized, considering patient characteristics and evaluating the clinical and cost-effectiveness of both multidisciplinary and tailored interventions (9).

### Conclusion

The findings from the exploration of patients lived experiences following total knee replacement (TKR) surgery highlight a range of physical, emotional, and social challenges throughout the pre-surgical, post-surgical, and rehabilitation phases. Pre-surgery, many patients experienced anxiety and psychological distress due to fears of pain, recovery uncertainty, and potential loss of independence. Post-surgery, the primary difficulties involved managing pain, overcoming mobility barriers, and dealing with swelling. Rehabilitation required significant adjustments, including learning new mobility techniques and adapting to assistive devices. Social and psychological challenges were evident, with patients experiencing changes in family dynamics, social interactions, and self-perception. Although many patients reported improvements in pain and mobility post-surgery, some were faced with unmet expectations and had to adjust to a "new normal" despite better quality of life. These findings align with existing literature, which emphasizes the importance of effective pain management, functional recovery, and psychological support for optimal patient outcomes.

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**CONFLICT OF INTEREST**

Authors declared no conflict of interest, whether financial or otherwise, that could influence the integrity, objectivity, or validity of their research work.

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**DATA SHARING STATEMENT**

The data that support the findings of this study are available from the corresponding author upon reasonable request



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