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Original Article

Exploring Patient Perspectives and Experiences in Physical Therapy and Treatment Choices for Knee Osteoarthritis in Saudi Arabia: A Qualitative Study

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Abstract

Background: Knee osteoarthritis is a prevalent condition, particularly among older adults, characterized by chronic pain, reduced mobility, and significant impacts on quality of life. While treatments such as physical therapy and surgery exist, patient perceptions and understanding of these options play a critical role in treatment decisions and outcomes. However, there is limited research exploring how patient insights and opinions shape their choices, particularly concerning physical therapy. This study aimed to explore the patient perspectives and experiences in physical therapy and treatment choices for knee osteoarthritis. **Methods:** Semi-structured interviews were conducted in Arabic with 33 participants diagnosed with knee osteoarthritis, comprising 18 males and 15 females, with a mean age of 53 years (SD = 5.67). The interviews were based on a pre-prepared schedule developed specifically for this study. Braun and Clarke's thematic analysis was applied to identify themes capturing participants' experiences and perspectives on treatment options and challenges. **Results:** Participants reported that knee pain prompted them to seek treatment, with physical therapy being chosen more frequently than surgical interventions. Awareness of physical therapy's benefits varied; some felt well-informed and supported by healthcare providers, while others encountered misinformation and emotional resistance. Family and community support systems were helpful, but a lack of education on management options caused confusion and frustration. **Conclusion:** To optimize the treatment outcomes of knee osteoarthritis, it is essential to address patients' emotional, psychological, and educational needs. Coupled with the benefits of physical therapy, such as pain relief and improved mobility, this holistic approach can enhance treatment adherence and significantly improve patients' quality of life. Healthcare providers should prioritize patient education, emotional support, and tailored interventions to ensure a comprehensive and patient-centered care experience.

Keywords: Knee Osteoarthritis, Patient Experience, Perception, Healthcare awareness, Physical Therapy

Introduction

Knee osteoarthritis (OA) is a progressive condition marked by the degeneration of joint cartilage and underlying bone (Osteoarthritis Research Society International, 2016; Kolasinski et al., 2020). It is a leading cause of pain, disability, and reduced

quality of life, particularly in middle-aged and older adults (Osteoarthritis Research Society International, 2019). Management strategies for knee OA include pharmacological treatments, surgery, and non-pharmacological approaches such as physical therapy, which are widely recognized for reducing pain and improving function (Yu & Hunter, 2015; Brosseau et al., 2017). Research consistently highlights the efficacy of physical therapy in managing knee OA through interventions like exercise therapy, manual techniques, and patient education (Kuru Çolak et al., 2017; Wang et al., 2007; de Rooij et al., 2017). However, patient perspectives on these options remain underexplored, particularly in diverse cultural and healthcare settings (Carmona-Terés et al., 2017; Conner & Norman, 2017).

Adherence to physical therapy is often hindered by factors such as patient awareness, logistical constraints, and cultural attitudes (Mazières et al., 2008; Hinman et al., 2016). In Saudi Arabia, studies reveal significant gaps in public understanding of OA and its management, often complicated by misconceptions about the disease and its progression (Bennell et al., 2014; Alyami et al., 2020). These gaps can delay care and reduce the effectiveness of interventions (Alyami et al., 2020; Serour et al., 2007). Cultural and psychological factors such as financial burdens, beliefs regarding non-surgical treatments, and reliance on traditional medicine play significant roles in patient decision-making (Serour et al., 2007; Ferreira, 2017; Nogueira et al., 2023). Furthermore, studies indicate that targeted educational interventions can enhance knowledge, correct misconceptions, and improve adherence to prescribed treatments (Nogueira et al., 2023; Triggs, 2017).

The Health Belief Model (HBM) offers a useful framework for understanding these behaviors, emphasizing the influence of patients' perceptions of disease severity, benefits and barriers of treatment, and self-efficacy in managing their condition (Coulson et al., 2016). However, qualitative research exploring these factors in culturally specific settings remains limited (Coulson et al., 2016; Carmona-Terés et al., 2017; Conner & Norman, 2017). Recent studies suggest that patients with knee OA often conceptualize their condition differently based on cultural perceptions and personal experiences (Binnie et al., 2022; Teo et al., 2021). Patients in different healthcare environments exhibit varying attitudes toward rehabilitation, with some demonstrating skepticism about physiotherapy's long-term benefits (Binnie et al., 2022; Posnett et al., 2015).

A key challenge in OA management is ensuring adherence to prescribed physiotherapy programs, as many patients discontinue treatment due to logistical and psychological barriers (Hinman et al., 2016; Triggs, 2017). A study by Mazières et al. (2008) highlights that adherence rates are significantly influenced by patient education and trust in healthcare providers. Additionally, Alyami et al. (2020) found that in Saudi Arabia, awareness of OA and its treatment options remains low, leading to delayed diagnosis and suboptimal management. Psychological determinants, such as self-confidence in completing exercises, play a crucial role in long-term adherence (Binnie et al., 2022; Conner & Norman, 2017).

Several interventions have been proposed to address these challenges. The use of telephone coaching, as suggested by Hinman et al. (2016), has been effective in encouraging exercise adherence among patients with OA. Additionally, studies have shown that behavior change techniques, including motivational interviewing and goal setting, improve adherence rates (Ferreira, 2017; Posnett et al.,

2015). Technological advancements, such as virtual physiotherapy platforms, may further enhance engagement and accessibility for patients with OA (Teo et al., 2021).

Understanding patient perspectives on knee OA and its management is essential for developing culturally tailored interventions (Carmona-Terés et al., 2017). Research indicates that a patient-centered approach that integrates education, psychological support, and personalized treatment plans can significantly enhance outcomes (Conner & Norman, 2017; Coulson et al., 2016). Future research should focus on exploring these factors in diverse populations to develop evidence-based strategies that improve adherence and optimize rehabilitation outcomes (Teo et al., 2021; Binnie et al., 2022).

Methodology

Participants and Study Design

This qualitative descriptive study utilized semi-structured interviews with purposive sampling to recruit participants from the local community in Saudi Arabia. This sampling method aimed to capture diverse attributes, behaviours, and experiences relevant to the research question.

The study included 33 participants diagnosed with knee osteoarthritis. Inclusion criteria included male and female individuals aged 45–70 years with a physician-confirmed diagnosis of knee osteoarthritis, based on radiographic evidence or symptom evaluation. All participants had received treatment for knee OA in at least one clinic in Saudi Arabia. There were no restrictions on the stage or severity of the condition. However, individuals with cognitive impairments that might interfere with their ability to participate in interviews were excluded.

Recruitment

Participants were recruited through social media platforms, including Facebook, X, and WhatsApp, as well as through advertisements displayed in local hospitals. Healthcare providers in these hospitals shared information about the study with potential participants. A snowball sampling method was used, where individuals who met the inclusion criteria were encouraged to refer others who might also be eligible. All participants received an information sheet and a consent form, which were provided in Arabic. These documents were reviewed and signed before any data collection began, ensuring participants fully understood the study's purpose and procedures.

Data Collection

The study employed semi-structured interviews based on literature and research objectives (Binnie et al., 2022; Teo et al., 2021; Conner & Norman, 2017), conducted via telephone or in-person as per participant availability. Telephone interviews were securely recorded and stored at Medical Rehabilitation Department, Umm Al-Qura University, Makkah, Saudi Arabia. Transcripts were verbatim in Arabic, anonymized, reviewed for accuracy, and translated into English for analysis and broader accessibility.

Data Analysis

Non numerical Unstructured Data Indexing Searching and Theorizing software (NVivo, version 12, QSR International, Melbourne, Australia) was utilized for the qualitative data analysis in this study, providing a structured and systematic approach to handling and interpreting the data. Descriptive thematic analysis was used using a combination of inductive and deductive approaches (Clarke et al., 2014) by creating codes

and themes to make sense of data. The thematic analysis was informed by the HBM, allowing for the exploration of patients' perceived severity of knee OA, perceived benefits of physical therapy, barriers to adherence, and overall self-efficacy in managing their condition.

Ethical Considerations

Ethical approval was obtained from the Local Committee for Biological and Medical Ethics at Umm Al-Qura University (NJDD011023). Participants received an information sheet and consent form at least 24 hours before participation. A signed informed consent form was obtained from each participant before the start of the study. Data were anonymized using unique codes, and participants could withdraw at any time without affecting their medical care or legal rights, with their data being destroyed upon withdrawal.

Results

The study aimed to explore the perception and experience of patients with knee OA on treatment journey and physical therapy. Semi-structured interviews were conducted with 33 participants from Saudi Arabia (Table 1. illustrate the Participants Demographic). Six themes were developed through the thematic analysis: Patient Journey and Symptom Onset, Adherence to Treatment Plans and Outcomes, Patient Education and Support, Impact of Comorbid Conditions and External Factors, Emotional and Psychological Challenges, Provision of Care and Treatment Experience.

Table 1. illustrate the Participants Demographic Characteristics (N=33)

Participants number	33
Gender	Male (18)
	female (15)
Age (years)	45-50 (14), 50-60 (15), 60-70 (4)

Theme 1: Patient Journey and Symptom Onset

Participants reported knee pain at the start of their day. This pain was frequently felt during everyday activities, especially those with heavy job duties. Furthermore, participants maintained that the pain made it much more challenging to do everyday responsibilities.

"I felt for the first time that when I sleep, my hand becomes tense, and I can't move my leg. My knees hurt."

The pain and stiffness experienced by the participants significantly affected their ability to engage in religious practices, which held great importance in their lives. Their knee discomfort restricted their ability to participate in and enjoy these spiritual activities fully. Participants expressed distress and a strong determination to overcome these difficulties, underscoring the need for effective pain management and improved knee function.

"Initially, I just had some pain in my knee; I couldn't bend it, especially during prayer. I couldn't sit properly in prayer. That was the beginning; I felt pain in the knee and the muscle."

Aware of how pain and stiffness affected their daily activities, especially their religious routines, the participants sought guidance from orthopedic doctors. These specialists conducted comprehensive evaluations of their knees, which included diagnostic tests and detailed medical examinations.

"Through the doctor, he ran several tests and examinations, including an x-ray."

The majority of participants regarded physical therapy as their preferred treatment option. The prospect of surgery elicited fear and uncertainty, making it a less desirable choice. In contrast, physical therapy was perceived as a more straightforward and less intimidating approach to addressing their knee issues.

"Personally, I prefer physical therapy over surgery. Leave surgery and surgical operations as a last resort, even if the treatment takes longer. I have no problem with that, and I do not prefer surgeries. Surgeries, no."

Some participants felt home-based exercises were more practical due to distance, psychological comfort, and other personal considerations. As a result, the clinic's proximity played a more significant role in their decision-making process than the clinic's quality or reputation.

"I mean, honestly, the most important thing is to go to a place with a good reputation where people have tried the treatment and praised it. I observe and try because experience is the best proof."

Other participants faced challenges attending physical therapy sessions and preferred receiving a brochure or written materials that included essential exercises and instructions for home use. Some participants preferred to avoid surgical intervention and opted for non-surgical treatments, even if these required a longer duration to achieve results.

"When I go to them, I feel like I am leaving my house just to do a few things and walk among the exercise rings and other things they use. I mean, it's better for them if they give me something. I can do it myself at home instead of going on this trip."

"Personally, I prefer physical therapy over surgery. Leave surgery and surgical operations or anything related to operations as a last solution, even if the treatment takes a long time. I have no problem with that, and I do not prefer surgical operations."

Theme 2: Adherence to Treatment Plans and Outcomes

The participants consistently reported that their compliance with physical therapy resulted in satisfactory outcomes. They expressed satisfaction with the treatment strategy and the results obtained through physical therapy.

“No, I am completely satisfied, thank God. Because I saw a difference, a huge difference. Now, thank God, it is much better than before. Thank God, I found a great improvement with physical therapy. Thank God.”

Overall, most of the participant's experience with physical therapy was very beneficial for their condition and significantly changed and improved the condition. However, some participants expressed opposing views, reporting that they felt inadequately managed and left unattended during their treatment sessions.

"My experience with the exercises that the specialist at the clinic gave me, I am very satisfied, the pain has decreased, and a lot has changed."

"They put a device on my knees that uses electrical vibrations, and muscle strengthening weights, and left me. So, on the contrary, the weights increased the pain, and they just gave me strengthening exercises at home."

Some participants noted that the therapeutic exercises were less challenging than anticipated;

however, they felt they were not tailored to their specific conditions. Additionally, a few responses highlighted delays in accessing the service and difficulties rescheduling sessions, which added to their concerns.

"They gradually increased the exercises until 10 sessions were completed. But I felt it is easy, not for me I guess"

"I mean, at first it was fine, then he started always postponing appointments half the time, and I used to get bored when I was there."

A few participants reported a lack of adherence to physical therapy, which may have contributed to the need for revision surgery or knee replacement. Additionally, some indicated that their busy lifestyles posed challenges to maintaining consistent physical therapy sessions.

"We are busy working on our lives. Ignoring our health, I mean, if I had been freer, I would have gone to physical therapy early on, as I am a strong believer in physical therapy."

Interestingly, one participant admitted to disregarding a physician's advice to avoid specific prayer movements that put stress on the joint, believing it was not significant. Instead, they chose to focus on performing exercises.

"Yes, he actually told me to pray while sitting, and I did not want to pray while sitting, but I know it is better for me to exercise and do knee exercises."

Theme 3: Patient Education and Support

The responses highlighted physicians' efforts to enhance awareness about knee osteoarthritis, particularly regarding the role of physical therapy. As a result, many participants expressed satisfaction with their treatment plans. Additionally, some participants noted that the physicians were highly cooperative, offering consistent support and education throughout their treatment journey.

"The doctor said that the operation was 100% successful, but 70% of the physical therapy is from you. If you are lazy, may God help you, and I was not lazy. On the contrary, I continued and benefited, and I did not stop until they prevented me from entering due to the pandemic."

"The doctor I was following up with, he was an understanding and knowledgeable doctor, and as I told you, he gave me advice other than drug treatment, which he gave me advice on how to deal with the knee, what to do."

Conversely, some participants were dissatisfied with the education and attention provided by medical staff regarding their condition. They felt their health concerns were insufficiently addressed, leaving them without adequate support for both the physical and emotional challenges they faced. Many reported struggling to manage their pain and understand their condition, leading to feelings of isolation and the absence of a strong social support network to assist them.

"Some were very brief, without proper explanation, and some offer more information."

"Well, I try to talk to my family, husband about it and they don't really care, you know, they don't feel it".

Most participants demonstrated a lack of awareness regarding their treatment plans and the effectiveness of various options. This became evident during the interviews, as they frequently asked medical questions about their condition, covering topics such as surgery, injections, and physical therapy. Additionally, many responses

reflected insufficient knowledge about their disease and its progression, highlighting a significant gap in patient education and understanding.

"No, the truth is, we all don't know about osteoarthritis."

Many participants relied on community-based advice, often passed down through generations. While these suggestions sometimes reflected misconceptions and incorrect beliefs, patients considered them highly valuable, particularly in areas or communities with limited access to conventional healthcare services.

"She told me to get some fat and try to cut it into squares, then put it on the fire until it melts, and grease it, meaning your knee, and put coarse salt in it, and grease your knee, and cover it. It really helped me."

Theme 4: Impact of Comorbid Conditions and External Factors

The responses highlighted the impact of the COVID-19 pandemic on participants' adherence to their physiotherapy treatment plans. Many participants noted that the lockdowns and precautionary measures during the pandemic led them to stop attending the clinic, a habit that, for some, persisted even after restrictions were lifted.

"I continued physical therapy for two to three weeks, and the Corona pandemic came, and they told me remotely, but to be honest, I was lazy and left it."

Several factors influenced participants' decisions regarding their choice of physical therapy. Distance from the clinic emerged as a practical consideration, with many opting for the nearest clinic regardless of its reputation. Additionally, some participants reported significant delays in securing physical therapy appointments, often waiting 3–6 months. These delays likely contributed to previously discussed issues, where missed or postponed appointments were neglected, leading to a deterioration in their condition.

"Appointments are given to you after three months. I mean, they do not give appointments easily. For example, if it was 15 days or ten days, it is reasonable, but that long!"

"Appointments are so difficult to get, especially in public hospital clinics. So, I forget about them and ignore them".

Theme 5: Emotional and Psychological Challenges

Overall, participants demonstrated motivation and adherence to their treatment plans, driven by the desire to regain an active, pain-free lifestyle. This was evident in numerous responses highlighting their commitment to taking supplements and maintaining exercise routines over the long term. However, a few participants indicated that personal beliefs influenced their consistency in following the treatment plan, sometimes hindering their continuity. Additionally, patients expressed feelings of anxiety related to their disease symptoms, highlighting the need for improved education and reassurance to address their concerns effectively.

"Thank God, I continue to take one tablet of Brufen and one vitamin B12 daily. I also did physical therapy for about 12 sessions over a month, and thank God, the pain has reduced. Not in the hospital, but in a private clinic, and thank God, the pain disappeared"

"No, because, for example, I see in my family, I see

my mother taking muscle relaxants and painkillers, but they are only temporary. I don't feel that they are addressing the problem itself."

The participants faced various challenges that impacted both their physical and emotional well-being. Many responses emphasized that knee osteoarthritis resulted in movement limitations and significant lifestyle adjustments, particularly affecting their ability to perform prayers. These restrictions often led to emotional distress and a sense of loss, reflecting the profound effect the condition had on their daily lives.

"I used to feel this pain in my knee, and it bothered me so much that I was getting tired of praying."

Theme 6: Provision of Care and Treatment Experience

Patients described the orthopedic and physical therapy staff as cooperative, communicative, and supportive. Many valued their helpfulness and optimism. However, comparisons emerged, with some noting better physical therapy quality abroad or elsewhere.

"No, no, really, everything was fine, even when the doctor didn't help me. He came and called me online and did a physical therapy session with me several times, cooperating with me, but the journey was exhausting, and I said to myself, I'm good, that's it. I've received a lot of treatments and a lot of medications, which may affect me."

Furthermore, when comparing private and public clinics, participants noted distinct differences. Private hospitals were praised for offering better appointment scheduling and more favorable outcomes, though they were significantly more expensive. In contrast, government hospitals provided free services but were criticized for longer waiting times and less satisfactory results.

"I tried two physical therapy centres, one free and the other was paid for, but the private made me better".

"The appointments that make me hate going for governmental, free clinic."

Discussion

This study aimed to explore the patient perspectives and experiences in physical therapy and treatment choices for knee OA. A key finding is the significant impact of knee OA on participants' quality of life, including physical limitations, emotional distress, and the disruption of essential daily activities, such as prayer. These results align with existing literature, which underscores the profound influence of knee OA on patients' physical and emotional well-being, highlighting the necessity of holistic approaches to management (Al-Ahaideb et al., 2013; Verges et al., 2019).

Participants expressed a strong preference for physical therapy over surgical interventions, viewing it as a safer and less invasive option. This preference reflects broader findings in the literature, where adherence to physical therapy is linked to improved outcomes when combined with patient education and tailored care plans (Triggs, 2017; Eisa et al., 2016; Meiyappan et al., 2020). However, barriers such as the lack of individually adapted exercises, logistical challenges, and long waiting times for appointments in public clinics emerged as significant obstacles to adherence. These findings suggest that improving access to care and personalizing treatment plans may enhance patient engagement and outcomes.

Another notable concern was the participants'

varying levels of awareness regarding their condition and available treatments. Many demonstrated limited knowledge about knee OA and the benefits of physical therapy, often relying on community-based advice, which sometimes perpetuated misconceptions. This finding emphasizes the critical role of education and effective communication between healthcare providers and patients in fostering informed decision-making and adherence to treatment plans (Juby et al., 2005; Subahi, 2021). Enhanced educational initiatives, particularly those addressing common misconceptions, are essential to empower patients in managing their condition (Nicolson et al., 2018; Zacharias et al., 2014).

The study also highlights the influence of external factors, such as the COVID-19 pandemic, which disrupted adherence to treatment plans and introduced long-term challenges in maintaining therapy routines. These disruptions emphasize the need for strong healthcare systems supporting patients during crises through alternative care delivery methods, such as telerehabilitation. Emotional and psychological challenges, including anxiety and feelings of isolation, were also frequently reported by participants. These findings align with prior research suggesting knee OA management should incorporate psychosocial support alongside physical interventions. Creating supportive environments within healthcare settings and through community networks could play a pivotal role in improving patient outcomes (Somers et al., 2009; Scopaz et al., 2006; Hendry et al., 2006; Mukharrib et al., 2018).

Lastly, participants' comparisons between private and public healthcare systems revealed disparities in access, cost, and satisfaction. While private clinics were praised for better scheduling and outcomes, they were less accessible due to higher costs. In contrast, despite being free, public clinics were criticized for long waiting times and suboptimal results. These insights highlight the importance of addressing systemic healthcare challenges to ensure equitable access to high-quality care.

Limitations

This study has several limitations. The small sample size (33 participants) and focus on a single region in Saudi Arabia may limit the generalizability of the findings. The qualitative design relied on self-reported data, which may introduce recall or social desirability bias (Ritchie et al., 2014). Additionally, while interviews were conducted in Arabic to ensure cultural appropriateness, translation into English may have resulted in minor nuances being lost. External factors, such as the impact of the COVID-19 pandemic on access to physical therapy, were not directly addressed, which could have influenced participants' responses. Despite these limitations, the study provides valuable insights into the experiences of knee osteoarthritis patients within a culturally specific context.

Conclusion

In conclusion, this study highlights the importance of addressing patient perceptions in knee OA management, guided by the Health Belief Model (HBM). Perceived severity, benefits, barriers, and self-efficacy influence adherence to physical therapy.

Future Research

Addressing misconceptions, logistical challenges, and emotional needs through targeted education and tailored care plans can enhance adherence and outcomes. HBM-guided strategies that empower patients and improve their confidence in

managing OA are essential for better quality of life and treatment success.

Author Contributions

All authors significantly contributed to the work reported, including conception, study design, execution, data acquisition, analysis, and interpretation. They actively participated in drafting, revising, or critically reviewing the manuscript, provided final approval of the version to be published, agreed on the journal submission, and accepted accountabilities for all aspects of the work.

Data Availability Statement

The authors will transparently provide the primary data underpinning the findings or conclusions of this article, without any unjustified reluctance. If need from editorial team.

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Conflicts of Interest

The authors declare no potential conflicts of interest related to the research, writing, or publication of this work.

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