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Experiences of Patients with Physiotherapy Service for Knee Osteoarthritis at Tertiary Care Government Hospital, Pokhara, Nepal-A qualitative study

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Research Article

Keywords: physiotherapy, knee osteoarthritis, qualitative, Nepal

Posted Date: November 17th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-11409973/v1

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Additional Declarations: No competing interests reported.

Abstract

Background

Knee Osteoarthritis is a chronic musculoskeletal condition leading to pain and disability. One of the conservative managements is physiotherapy which is still an emerging field in Nepal with limited access for public due to inequitable distribution of services. Few studies have been done on the patient experiences in low- or middle-income countries like Nepal, which is a crucial component that affects treatment compliance, satisfaction, and results. Since, the outcome of the service is reflected via patients' experiences, the rare documentation in Nepal represents a significant discrepancy. Investigating the experiences of Nepalese people who have recently received physiotherapy treatment for osteoarthritis in their knees is the purpose of this study.

Methods

A phenomenological qualitative design was used. Eight participants who had undergone physiotherapy service for their knee osteoarthritis at Western Regional Hospital, Pokhara were recruited using convenience sampling technique. A semi-structured face to face interview was used to collect data and later was analyzed using Braun and Clarke's thematic framework.

Results

Majority of the participants were women with minimal education and from rural backgrounds. Seven themes emerged: perceived causes and risk factors of osteoarthritis, living with osteoarthritis symptoms, pathways into physiotherapy department, perception on approaching and receiving physiotherapy service, management approaches in physiotherapy, informational and educational gaps in physiotherapy care, and experiences of patients. Nearly all of the participants attended physiotherapy without hesitation, typically after orthopedic referral, attributing their condition to age, occupation and prior trauma. Almost all of the participants had pain and functional limitations as major consequences and were prescribed evidence-based exercises which were however, not individualized. Despite minimal physical examination, participants reported pain relief and ease in their functional abilities.

Conclusion

In this context, patients' experiences with physiotherapy service for knee osteoarthritis revealed both actual therapeutic benefit and significant gaps in assessment, communication and customized care. Patient centered approach of knee osteoarthritis care in Nepal should be enhanced by thorough assessment, routine outcome evaluation and proper education for patients in addition to practice recommendations of physiotherapy as a first-line management approach.

BACKGROUND

Osteoarthritis (OA) is characterized as a heterogeneous collection of disorders that cause joint symptoms and indicators linked to articular cartilage defects [1]. The knees, hips, hands, facets, and feet are the primary joints affected by OA however eighty-three percent of all cases of osteoarthritis are knee osteoarthritis [2]. The construction and agricultural industries, in particular, had higher risks of knee OA due to their frequent climbing, heavy lifting, kneeling, squatting, and standing for a prolonged period of time [3]. The most significant risk factor for KOA is increasing age, followed by obesity and prior knee injuries [4]. There is a growing understanding that physiotherapy can be crucial to the multidisciplinary management of patients with knee OA [5]. Even though it's advised, just 4% of OA patients treated in a primary care setting regularly exercise, compared to 26% and 31% who take topical Non-Steroidal Anti - Inflammatory Drugs (NSAIDs) and paracetamol respectively [6]. World Physical Therapy Day in 2022 focused on osteoarthritis, providing information on running's impact on OA, prevention strategies, facts, and myths [7]. In Nepal, a study found a significant female predominance of 67.5% [8]. According to a national survey, there is 1 physiotherapist for every 25,000 people in Nepal. In this survey, ninety percent of the physiotherapists had a musculoskeletal specialty. Just 1% of the physiotherapists were involved in counselling the patients. Half of the physiotherapists in the survey expressed dissatisfaction with their jobs and the workforce for physiotherapy is found to be underrepresented in rural areas [9]. In Nepal, the physiotherapy services were significantly impacted by lack of awareness about physiotherapy [10].

There are qualitative studies that take physiotherapists' viewpoints into account however it might be argued that a patient's perception of their physiotherapy care experiences may differ from the therapist's [11]. Physiotherapy service's effectiveness is influenced by the patient's experience, incentive, and participation in the therapeutic process in addition to clinical procedures. In line with a biopsychosocial approach, addressing the psychological and social aspects of knee osteoarthritis in addition to its biological aspects might yield better results [12].

Methods

Design

We conducted a phenomenological qualitative study design using face to face in depth interviews [13] to explore the experiences of patients with physiotherapy service for knee osteoarthritis at tertiary care hospital in Nepal. The primary researcher is a female, final year physiotherapy student at School of Health and Allied sciences, Pokhara University with no prior relationship with the participants. The qualitative approach enabled to explore in-depth experiences, perception and contextual factors that quantitative method would not adequately capture. The reporting adheres to the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines where applicable.

Sampling and participation selection strategy

Convenience sampling technique was used to recruit eight participants [13] who had undergone physiotherapy service for their knee osteoarthritis at Western Regional Hospital in Pokhara, Nepal. The selection criteria were individuals with a proven clinical diagnosis of knee osteoarthritis based on their medical records or medical professional diagnosis, patients who have fulfilled the OA clinical criteria as forth by the (NICE) National Institute for Health and Care Excellence (aged 45 years or older, experiencing activity-related knee pain, and any morning stiffness lasting no more than 30 minutes) [14] and individuals who have undergone physiotherapy in prior 3 months [15]. Final sample size was guided by the principle of data saturation, whereby recruitment continued until no new themes emerged from the interview's information [16]

Data Collection

Data were collected through face-to-face semi-structured In-Depth Interview (IDI) guide conducted between third week of August 2025 and September 2025 after ethical approval was obtained from the Institutional research committee of Pokhara Academy of Health Sciences. A semi-structured interview guide [11] was developed based on a comprehensive review of relevant literature and iterative discussions with the supervisor and subject-matter experts. The guideline was pre-tested with two patients (not included in the main study) to evaluate clarity, relevance, and flow of questions, and necessary modifications were made prior to finalizing the tool that is used to engage eight participants in order to extract detailed accounts of individuals who had undergone physiotherapy service for osteoarthritis in their knees. Digital recorder was used to record interviews, and any noteworthy events that came up during the interviews were captured as field notes in notebooks. Eligible patients were contacted one-on-one to inquire about their willingness to participate in the study after the proposal was approved, ethical clearance was obtained, and authority for data collection was granted. Prior to each interview, the purpose of the study was clearly explained to participants and written informed consent was obtained. Participants were assured of the voluntary nature of their participation and their right to withdraw at any stage without consequence. All interviews were audio-recorded with participants' explicit consent, and field notes were taken concurrently as a backup in the event of equipment failure. Interview durations ranged from 25 to 40 minutes depending on participant engagement and depth of responses. Interviews were solely conducted by principal author (Final year Bachelor of physiotherapy student, AT, she) conducted at a time and location within the premises of hospital convenient for participants, coordinated in advance via telephone. To maintain the comfort for expressing the views by subjects, only the principal author and the subjects were present at the specific venue specified earlier. Interview Follow-up probing questions were used throughout to elicit richer and more nuanced accounts of participants' experiences. No any subjects refused to participate in our study. The study was stopped at sample 8 due to principle of data saturation which states that data collection terminates after no new patterns or insights emerge [13].

To ensure confidentiality, participants were identified only through individual identification numbers rather than names. Each participant was provided written informed consent before the interview. In order

to guarantee participants' comfort and clarity, interviews were done in person in simple Nepali language. In order to adequately capture the complexity of the participants' expressed experiences, both verbal responses and nonverbal cues were closely monitored and documented during the interview process.

Data Management and Analysis

Audio recordings were transferred to a password-protected laptop immediately following each interview and subsequently uploaded to a secure Google Drive folder to ensure data security. The initial portion of each audio file containing participant identifiers was removed to preserve anonymity. After each interview, the audio recordings were transcribed verbatim by the primary researcher (AT) in Nepali and later translated into English, which was revised by an expert and supervisors in both languages to ensure the quality of translation. AT and PS independently coded the transcripts, and discrepancies were resolved through review and discussion with another supervisor (BS). Accuracy and completeness of transcripts were verified by re-listening to recordings, and back-translation from English to Nepali was conducted as a cross-check measure. Data were stored securely and anonymized using participant identification numbers.

Data were analyzed using thematic analysis following the six-phase framework described by Braun and Clarke (2006) framework [17] The process involved: (1) familiarization with the data through repeated reading of transcripts; (2) generation of initial codes through systematic line-by-line coding; (3) collation of codes into potential themes; (4) review and refinement of themes in relation to the coded extracts and the full dataset; (5) defining and naming themes; and (6) producing the final report. Themes were further refined through discussion with the supervisors. Manual coding was done without the use of qualitative analysis software to allow for deeper immersion in the data. Our study adopted an inductive thematic analysis approach, where themes and sub-themes were generated directly from the collected data rather than using a preexisting framework. The principle of data saturation guided the adequacy of the sample size. Throughout the process, reflexivity was maintained by the researcher to minimize bias and remain conscious of personal assumptions. The final themes were verified by revisiting the transcripts and field notes to ensure that the analysis accurately reflected the participants’ voices. This study has been presented in compliance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines.

Trustworthiness

The quality of the study was ensured through systematic attention to the four criteria of trustworthiness proposed by Lincoln and Guba: credibility, transferability, dependability, and conformability [18].

Credibility was established through member checking; whereby preliminary findings were shared with participants to confirm the accuracy of their represented views. Additionally, a subset of data was re-analyzed with the supervisor to verify the analytical process. The primary researcher is a female final

year student of Bachelor of Physiotherapy (BPT) at Pokhara University in guidance with qualified health professionals registered in Nepal Health Professional Council. No prior relationship existed between the interviewer and any of the study participants before commencement of the study

Transferability was supported by the deliberate inclusion of well-defined subjects and through the provision of rich, detailed descriptions of the study context and findings to enable readers to assess applicability to other settings.

Dependability was addressed through the transparent application of a systematic thematic analysis framework, and member checking of findings across a diverse participant sample. The interviewer received training in qualitative research methods as a part of BPT program by supervisor (BS: obtained 18 CPD credit point on “Training of Trainers on qualitative method and data analysis process in health research” by Nepal Health Research Council-NHRC) and conducted pre-testing of the interview guide, prior to data collection.

Conformability was ensured through the personal conduct of all in depth interviews by the first author (AT), immediate post-interview transcription, repeated verification of transcripts against audio recordings, and review of the data and analysis by the supervisors.

Ethical considerations

Results

Women made up 62.5% of the sample, while men made up 37.5%. The average age of the participants was 62 years, indicating that older persons made up the majority of the study population, which is in line with the typical demographic impacted by osteoarthritis in the knee. The details of characteristics of patients are in table 1.

Table 1
Characteristics of patients

Characteristic	Mean or n(percentage)
GENDER	3 (37.5%)
Male	5 (62.5%)
Female	
AGE	62
PROVINCE	1 (12.5%)
Bagmati	7 (87.5%)
Gandaki	
ADDRESS	1 (12.5%)
Major City	3 (37.5%)
Inner Regional	4 (50%)
Outer Regional	
EDUCATION	4 (50%)
No formal education	4 (50%)
Basic Level	
WORK STATUS	4 (50%)
Agricultural (Farmer)	2 (25%)
Domestic/Care	1 (12.5%)
Skilled/Other	1 (12.5%)
Not Specified	
SEVERITY OF KNEE PAIN	2 (25%)
No Pain	2 (25%)
Moderate	4 (50%)
Severe	
PAIN (WOMAC)	9.125
MORNING STIFFNESS (WOMAC)	2.5
EVENING STIFFNESS (WOMAC)	0.25
PHYSICAL FUNCTION (WOMAC)	39.125

Characteristic	Mean or n(percentage)
NUMBER OF PHYSIOTHERAPY SESSIONS	3(37.5%)
1	4(50%)
2	1(12.5%)
More than 10	
NUMBER OF PHYSIOTHERAPIST(S) SEEN	3.375

Themes Identified

Seven themes emerged: (1) perceived causes and risk factors of osteoarthritis, (2) living with osteoarthritis symptoms, (3) pathways into physiotherapy department, (4) perception on approaching and receiving physiotherapy service, (5) management approaches in physiotherapy, (6) informational and educational gaps in physiotherapy care, and (7) experiences of patients.

Theme 1: Perceived causes and risk factors of OA

Sub theme 1.1 Occupational and physical labor

Respondents from agricultural and rural origins described laborious lifting, prolonged walking, and standing as the explanatory foundations of their knee pain.

"I had to carry a lot of things in the village. I had to carry grass, cow dung. That's why it all started at this age." (P2)

“It is because I walk a lot. I also think that is what caused this. Also, I’ve heard it’s because of prolonged standing.” (P4)

Sub-theme 1.2 Ageing

Presenting knee OA as an unavoidable and natural part of aging was another causal tendency.

“Is it because I did too much work, my age? I've no idea." (P3)

Sub-theme 1.3 Prior Trauma and Injury

Without additional help, these individuals independently created biographical causal linkages that connected their current situation to a previous fracture, a fall, or a history of severe illness.

“I had fracture of my leg around 25 years back so I think the knee pain is because of that.” (P6)

“1 year back…. while cleaning bathroom, my ankle twisted and I fell which led to difficulty in walking. It wasn’t near normal but I could walk a little better so I didn’t go to hospital. …About 5 months later, I started

having pain around the knee. The pain increased as days passed by." (P8)

Theme 2. Living With OA Symptoms

Sub-theme 2.1 Pain

Several participants experienced a dull, deep painful sensation that was localized within and around the knee joint. This quality of pain was remarkably consistent.

"I've a dull kind of pain inside my knee. And it was difficult and painful to even walk, sit." (P8)

"I had dull kind of pain and my knees would swell as if I bumped on something." (P2)

One participant's acceptance that the pain was so bad that it made her cry shows that pain exceeded the boundary from physical pain to psychological and emotional anguish.

"I'd give my pain 10 - sometimes I cry because of pain." (P2)

Sub theme 2.2 Onset and progression

Most of the respondents had gradual onset which worsened progressively.

"It wasn't that difficult in the beginning but now it's hard to walk. It's been 2–3 months that I've found it more painful." (P2)

One of the participants complained that she had symptom relapse followed by treatment interruption.

"I had to go to village. I came back with more pain and swelling as well."(P8)

Sub theme 2.3 Functional Limitations

The most common and detrimental effect of knee OA found in the dataset was functional limitation, which affected participation in society, household tasks, job-related responsibilities, and basic mobility.

"I could not sit cross-legged. And I could not walk up and down." (P7)

" I'm not doing any job because of knee pain. I had difficulty walking." (P3)

Theme 3. Pathways into Physiotherapy Department

Sub-theme 3.1 Doctor mediated referral pathway

The fact that the majority of participants were referred to physiotherapy by an orthopedic suggests that access to physiotherapy is frequently mediated through specialized medical consultation rather than being started by patients or general practitioners.

“Because of knee pain, I showed it to orthopedic and they asked me to go for physiotherapy. Otherwise, we didn't know about it." (P2)

“I was referred to physiotherapy by orthopedic, twice.” (P7)

Sub-theme 3.2 Peer and community networks

Informal community knowledge also functioned concurrently and occasionally even prompted patients to seek or request specialist assistance.

“Doctor also didn’t tell me about physiotherapy. My brother’s wife also had knee pain and she did therapy in Chitwan and apparently her pain that was in the past 8–9 years, resolved. So, I appealed to the doctor, if possible, refer me to physiotherapy.” (P8)

"Some people told me to try physiotherapy and that they had better results with physiotherapy." (P3)

Theme 4: Perception on Approaching and Receiving Physiotherapy Service

Sub theme 4.1 Attitude towards physiotherapy

In some cases, patients came to the department with anticipatory hope, a desire to learn and a conviction that physiotherapy could be helpful.

"No, I was not worried. I was hoping to be able to learn from the physiotherapist." (P2)

"I was not hesitating. I was just thinking that …. going to therapy could help me." (P3)

One participant demonstrated apparent therapeutic skepticism, attending and adhering to exercises while also questioning whether physiotherapy would result in any significant improvement.

“I still think nothing is going to change because of physiotherapy. But I’ll do it I guess.” (P4)

Nearly all of the participants explained how finances weren’t the issue for them to access physiotherapy service.

“My sessions were covered by insurance so it wasn’t that expensive for me.” (P8)

Sub theme 4.2 Physical Examination by physiotherapist

Almost all of the patients responded that there was minimal or absent physical examination from the side of physiotherapist.

"No any form of examination was done whatsoever" (P3)

"Sometimes they asked me to bend, extend knees while lying." (P1)

Sub Theme 4.3 Outcome Measures

The result demonstrates that organized instruments like Western Ontario and McMaster Universities Arthritis Index (WOMAC), Visual Analogue Scale (VAS), or Knee Injury and Osteoarthritis Outcome Score (KOOS) that are used to measure pain, function, or impairment were not used across nearly all patients.

"They didn't give me any form." (P2)

Sub theme 4.4 Clinical Reasoning

Rather than using independent clinical reasoning, participants reported that physiotherapists reached their clinical conclusions by analyzing imaging results or relying to the orthopedic specialist's diagnosis, with no participant recalling an assessment by physiotherapist.

"The physiotherapist looked at X-ray and told me degenerative changes are seen on right knee." (P4)

Theme 5: Management Approaches in Physiotherapy

Sub theme 5.1 Exercise as primary treatment modality

The reported workouts, which included dynamic quadriceps strengthening, adductor isometrics, VMO activation, quadriceps and hamstring isometrics, were largely consistent throughout the sample.

"He gave me exercise treatment, not any other treatment." (P1)

"They told me to do exercises accordingly and pain would resolve." (P1)

A number of participants self-organized their workout plan around their daily routine, and the majority stated that they intended to stick to their regimen.

"On daily basis I'll follow the exercises. I know this is essential for me so I'd do it routinely." (P3)

"I will have to take time off. I have to get up early in the morning, I have to get up 15–20 minutes early. And at night, before I go to sleep, I can do them as it's all done while lying." (P2)

Sub theme 5.2 Adjunctive treatments

Beyond exercise, only few respondents were advised with adjunctive modalities.

“I used TENS. But every new person had different approach towards it. Some would tell one channel is enough, some would say it’s better not to apply over bony area, some would apply it overall. The technique was different with different physiotherapist” (P8)

"If pain persists, they've told me that they'll use some form of machines." (P6)

"Only orthopedic told me about something that heals my knee using my own blood and an injection." (P8)

Sub theme 5.3 Awareness of and attitudes towards surgical intervention

Physiotherapists in the study were virtually mute on the subject; they focused more on conservative management. However, patients had strong personal opinions on surgery that were mostly influenced by societal narrative and fear over clinical knowledge.

"they've told me about surgery but I'm scared it'd become more worse. Others say it could worsen my walking ability so I'm scared." (P6)

"If the pain resolves, I won't be needing surgery but if pain persists, I might have to do the surgery." (P7)

Theme 6: Informational and Educational Gaps in Physiotherapy Care

Sub theme 6.1 Instructions for home based exercise programme

Physiotherapists' communication and support for at-home exercise was generally sparse and uneven throughout the dataset.

"It'd be useful for older people if they gave exercises in written form." (P5)

A small percentage of participants stated that they had a family member with them when the exercises were demonstrated during their physiotherapy session.

One encouraging aspect of this topic was that participants said they were allowed to take pictures of the exercises that were posted on the physiotherapy department's walls.

Furthermore, the majority of participants stated that they were given precise verbal directions regarding the frequency, repetitions, and execution of each and every exercise throughout the session.

"They have told me to do these exercises 2 times a day with 10 repetitions." (P7)

Sub theme 6.2 Diagnostic Explanation by Physiotherapist

According to the data, patients were given little to no explanation for their diagnosis. When explanations were provided, they were superficial rather than informative from a therapeutic standpoint.

"they told me that as you age, this is normal. The physiotherapist explained how when a tree grows old, it won't be like before." (P3)

"Neither physiotherapist nor orthopaedical explained it to me. That is why this is the issue." (P4)

Sub theme 6.3 Advices on lifestyle modifications

Minority of the respondents were advised to reduce their weight, which is a guideline that has significant impact on the treatment of osteoarthritis in the knee, but didn't receive any helpful advice on how to do so.

"They told me to lose weight but didn't tell me how." (P6)

"…they did tell me to reduce weight. Didn't explain the importance and how to lose weight." (P8)

Throughout the dataset, one type of advice that was often but inconsistently given was to modify daily physical activity.

"They advised me not to walk uphill and downhill a lot." (P4)

"I have to carry heavy things so they asked me to avoid it as much as I can. I have to take care of my diet. I have to be careful while walking uphill and downhill." (*P2)*

Theme 7: Experiences of treatment

Sub theme 7.1 Pain Reduction

Throughout the entire data, pain reduction was shown to be the most often reported and highly rated treatment outcome.

"I would've given ten. It's been five or six days. It's gone to zero now." (P1)

"I felt kind of relief while I was doing the exercise there itself so I feel it'd help me a lot." (P2)

"It was different while I came from there to here." (P3)

Sub theme 7.2 Uncertainty about the treatment

A concurrent and equally important thread of ambiguity ran along the pain reduction described by a number of participants; if the improvement would continue, what actually led to it, and what would happen once therapy ceased.

"Either it's medicine or therapy but my pain has reduced a lot." (P1)

"I just don't know if I stop using the machine, the pain will persist or not." (P8)

Sub theme 7.3 Ease in functional activities

In addition to pain relief, a number of participants reported significant gains in their capacity to carry out every day functional tasks after physiotherapy.

"Pain was about score 4 when doing basic activities since I started therapy, pain has reduced and I'd give it a 2 right now." (P8)

One of the respondents showed immediate ease after a physiotherapy session.

“While coming from there (points towards door of OPD) to here (seating area at park), I already feel different.” (P3)

A number of individuals reported a trend in which pain relief and functional improvement led them to stop exercising, either consciously or unconsciously reasoning that if symptoms had subsided, there was no need to continue.

"Pain would resolve a little then I would discontinue it." (P7)

"2–3 months prior, he thought it'd resolve on its own so he didn't adhere to the exercises that well." (P4)

Discussion

All eight of the participants in this study were trying to create a causal depiction of their condition. Majority of them associated KOA with occupation (mainly agricultural work), ageing and previous injury which resonates with few studies [19–21]. Most of the respondents perceived that KOA is a part of ageing, it’s inevitable which aligns with a study by Pouli et al. [22] that illustrated how most of the participants approached KOA as a natural process of ageing. The consistency in pain terminology “dull-ache” among participants is clinically noteworthy and aligns with well-established characterizations of OA symptoms seen in study by Longo et al. [23]. A respondent stating that her pain sometimes makes her cry, demonstrates significant psychological and emotional components in addition to physical dimension. This is consistent with a study which illustrated that OA patients daily activities were impacted and besides that, they also often experience anxiety, irritability, and that the illness necessitates an individualized biopsychosocial [24].

Respondents described struggling to continue or had quit work due to limitations in their activities. It aligns with the study by Nyvang et al. [25] which accurately reflects the experiences of this primarily rural, agricultural population, for whom the condition disturbed not just movement but also livelihood and identity. The fact that an orthopedic referred nearly all participants to physiotherapy illustrates a well-known structural reality in the accessibility of musculoskeletal care. This finding is directly corroborated by a study by Shakya et al [26]. which showed that 76.4% of the patients were referred from a physician. This differs from a study by Teo et al. [11] done in Australia which illustrated that few of the participants self-referred to physiotherapist. A respondent in this study presented a unique experience where she hadn’t even been informed about physiotherapy by the physicians but through the recovery experience from her sister-in-law, she actively requested a referral to physiotherapy, reversing typical dynamic referral pathway which is consistent with research by Ali et al. [27] showing that social support, whether from peers or medical professionals, is crucial for OA management program.

Majority of the participants were hopeful in getting better with physiotherapy which correlates with a study done in Malaysia [28]. Physiotherapists didn't perform any sort of assessment on the participants. The only exception was one respondent who explained that physiotherapist assessed their range of motion. The finding differs from a systematic review by Runge et. al. [29] which showed that for a medical diagnosis and to evaluate pain, function, and impairment resulting from KOA, a comprehensive examination and history are crucial. The choice of particular interventions to enhance knee range, strength, and proprioception is influenced by this evaluation. Physiotherapists in this study used Out Patient Department (OPD) cards from the orthopedic referral and existing radiological findings for their diagnostic decisions rather than using independent clinical reasoning. International guidelines clearly state that imaging is not always necessary and support a diagnosis of knee osteoarthritis based on signs and examination findings [30].

Nearly all of the respondents were prescribed standard home - based exercises and those exercises align with the guideline for management of KOA [31]. Regardless of their unique severity, functional ability, or clinical presentation, almost all participants received the same exercise regimen, which indicates a protocol-based rather than patient-centered strategy to exercise prescription. One participant used Transcutaneous Electrical Nerve Stimulation (TENS) over sixteen sessions, making it the sole electrotherapy protocol recorded. The American College of Rheumatology advises strongly against the use of TENS in the treatment of knee OA, and Osteoarthritis Research Society International (OARSI) considers the evidence to be questionable [32]. Majority of those who were prescribed exercises, received clear instructions on repetitions and frequency. However, the lack of take-home materials put the entire burden of exercise recall on patient memory. Throughout the dataset, there was either no diagnostic explanation or only the term "degenerative changes", a designation given without any treatment context. Patients frequently express a need for precise information regarding their ailment, its causes, and what individuals can do about it [20]. These demands are not sufficiently met by the diagnostic communication reported in this study, which is consistent with a study by Paskins et al. [33]. Advising patients to avoid carrying heavy loads and frequent uphill, downhill reflects a basic biomechanical awareness that is considered clinically appropriate and in line with evidence that occupational and strenuous loading tasks are specifically associated with knee OA risk and progression [34]. This is reflected in the recommendation to avoid uphill and downhill walking and heavy carrying, which has been documented across multiple participants. Throughout the whole dataset, pain reduction was the most often reported and highly valued treatment outcome. It served as the only metric by which each participant assessed the effectiveness of physiotherapy. This is in line with the study demonstrating the effectiveness of therapeutic exercise resulting in clinically significant pain reduction across a variety of modalities, including isometric and dynamic strengthening, the exact exercises recommended for this sample [35]. In the majority of cases, the gradual progression of functional improvement is in line with anticipated rehabilitation trajectories. Research demonstrates that regular engagement in structured exercise results in quantifiable functional benefits in KOA, with improvements in mobility and activities of daily living being among the most well-documented outcomes [35]. However,

patients often interpreted periods of reduced pain as a reason to reduce activity rather than as proof that exercise was effective [36].

Strengths and weaknesses

This study has a few of noteworthy strengths. To the best of our knowledge, it fills a major void in South Asian musculoskeletal literature by being one of the first qualitative studies of patients' experiences with physiotherapy for knee osteoarthritis in Nepal. In order to reduce interpretation bias and promote rapport and in-depth disclosure, the researcher personally conducted each interview in the participants' native Nepali language. Participants showed significant diversity in terms of gender, occupation, education level, and place of residence despite the limited sample size, enhancing the range of experiences recorded. Rigor and transparency were maintained throughout the data collecting and analysis process by adhering to known methodological frameworks, such as the NICE clinical criteria and verified Nepali WOMAC for participant selection and Braun and Clarke's thematic framework for data analysis.

However, some limitations must also be acknowledged of our study. The study's small sample size from the Pokhara district may not accurately reflect the experiences of patients in Nepal's other regions. The results are not meant to be statistically generalizable because this is a qualitative study. As participants had to think back on their experiences with physiotherapy up to three months, the study may be prone to recall bias. To minimize this, interview sessions were made within close proximity to their physiotherapy sessions and we also tried to follow up with few patients. Another limitation is that the extent of the experiences reported may have been impacted by the inclusion of individuals with varied lengths of exposure to physical therapy.

Conclusion

The purpose of this study was to investigate the physiotherapy experiences of patients with osteoarthritis of the knee at a tertiary care hospital in Pokhara. The study produced seven themes and numerous subthemes using a qualitative approach with thematic analysis, backed by WOMAC quantitative data. Together, these themes provide a comprehensive and analytically rich picture of how patients perceived, accessed, experienced, and assessed their physiotherapy care. The results showed a multifaceted experience influenced by inadequate clinical evaluation, a lack of patient education, standardized intervention administration, and a notable paradox where real therapeutic gain coexisted with significant and unaddressed gaps in the level of care that patients received.

Understanding patients' lived experiences is crucial for enhancing the quality of service and professional standards since they are the main users of physiotherapy care and particularly direct observers of what happens throughout the clinical interaction. This study emphasizes the significance of patient-centered, and contextually responsive physical therapy. This study would be helpful in future for optimizing physiotherapy service delivery resiliently under resource limitations in a public tertiary healthcare setting in an LMIC context.

Abbreviations

COREQ
Consolidated Criteria for Reporting Qualitative Research
KOA
Knee Osteoarthritis
NICE
National Institute for Health and Care Excellence
NSAIDs
Non-Steroidal Anti - Inflammatory Drugs
OARSI
Osteoarthritis Research Society International
OPD
Out Patient Department
TENS
Transcutaneous Nerve Stimulation
WOMAC
Western Ontario and McMaster Universities Arthritis Index

Declarations

Ethical approval

for this study was obtained from the Pokhara Academy of Health Sciences, Institutional Review Committee (Ref No. 21/082). Permission was also obtained from relevant department of the hospital. Written informed consent was obtained from all participants prior to data collection. Participants were informed of the study objectives, their right to withdraw at any point without consequence, and the measures in place to ensure confidentiality and anonymity of their data. No direct benefits or risks to participants were anticipated from participation in this study.

Ethics Approval and consent to participate

This research was conducted in accordance with the ethical principles of the 'World Medical Association's Declaration of Helsinki, Ethical Principles for Medical Research Involving Human Subjects'. Ethical approval was taken from the Pokhara Academy of Health Sciences, Institutional Review Committee (Ref No. 21/082). Permission was taken from the department of physiotherapy of the hospital to conduct the study. Written informed consent was obtained from each participant. The objectives of the study were explained clearly to participant before data collection. All interviews were carried out voluntarily and participants could withdraw from the study at any stage. In-depth Interview

(IDI) was recorded with the participant's consent. Field notes were taken during the IDI as a backup of the audio-recorded data in case of equipment failure.

Consent for publication

Not applicable. This manuscript does not contain any individual person's data in any form

Competing interests

The authors declare no competing interests.

Clinical trial numbers

not applicable.

Author Contribution

AT, PS & BS; Conceptualization, AT, BS, PS & SB; methodology & revision of interview guide, AT, BS, PS & SB; formal analysis, AT & BS; writing-original draft preparation, BS, PS & SB; review and editing, BS & PS; supervision. All authors have read and agreed to the published version of the manuscript.

Acknowledgement

Sincere gratitude to to all of the participants who generously gave their time and the department of physiotherapy of Western Regional Hospital, Pokhara

Data Availability

All data supporting the findings of this study are available within the paper and the dataset is available with corresponding author and will be shared upon reasonable request

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