

Requirements of Patients Undergoing Unicompartmental Knee Arthroplasty in Preparation for Discharge from the Hospital -A Qualitative Study

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Objective: To enhance the understanding of the challenges and needs faced by patients undergoing unicompartmental knee arthroplasty (UKA) in preparation for discharge, this study seeks to provide a practical framework for devising effective discharge plans tailored to this demographic.

Methods: Using purposeful sampling, 15 patients who underwent UKA at a tertiary hospital in China between March and May 2023 were selected for face-to-face interviews, aiming to explore their experiences and needs during the discharge preparation phase. The interview contents were transcribed verbatim, and thematic analysis was conducted to identify and refine themes and sub-themes.

Results: After analyzing the interview data, we identified four themes and eleven sub-themes that encapsulate the discharge readiness needs of patients undergoing UKA and nearing discharge, as follows: (1) Demand for guidance on rehabilitative functional exercises, which includes rehabilitation functional exercise knowledge, diversified teaching methods, demand for promoting adherence to rehabilitative functional exercises; (2) Demands for knowledge and skills related to disease management, encompassing knowledge of wound care, Pain management and medication safety guidance, daily life guidance, caregiver caregiving knowledge; (3) Psychological support needs, including anxiety and lack of confidence in rehabilitation, need for establishing an emotional support system; (4) Continuity of care needs, including featuring tele-information support and advisory services and home rehabilitation plan.

Conclusion: Patients undergoing UKA face various issues and needs during the discharge preparation process. It is imperative for medical staff to carefully assess these needs and tailor individualized discharge plans for each patient based on their specific circumstances, in order to facilitate postoperative rehabilitation for UKA patients.

Keywords: unicompartmental knee arthroplasty, qualitative research, discharge preparation

Introduction

Knee osteoarthritis (KOA), a prevalent chronic degenerative joint disease, results from the deterioration of articular cartilage and osteophyte formation along the joint margins. This condition clinically presents with symptoms such as knee pain, swelling, stiffness, joint deformity, and restricted mobility, leading to significant morbidity and disability.¹ As of 2020, approximately 317 million people worldwide suffer from KOA, with projections suggesting a 74.9% increase in prevalence by 2050, potentially affecting 642 million individuals.² Notably, 80% of KOA patients exhibit unicompartmental osteoarthritis, primarily affecting the medial knee compartment.³ Unicompartmental knee arthroplasty (UKA) has proven effective for this subtype and currently accounts for 10% of knee replacement surgeries globally.⁴ UKA diverges from Total Knee Arthroplasty (TKA) primarily through its reconstructive approach, aimed at addressing cartilage defects, realigning original force vectors, and maintaining biomechanical integrity, thereby mitigating further wear in unstable knee joint compartments.⁵ UKA presented a higher early failure rate due to stringent patient selection criteria, leading to

a lower prosthesis survival rate and a higher revision rate compared to TKA, which sparked controversy. However, advancements in UKA techniques and prosthetic design in recent years have improved short-term outcomes, now approaching or slightly surpassing those of TKA, with mid- to long-term survival rates similar to TKA and exceeding 95% at ten years.⁶ Consequently, indications for UKA have expanded, increasing its clinical adoption.^{7,8}

Due to the smaller incision of UKA compared to TKA, it is even more important to start functional exercises as early as possible after surgery. Patients undergoing UKA often have higher expectations for the degree of postoperative knee function recovery compared to those undergoing TKA. However, their satisfaction levels and clinical function questionnaire scores are generally lower than those of TKA patients.³ Nonetheless, many patients do not regain pre-surgical joint function, with inadequate postoperative pain management and unmet functional expectations being primary drivers of patient dissatisfaction.⁹ The success of UKA hinges not only on surgical excellence but also on comprehensive patient education, meticulous preoperative planning, diligent postoperative care, and robust long-term management. UKA patients, often elderly, face challenges such as functional rehabilitation, pain control, wound care, and monitoring for complications. Limited cognitive capacity and passive information reception can hinder their understanding of discharge instructions, impacting self-management confidence and ultimately, surgical outcomes. The trend toward accelerated rehabilitation has shortened hospital stays for UKA patients, increasing the importance of preparedness for post-discharge life management and rehabilitation. Inadequate preparation for patient discharge from hospitals to home or community settings, coupled with insufficient communication and information transfer at discharge, often results in discontinuous and fragmented care.¹⁰ This discontinuity compromises post-discharge outcomes and escalates the risk of adverse events.¹¹

Meleis' Transition Theory elucidates the concept of "transition", which refers to the process of an individual shifting from one state or phase to another. This theory is utilized to understand and facilitate the various changes and transitions individuals experience throughout their life course, as well as how these transitions impact health, illness, recovery, and quality of life. It has been proven to guide patients through the discharge preparation process, emphasizing the importance of patient education and activating the positive roles of caregivers to ensure comprehensive support for patients, enabling a smooth transition.^{12,13} Based on this theory, this study focuses on patients who have undergone UKA. We conducted interviews with UKA patients to investigate the challenges they encounter and the needs they have during the discharge preparation process, offering references and a basis for future targeted interventions.

Methods

Study Design

This is a qualitative study, involved face-to-face interviews with UKA patients to explore their experiences and needs during discharge preparation. Semi-structured, open-ended questions guided the interviews, which were refined by the researcher following a thorough literature review, consultations with experts, and group discussions. To ensure the suitability and effectiveness of the interview outline, we conducted pre-interviews with two UKA patients prior to the official start of the interviews and made appropriate adjustments and revisions to the outline based on the feedback received. The methodology and reporting adhered to the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist.¹⁴

Participants

Patients who were about to be discharged from a tertiary general hospital in Shanghai, China, after undergoing UKA surgery between March and May 2023 were selected for this study using purposive sampling. These patients did not adopt a short stay program but instead followed the standard surgical care pathway of the hospital: they only received basic verbal education before surgery, with the operation typically scheduled for the day after admission. Three to four days postoperatively, once they met the medical discharge criteria and received brief verbal discharge instructions, they were discharged. The overall length of hospital stay was approximately five days.

Participants were required to meet several inclusion criteria: (1) diagnosis of isolated KOA, with initial unilateral UKA surgery; (2) age of 60 years or older; (3) residence at home post-discharge; (4) proficient communication and expression abilities; (5) voluntary participation. Exclusion criteria included: (1) mental and cognitive impairments;

(2) concurrent serious systemic diseases such as significant liver or kidney dysfunction, or malignant tumors; (3) intellectual and hearing impairments that hindered cooperation with the interview process. During the data collection process, information saturation is achieved when newly collected data no longer provides novel information or perspectives. In this study, data saturation was reached after interviewing 15 patients, at which point no additional themes were identified, thereby determining the final sample size for this study.

Data Collection

The interview guide for this study is based on Meleis' Transition Theory,¹³ incorporating open-ended questions that cover the entire process of patients from admission to discharge, their informational needs during hospitalization, preparations for discharge, and suggestions for improving the support provided by healthcare professionals. The complete interview guide is available in [Box 1](#). The researcher is a postgraduate student in nursing, who has undergone training in qualitative research and possesses interview skills. The interviews were conducted in a quiet and private room in a semi-structured format. The duration of each interview ranged from 20 to 30 minutes. During the interview process, the researcher observed and recorded the non-verbal behaviors of the interviewees, including facial expressions, emotional responses, and body movements.

Data Analysis

Within 24 hours after the interview, researchers transcribed the recorded content into text using NVivo 20 software and manual analysis. This study adopted the thematic analysis method. There are six steps in the thematic analysis. Initially, the researcher immersed themselves in the data to gain a thorough understanding. The second step involved generating initial codes by identifying, labeling, and categorizing meaningful words, phrases, or passages as "codes". The third step focused on finding themes; here, the coded data was reviewed to organize and uncover potential themes. In the fourth step, these themes were critically reviewed to confirm their authenticity and to ensure they were distinct and non-overlapping. The fifth step entailed defining and naming each theme to accurately reflect its essence. The final step involved composing a report to present the analysis results. During the analysis process, we employed an inductive coding approach to enhance the accuracy and effectiveness of the analysis.

Ethical Approval

This study was approved by the Ethics Committee of Tongren Hospital, Shanghai Jiaotong University School of Medicine (Ethical Approval Form 2023–101-01). This study was conducted in accordance with the Declaration of Helsinki. Adhering to the principles of informed consent, confidentiality, and non-harm, the research team thoroughly briefed the participants about the study's objectives prior to the interviews. Participants were assured of strict confidentiality, and it was clarified that interview data would be used solely for scientific purposes. Documentation was anonymized, with numbered records employed to safeguard participant privacy. Informed consent was obtained from all patients and their family members, who also signed the consent forms.

Box 1 Interview Guide

Questions

1. How are you feeling now that you are about to be discharged?
2. What information do you currently know about disease self-care? What are the main sources of learning?
3. What else do you think you need to know during your hospitalisation?
4. What preparations did you make before you were discharged from the hospital? What else do you think you need to do before discharge to help you recover better?
5. What do you think could be improved about the guidance provided by the healthcare staff prior to discharge to help you make the transition from hospital to home?

Results

In this study, we conducted interviews with 15 patients who had undergone UKA. The cohort predominantly consisted of women, with a distribution of 12 females and 3 males. These participants ranged in age from 61 to 75 years. The duration of KOA prior to surgery varied from 1 to 30 years. Further details about the participants are provided in Table 1. Analysis of the transcribed interviews revealed 4 themes and 11 sub-themes are shown in Table 2.

Theme 1: Demand for Guidance on Rehabilitative Functional Exercises

Rehabilitation Functional Exercise Knowledge

Patients undergoing UKA face an extended rehabilitation journey from surgery to complete recovery. This process necessitates continual functional knee exercises after discharge from the hospital. However, participants reported that the instruction received during hospitalization was inadequate. They expressed a lack of comprehensive understanding of these exercises and emphasized the need for more detailed guidance on performing them effectively.

Table 1 Demographic and Characteristics of the Participants (N=15)

Items	Categories	Value
Gender	Male	3
	Female	12
Age, years	Range	61~75
	Average age	68.47±4.00
Educational levels	Junior high school and below	6
	High school or technical secondary school	7
	Junior college and above	3
Marital status	Married	9
	Unmarried or divorced or widowed	6
Living arrangements	With family members	14
	Alone	1
Disease duration, years	≤5	3
	5~10	4
	≥10	8
Number of chronic diseases	0	3
	1~2	11
	3	1

Table 2 Themes and Related Subthemes

Theme	Subtheme
1. Demand for guidance on rehabilitative functional exercises	1.1 Rehabilitation functional exercise knowledge 1.2 Diversified teaching methods 1.3 Need for enhancing compliance with rehabilitation exercise regimens
2. Knowledge and skill needs related to disease management	2.1 Knowledge of wound care 2.2 Pain management and medication safety guidance 2.3 Daily life guidance 2.4 Caregiver caregiving knowledge
3. Psychological support needs	3.1 Anxiety and lack of confidence in rehabilitation 3.2 Need for establishing an emotional support system
4. Continuity of care needs	4.1 Tele-information support and advisory services 4.2 Home rehabilitation plan

You did teach us some rehabilitation exercises before, like the straight leg raise and ankle pump exercises. But honestly, I was quite confused at that time. I didn't know how to perform these standard exercises correctly, to what extent they should be done, or how many times a day they need to be done. I couldn't remember a lot of the details. (Female, 70 years old)

Can I squat? Many public toilets require squatting. Could this movement damage the implant? (Female, 75 years old)

Do I need to use a walker to get around? Also, about this knee brace—the doctor mentioned I should wear it. Should I wear it even when I'm resting? How long do I need to keep it on? (Female, 71 years old)

Diversified Teaching methods

The traditional method of teaching functional exercise through oral instruction often proves ineffective. Patients are increasingly seeking diverse avenues to acquire knowledge about functional exercises.

When I was in the hospital, you guys went over how to do this move and that, but I'm older and my memory isn't what it used to be—I can't keep it all straight. It would be really helpful if you could give us some videos or pictures of the exercises. That way, I could watch them as many times as I need to make sure I'm doing it right and not forget anything. (Female, 70 years old)

Didn't you say we should be exercising? I found some functional exercise videos online and tried to follow along. (Female, 61 years old)

Demand for Promoting Adherence to Rehabilitative Functional Exercises

Due to various factors, patients' adherence with postoperative rehabilitation exercises is often affected, including limited awareness of the importance of exercise, inadequate guidance from medical staff, and postoperative wound pain.

In the hospital, I've got you watching over me, but at home, it's just me and my husband. I just can't keep up with it because it hurts too much. (Female, 67 years old)

After getting the knee implant, I'm honestly scared to exercise too much. I worry I might dislocate it if I do something wrong, and I've heard that could mean another surgery, which would be a real hassle! (Male, 73 years old)

Theme 2: Demands for Knowledge and Skills Related to Disease Management

Knowledge of Wound Care

The patient is anxious and concerned as the surgical wound has not healed upon discharge, and there is an urgent need for knowledge related to wound care.

How many days after returning home can I take a shower? If I take a shower, should I just avoid the wound? (Female, 75 years old)

Can I change this wound's dressing at home? (Female, 69 years old)

Pain Management and Medication Safety Guidance

Postoperative pain following UKA is often moderate to severe, affecting patients' quality of life. They need to understand and master the relevant measures for pain management.

I just don't know what's going on, my leg won't straighten or bend, and the cut is killing me. (Female, 75 years old)

The area around the incision still hurts, feels like tiny needles poking me, and it's messing with my sleep. I can't get any rest at night because of the pain. Should I use heat or ice on it? (Male, 73 years old)

After being discharged from the hospital, patients need to take analgesics to relieve pain in their knee joints. However, many patients exhibit significant reluctance towards taking these medications, fearing potential side effects and having questions about how to take them correctly.

Is it okay to skip the painkillers if they upset my stomach? Do I really need to take one every time I'm in pain? (Female, 68 years old)

I'd also like to know what side effects this painkiller might have, and what's the best time to take it? (Female, 65 years old)

Patients have other needs for guidance on how to take their medications.

My daughter got me this aminoglycosyl chondroitin; I've heard it's good for the joints. Is it alright if I take it regularly? (Female, 71 years old)

Daily Life Guidance

The patient's self-care capacity diminished significantly following surgery, presenting several challenges in daily activities.

Is there anything I need to watch out for in my diet? I like spicy food, is that okay? Is there anything I should avoid? (Female, 64 years old)

Is there anything you should be aware of in your daily life? (Male, 73 years old)

Caregiver Caregiving Knowledge

Carers play an essential role in assisting patients with daily activities upon their return home following hospital discharge. As they undertake the responsibility of caregiving, it is crucial that they enhance their caregiving skills to facilitate better recovery for patients after surgery.

My partner is really protective; he doesn't want me moving much. (Female, 70 years)

You know, it would've been great if you could've shown my partner the exercises while I was in the hospital. That way, we could've learned them together, and she could've helped keep an eye on me once we got home. I don't always remember things well, and she's probably better at picking up that kind of stuff than I am. (Male, 73 years old)

Theme 3: Psychological Support Needs

Anxiety and Lack of Confidence in Rehabilitation

Following UKA, patients often experience chronic pain and an extended recovery period. This postoperative phase is typically marked by significant anxiety concerning the restoration of knee function. Additionally, some patients exhibit a lack of confidence in the newly implanted prosthesis, questioning its ability to function normally. Concerns also arise regarding potential damage to the prosthesis from routine daily activities.

My knee's hurting all the time, it's so painful that it's got me all anxious and upset. I've been really careful with what I do, scared that I might mess something up. (Female, 61 years old)

There's a lady in our neighborhood who had this knee surgery last year, and she says it still hurts, hasn't gotten any better! I never wanted this surgery in the first place, but my daughter pushed me to go through with it. I'm really worried that I might not heal right. What should I do? (Female, 71 years old)

Need for Establishing an Emotional Support System

It is inevitable for patients to feel fear towards the surgical process and express concerns about their postoperative recovery. This highlights a critical need for enhanced support from healthcare professionals to address these uncertainties and alleviate patient anxiety

I was super anxious at first, you know? I barely slept the night before the surgery—it was my first one, and I was terrified it might go wrong or that I wouldn't recover well. But having you guys there to cheer me on and calm me down made a huge difference. I felt way more relaxed. Thanks a ton. (Female, 64 years old)

In the short term after surgery, patients require assistance from caregivers for daily activities such as washing, eating, and using the restroom. At this time, the understanding, patience, and support of family members become particularly important.

These days, having my husband and daughter around to help out means the world to me. They keep me positive, and just chatting with them makes everything feel a bit easier. (Female, 69 years old)

Theme 4: Continuity of Care Needs

Tele-Information Support and Advisory Services

During their hospital stay, patients are accustomed to seeking consultation and assistance from doctors and nurses at any time. However, once discharged, such convenient and immediate help and support abruptly cease, leaving them feeling confused, helpless, and uncertain as they confront the impending challenges of home rehabilitation. Patients have expressed a strong desire for continued professional guidance and support after being discharged.

My home is quite far away, and it takes an hour to get here. Plus, my house is on the sixth floor without an elevator. With my legs in this condition, it's really difficult for me to go downstairs, let alone make a trip to the hospital. It would be great if I could add you on WeChat. That way, I can just send a message whenever I need help and avoid the trouble of coming back and forth. (Female, 71 years old)

Home Rehabilitation Plan

Patients expressed a desire for assistance in creating a home rehabilitation plan to facilitate a successful recovery in their home environment.

I hope you can help me develop a home rehabilitation plan so that I can clearly understand what I should do every day and at each stage after returning home, which activities are safe to perform, and which ones I need to strictly avoid. This way, I'll have a clearer idea in mind. (Male, 63 years old)

Discussion

This study explores the needs of patients undergoing UKA during the discharge preparation phase from the patients' perspective. We have identified numerous issues and unmet needs faced by these UKA patients in the process of discharge preparation, such as rehabilitation exercise guidance and continuity of care. The themes and sub-themes we have extracted can serve as a reference for subsequent formulation of discharge plans for UKA patients. As healthcare professionals, we should prioritize assessing patients' needs and developing targeted interventions to accelerate their rehabilitation process.

Enhance Rehabilitation Exercise and Functional Training Guidance

Rehabilitation significantly influences the outcome of knee surgery.¹⁵ Research has demonstrated that active, standardized rehabilitation and functional exercise are crucial for expediting the recovery of knee function following UKA.¹⁶ Interviews have revealed that many patients lack a comprehensive understanding of functional exercise techniques during their hospital stay. Additionally, some patients underestimate the importance of such exercises before and after surgery. This muscle weakness, exacerbated by pain, can impede early recovery, resulting in poor adherence to prescribed functional exercises.¹⁷ Berg et al conducted qualitative interviews with 24 arthroplasty patients from three hospitals implementing rapid care programs, focusing on their actual experiences during the preparation phase, surgical hospitalization, and rehabilitation phase within the clinical pathway.¹⁸ The research results indicate that the rehabilitation phase is the weakest and most deficient aspect within the rapid rehabilitation program. This inadequacy primarily stems from patients' lack of necessary rehabilitation information support during the rehabilitation process, which coincides with the findings of this study. Given that the patient population undergoing UKA is predominantly elderly, their information processing and reception capabilities are relatively limited, making it difficult for them to fully grasp the techniques of

functional exercises.¹⁹ Typically, instructional information is conveyed orally, which makes it challenging for many patients to retain over the long term, thereby affecting the effectiveness of rehabilitation. Some patients have expressed a strong desire to access postoperative rehabilitation exercise information through multiple channels, highlighting the necessity of adopting multimodal and personalized rehabilitation education methods. A qualitative systematic review by Taylor et al on knee arthroplasty patients similarly highlighted issues such as suboptimal quality of patient education provided by healthcare professionals and low adherence to rehabilitation exercise regimens.²⁰ Therefore, patient education materials should not only include verbal instructions but also incorporate images, videos, manuals, and other formats. Early rehabilitation programs can accelerate the recovery of patients' joint functions.²¹ When patients have a thorough understanding of the rehabilitation process and recognize its importance, their compliance with the rehabilitation program will also increase accordingly.²²

Gap in Disease Management Knowledge and Skills

This study found that UKA patients face significant challenges in self-care after returning home due to a lack of knowledge in disease management, which is consistent with the research findings of Sjøveian et al.²³ Previous research indicates that such patients often experience uncertainty about their condition prior to discharge, which can lead to insecurity and diminished confidence in managing their health independently post-discharge.²⁴ Furthermore, improper postoperative care can lead to serious complications, including poor wound healing, infections, joint stiffness, muscle atrophy, and deep vein thrombosis.²⁵ These complications can reduce both the effectiveness of the surgical procedure and patient satisfaction. You et al conducted a qualitative study on the rapid discharge experience of patients undergoing knee arthroplasty, revealing challenges in the rehabilitation process: some patients did not take pain management seriously and resisted the use of analgesics, which is consistent with the findings of this study.²⁶ Optimizing pain management and reducing patient suffering are the primary conditions for achieving rapid recovery. Therefore, targeted self-management and patient care education need to be implemented during hospitalization, with particular emphasis on discharge planning. This should systematically guide pain management, wound care, daily activities, and medication management. Berkovic et al through a systematic review synthesizing qualitative evidence, identified the main barrier to implementing short-stay programs for arthroplasty patients as their negative perceptions of their own abilities. Adequate discharge information was identified as a facilitating factor for participating in short-stay programs.²⁷ When patients have sufficient knowledge, they can more effectively monitor and manage postoperative complications, thereby enhancing their sense of control over their illness and boosting their confidence in facing rehabilitation challenges.

As primary providers of care and rehabilitation for patients returning home, caregivers play a crucial role in the recovery process.²⁸ A cross-sectional study conducted in Australia delved into the perspectives of multiple stakeholders regarding short-stay joint replacement programs. Notably, caregivers' anticipated physical and psychological burdens emerged as a shared concern between caregivers and patients. This underscores the critical importance of providing synchronized education for both patients and their caregivers, with particular emphasis on delivering clear and specific discharge instructions to ensure continuity of care.²⁹ Effective health education for caregivers is pivotal in enhancing their capacity to manage patient care at home. Insufficient caregiving knowledge can detrimentally impact patient recovery. By receiving professional training, caregivers can learn to adequately assist with daily living activities and rehabilitation exercises, thereby improving both the quality and efficiency of care. Research shows that targeted training can reduce caregivers' uncertainty and anxiety by imparting knowledge and skills, thereby facilitating the effective implementation of home care.³⁰ Therefore, when conducting patient health education, healthcare professionals need to fully consider the knowledge and skill requirements of caregivers and enhance their caregiving abilities.

The Necessity of Psychological Support

During the interviews, many patients expressed a need for psychological support to manage various stressors, including postoperative pain, prolonged recovery, and uncertainty about their prognosis. A qualitative study by McDonald et al investigating the acceptability of short-term hospital care pathways for patients after joint replacement surgery revealed that while the care pathways themselves were perceived as acceptable, patients still experienced anxiety or concerns prior to surgery and during the transition back home post-discharge.³¹ Similarly, a study in Malaysia focusing on the discharge

planning needs of orthopedic patients also reached comparable conclusions.³² Despite the less invasive nature of UKA, there is no significant difference in pain levels between UKA and TKA.³³ Both procedures require an incision that may cause soft tissue damage and lead to moderate to severe postoperative pain. Pain perception is closely tied to emotional and mental states, influencing physiological health and cognitive and affective processes. Common psychological issues in UKA patients include pain catastrophizing, dysfunctional disease perception, and poor mental health,³⁴ which can hinder natural healing, increase complication risks, and delay recovery. Gaby et al conducted a prospective study examining the impact of psychological factors such as pain catastrophizing, anxiety, and depression on patient-reported outcomes in 150 UKA patients at 6, 12, and 24 months postoperatively. The findings revealed that negative psychological states correlate with poorer patient-reported outcomes.³⁵ Family and healthcare providers play crucial roles in offering psychological support, helping patients manage negative emotions and improving their overall psychological well-being. This support is pivotal in enabling patients to navigate postoperative challenges effectively. Consequently, healthcare professionals must closely monitor patients' psychological well-being during hospitalization, addressing any signs of anxiety or depression through timely psychological counseling to promote optimal recovery.

Urgent Need for Continuous Care

The interviews indicated a strong preference among patients for continued care services post-discharge, including tele-information support, counseling, and home-based rehabilitation plans. This finding is similar to the research results of Wallis et al.³⁶ The OARSI guidelines suggest that regular telephone follow-ups may enhance patients' functional outcomes.³⁷ Additionally, the acceptance of telemedicine in routine healthcare is increasing, with telemedicine becoming a vital component of future surgical care.³⁸ Research demonstrates that internet-based tele-rehabilitation can be as effective as traditional face-to-face sessions in improving rehabilitation outcomes for patients post-joint replacement.³⁹ Techniques such as those developed by Chughtai et al have improved adherence to functional exercises in UKA patients through tele-rehabilitation, yielding better scores on the Knee Scale Score (KSS), Osteoarthritis Index Score (WOMAC), and the Activity Measure for Post-Acute Care (AM-PAC).³⁷ These methods facilitate remote monitoring and coordination of patient care, allowing for effective home-based rehabilitation, decreasing dependence on hospital resources, and cutting healthcare costs—particularly beneficial for those in remote areas. This approach demonstrates that continuity of care services can be efficiently delivered through platforms like WeChat or specialized follow-up systems. Such systems provide online guidance for rehabilitation exercises, continuous monitoring, and address patients' inquiries during rehabilitation, catering to their specific needs. Patients regularly update healthcare providers on their progress, allowing timely adjustments to the rehabilitation plans and professional input, thereby enhancing the rehabilitation process and improving quality of life. This strategy also minimizes the use of unnecessary healthcare resources, facilitating a more effective recovery.⁴⁰ A qualitative study focusing on joint replacement patients utilizing a mobile application-based rehabilitation program revealed that this digital approach provided a positive experience, enhanced patients' active engagement in rehabilitation, and instilled substantial confidence in their postoperative recovery.⁴¹ In light of these findings, there is a compelling need to actively explore and implement digital solutions in continuity of care services. This involves delivering convenient and efficient post-discharge care, standardizing follow-up protocols, assisting patients in establishing personalized home-based rehabilitation plans, offering real-time online guidance for functional exercises, and enabling continuous monitoring of rehabilitation progress to optimize outcomes.

Strengths and Limitations

This study presents certain limitations that may impact the generalizability of its findings. Specifically, all participants were recruited from a single hospital, and due to a female predominance among patients undergoing UKA, women represented 80% of the study cohort. Consequently, the results may not be representative of all patient experiences.

Conversely, the strengths of this study is that it conducted interviews with patients who were about to be discharged after undergoing UKA. At this stage, patients were in the process of preparing for the transition from hospital to home. This timing provided a wealth of contextual information for examining patients' experiences, offering precious insights into their conditions, and laying a solid groundwork for developing targeted interventions to enhance discharge planning for UKA patients.

Conclusion

In this study, we conducted in-depth interviews with 15 patients who underwent unilateral knee arthroplasty (UKA) to investigate the challenges and needs they faced during the discharge preparation phase. We identified several crucial patient needs, including guidance on rehabilitation and functional exercises, knowledge and skills for disease management, psychological support, and continuous medical care services. This information provides practical references for optimizing discharge planning protocols for UKA patients, aiming to more effectively address patient needs, resolve practical issues, and enhance patient outcomes and satisfaction.

Ethics Approval and Informed Consent

This study was approved by the Ethics Committee of Tongren Hospital, Shanghai Jiaotong University School of Medicine (Ethical Approval Form 2023-101-01). This research was conducted in accordance with the Declaration of Helsinki. All methods were carried out in accordance with relevant guidelines and regulations. Written informed consent was obtained from all the participants. Participants were informed about the study and consented to the anonymous information including “publication of anonymized responses/direct quotes” being used for publication.

Acknowledgment

We would like to express our sincere gratitude to all the patients who participated in this study for sharing their experiences.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This study was funded by Shanghai Changning District Health Commission medical key specialty project (No.20231002) and Teaching Talent Program, Tongren Hospital, Shanghai Jiao Tong University School of Medicine (No. jjsx202305).

Disclosure

All the authors declared no conflicts of interest in this study.

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