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Illness perceptions in patients diagnosed with osteoarthritis in light of their personal experiences: a mixed-methods study

Damla Bakkallar[1], Işıl Işık[1], Gül Ergün[2]

1 Yeditepe Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, İstanbul, Türkiye
2 Burdur Mehmet Akif Ersoy Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Burdur, Türkiye

Abstract

Aim: This study aimed to evaluate the illness perceptions of individuals diagnosed with osteoarthritis and scheduled for knee replacement surgery through the lens of their personal experiences.
Materials and Methods: A mixed-methods research design was employed. The quantitative phase included 50 patients, while the qualitative phase involved in-depth individual interviews with 10 patients. Data were collected using a Personal Information Form, the Illness Perception Questionnaire, and a Semi-Structured Interview Form. Quantitative data were analyzed using SPSS 21.0 with Mann-Whitney U and Kruskal-Wallis tests, while qualitative data were analyzed using Colaizzi's phenomenological method.
Results: Four main themes were identified: Illness Perception, Impact of the Illness, Treatment, and Nature of the Illness. The most commonly reported symptoms were pain (96%), joint stiffness (96%), fatigue (94%), and loss of strength (86%). Qualitative findings revealed that participants frequently associated osteoarthritis with aging, experienced significant restrictions in their social lives, and perceived current treatment options as largely inadequate.
Conclusion: Patients' perceptions of osteoarthritis significantly influence their treatment adherence, quality of life, and decisions regarding surgical intervention. By integrating quantitative interpretations, this mixed-methods study demonstrates how patients perceptions of osteoarthritis shape their expectations and timing regarding knee replacement surgery. Therefore, it is essential for nurses to develop illness perception–oriented assessment and intervention strategies as part of the multidisciplinary care team.

Keywords: Osteoarthritis, illness perception, knee replacement, personal experience, mixed-methods.

Kişisel deneyimleri ışığında osteoartrit tanısı alan hastalarda hastalık algısı: karma yöntem araştırması

Öz

Amaç: Bu çalışma, osteoartrit tanısı almış ve diz protezi ameliyatı planlanan bireylerin hastalık algılarını, kişisel deneyimleri ışığında değerlendirmeyi amaçlamaktadır.
Gereç ve Yöntem: Araştırma, karma yöntem desenine göre yürütülmüştür. Nicel aşamada 50 hasta yer alırken, nitel aşamada 10 hasta ile derinlemesine bireysel görüşmeler gerçekleştirilmiştir. Veriler; Kişisel Bilgi Formu, Hastalık Algısı Ölçeği ve Yarı Yapılandırılmış Görüşme Formu aracılığıyla toplanmıştır. Nicel veriler SPSS 21.0 programı ile Mann-Whitney U ve Kruskal-Wallis testleri kullanılarak analiz edilmiş; nitel veriler ise Colaizzi'nin fenomenolojik analiz yöntemiyle değerlendirilmiştir.
Bulgular: Analiz sonucunda dört ana tema belirlenmiştir: Hastalık Algısı, Hastalığın Etkileri, Tedavi ve Hastalığın Doğası. Katılımcıların en sık bildirdiği semptomlar; ağrı (%96), eklem sertliği (%96), yorgunluk (%94) ve güç kaybı (%86) olmuştur. Görüşmelerde, osteoartritin sıklıkla yaşlılıkla ilişkilendirildiği, bireylerin sosyal yaşamlarında ciddi kısıtlamalar yaşadığı ve mevcut tedavi yaklaşımlarının genellikle yetersiz bulunduğu belirlenmiştir.
Sonuç: Osteoartrit tanısı alan bireylerin hastalık algıları; tedaviye uyum, yaşam kalitesi ve cerrahiye yönelik kararları doğrudan etkilemektedir. Bu karma yöntem çalışması, nicel bulguları nitel yorumlarla bütünleştirerek osteoartrit algılarının hastaların diz protezi cerrahisine ilişkin beklentilerinin ve karar zamanlamasını nasıl şekillendirdiğini ortaya koymaktadır. Bu nedenle hemşirelerin, hastalık algısına yönelik değerlendirme ve müdahale planlarını multidisipliner ekip içerisinde geliştirmeleri kritik öneme sahiptir.

Anahtar Kelimeler: Osteoartrit, hastalık algısı, diz protezi, kişisel deneyim, karma yöntem.

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Sorumlu Yazar: *Işıl Işık*
e-mail: *isil.isik@yeditepe.edu.tr*
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Introduction

Osteoarthritis (OA) is a chronic, degenerative musculoskeletal disorder characterized by the progressive breakdown of joint cartilage, most commonly affecting older adults (1). As the most prevalent form of arthritis, OA significantly impairs quality of life by causing pain, joint stiffness, decreased mobility, and limitations in daily functioning (2). Globally, symptomatic knee OA affects approximately 10% of men and 13% of women over the age of 60 (3), with consistently higher prevalence rates reported among women. This disparity is often attributed to a complex interplay of biological, psychological, and social factors (4).

Given its progressive and often irreversible nature, OA necessitates the development of long-term coping strategies that extend beyond symptom management. In this context, the concept of illness perception—referring to an individual's cognitive and emotional interpretation of their condition—has emerged as a critical determinant of adaptation and self-care (5). According to Leventhal's Common-Sense Model of Self-Regulation (CSM), individuals construct beliefs about their illness across dimensions such as symptom identity, timeline, perceived consequences, controllability, coherence, and emotional response (6,7). These beliefs not only shape health-related behaviors but also influence emotional adjustment and treatment engagement (8).

Recent research has increasingly emphasized the relevance of these perceptions in chronic conditions such as OA. For example, Ginnerup-Nielsen et al. (2021), in a cross-sectional study involving 1,071 older adults with knee pain in Frederiksberg, Denmark, identified five distinct illness perception profiles and found that individuals with more negative perceptions were significantly less likely to engage in self-management behaviors such as physical activity and symptom monitoring (9). Similarly, Xie et al. (2025) demonstrated that care-seeking behaviors among older adults with knee OA are shaped not only by symptom burden but also by cultural beliefs, emotional coping strategies, and skepticism toward conventional treatments (10).

Qualitative findings have further enriched our understanding of the emotional and psychosocial impact of OA. Carmona-Terés et al. (2017) reported that individuals with knee OA often experience profound emotional burden, marked by frustration, loss of independence, and fear of dependency (11). Likewise, Jinks et al. (2007) found that patients frequently feel their condition is trivialized by others as a natural consequence of aging, which reinforces feelings of invisibility and emotional distress (12). Pouli et al. (2014) noted that many individuals with OA feel unheard and emotionally disengaged, citing a gap between their lived experiences and the support offered by healthcare providers (13). Similarly, Tsianakas et al. (2012) emphasized that integrating patient narratives into healthcare evaluation helps identify priorities for quality improvement and ensures that care planning reflects patients' real experiences and needs (14).

Beyond its role in daily symptom management, illness perception has also been shown to influence surgical processes and recovery. Observational evidence suggests that cognitive and emotional representations of illness, together with negative emotional responses, are closely associated with post-operative recovery outcomes. In an observational study of patients undergoing surgery for perianal disease, Hou et al. reported significant associations between maladaptive illness perceptions, heightened negative emotions, and poorer post-operative recovery, highlighting the role of psychological representations in surgical recovery processes (15). Similarly, evidence from joint replacement surgery supports the relevance of illness perception in surgical outcomes. In a study of patients undergoing total hip replacement, Balck et al. demonstrated that preoperative illness perceptions were significantly associated with post-operative pain, stiffness, functional outcomes, and activities of daily living, indicating that cognitive representations of illness contribute to recovery beyond surgical factors alone (16).

Although international research is expanding, studies examining illness perceptions related to OA in Turkey remain limited; existing work has predominantly focused on the postoperative period, leaving a gap in understanding patients' preoperative experiences (17). Yet, illness perception is a critical factor not only in determining coping strategies and treatment adherence but also in influencing decisions about major interventions such as knee replacement surgery. How patients interpret their illness and its impact on daily life profoundly shapes their treatment expectations and willingness to undergo surgical procedures. This underscores the need for nursing professionals to evaluate illness perceptions as part of holistic assessments and to integrate a person-centered approach into multidisciplinary care planning (18). From a nursing perspective,

understanding patients' illness perceptions is fundamental to delivering holistic and person-centered care. Nurses play a pivotal role in preoperative assessment by identifying patients' cognitive and emotional representations of illness, addressing fears and misconceptions through therapeutic communication, and supporting informed decision-making. By integrating illness perception into nursing care, clinicians can enhance patient engagement, emotional preparedness, and alignment between treatment plans and patients' lived experiences.

This study aimed to explore and assess the illness perceptions of individuals diagnosed with OA and scheduled for knee replacement surgery, through the lens of their personal narratives. By utilizing a mixed-methods design, it offers a comprehensive understanding of how subjective interpretations of illness influence adaptation, emotional response, and healthcare decision-making.

Materials and methods

Study design

This study employed a mixed-methods design, integrating both quantitative and qualitative data collection strategies. The quantitative component followed a cross-sectional descriptive design, while the qualitative component adopted a phenomenological approach to explore participants' lived experiences in depth. Patients scheduled for knee replacement surgery were identified from the hospital's elective surgery waiting list, and eligible participants were selected using a simple random sampling procedure from this list and invited to participate in the study prior to surgery. This dual methodology aimed to provide a comprehensive understanding of illness perception by examining both its measurable dimensions and subjective interpretations.

The study was conducted at the Department of Orthopedics and Traumatology of a university hospital in Istanbul, Turkey, between December 7, 2017, and April 4, 2019.

The study population comprised patients diagnosed with OA and scheduled for knee replacement surgery during the research period. For the quantitative phase, 50 participants were recruited through simple random sampling. Since the study aimed to include all eligible patients who met the inclusion criteria within the specified data collection period, a formal power analysis was not conducted. This approach ensured comprehensive representation of the available patient group.

All participants provided informed consent. From this group, a purposive subsample of 10 individuals (who were also included in the quantitative phase) was selected for the qualitative phase to obtain rich narrative data. Data collection continued until theoretical saturation was reached, and the process was concluded after the tenth interview upon achieving data adequacy.

Inclusion and exclusion criteria

The inclusion criteria were: (1) being diagnosed with osteoarthritis by an orthopedic specialist, (2) being scheduled for primary knee replacement surgery, (3) being 18 years or older, and (4) volunteering to participate in the study.

The exclusion criteria were: (1) having a diagnosis of another chronic musculoskeletal or neurological disorder that could affect mobility or perception, (2) undergoing revision knee surgery, and (3) having cognitive or communication impairments that would prevent meaningful participation in interviews.

Research hypotheses

This study was designed to explore whether illness perception levels differ according to demographic and clinical variables. The following hypotheses were proposed:

H_1: Illness perception levels differ significantly according to age.

H_2:Illness perception levels differ significantly according to gender.

H_3:Illness perception levels differ significantly according to education level.

H_4: Illness perception levels differ significantly according to place of residence (urban/rural).

H_5: There is a significant relationship between illness perception levels and treatment attitudes.

Data collection tools and procedures

Three instruments were used for data collection: a Personal Information Form, a Semi-Structured Interview Form, and the Illness Perception Questionnaire (IPQ).

The Personal Information Form, developed by the researchers in light of the relevant literature, included 20 closed-ended items to assess participants' sociodemographic characteristics, such as age, gender, marital status, education level, occupation, income, health insurance status, presence of chronic diseases, and use of tobacco or alcohol (4,18).

The Semi-Structured Interview Form, also developed by the researchers based on the relevant literature (4,18) included 18 open-ended questions. These questions explored participants' knowledge about OA, personal experiences with the disease, emotional and social impact, treatment history, and perspectives regarding knee replacement surgery. All interviews were conducted individually in a quiet, private room after obtaining informed consent. The interviews were audio-recorded with participants' permission.

IPQ was originally developed by Weinman et al. and later revised by Moss-Morris et al. (19). Its Turkish adaptation and validation were performed by Kocaman et al. (18). The IPQ includes three dimensions:

- Illness Identity: Assessment of 14 symptoms (e.g., pain, fatigue, joint stiffness).
- Illness Beliefs: A 38-item Likert-type scale across seven subscales (e.g., timeline, consequences, personal control, treatment control)
- Perceived Causes: Items related to psychological factors, immune system, risk factors, and chance

Higher scores reflect stronger cognitive and emotional representations of the illness. In this study, the Cronbach's alpha coefficient for the IPQ was 0.64.

Statistical analysis

Qualitative data were analyzed using Colaizzi's seven-step phenomenological method (20). Audio recordings were transcribed verbatim, and transcripts were reviewed multiple times to extract significant statements. These statements were then organized into meaning units, which were clustered under four overarching themes. To ensure reliability, three independent researchers conducted parallel analyses, followed by consensus discussions.

Quantitative data were analyzed using SPSS version 21.0. The Kolmogorov–Smirnov test was used to evaluate the normality of the data. Since most variables were non-normally distributed, non-parametric tests were applied. The Mann–Whitney U test was used for pairwise comparisons, and the Kruskal–Wallis test for group comparisons involving more than two variables. A p-value of <0.05 was considered statistically significant. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarize sociodemographic data.

Ethics

Ethics Committee Approval: The study was approved by the Yeditepe University Clinical Research Ethics Committee (Decision no: 770, Date: 07.12.2017).

Informed Consent: The research was conducted in accordance with the principles of the Declaration of Helsinki. The aim, method, and confidentiality principles of the study were explained to all participants, and written informed consent was obtained from each participant.

Results

Quantitative findings

The study included 50 participants diagnosed with OA and scheduled for knee replacement surgery. The mean age was 69.84 ± 7.15 years (range: 52–84), and 92% of participants were female. Sociodemographic characteristics are presented in Table 1.

According to the IPQ results, the most frequently reported symptoms were pain (96%), joint stiffness (96%), fatigue (94%), and loss of strength (86%), reflecting a high symptom burden among individuals with OA.

In the illness beliefs domain, participants scored highest on the Emotional Representations subscale (26.56 ± 3.59), indicating a significant emotional impact of the disease. This was followed by the Timeline (Chronic) subscale (20.88 ± 4.82), suggesting the perception of OA as a long-term condition. The Consequences subscale (25.24 ± 3.18) also yielded high scores, implying a belief that the illness substantially affects daily life.

Participants reported moderate perceived control, with mean scores of 19.78 ± 4.19 for Personal Control and 19.30 ± 2.58 for Treatment Control. The Illness Coherence subscale score

(16.22 ± 6.41) reflected a moderate understanding of the disease.

In terms of causal attributions, Risk Factors (16.36 ± 4.41) and Psychological Causes (10.68 ± 3.30) were rated the highest, while Immune System (4.58 ± 2.15) and Chance (4.72 ± 1.29) were the least endorsed causes. Detailed results are presented in Table 2.

Statistical analyses revealed significant differences in illness perception scores by gender (p=0.038), education level (p=0.041), and place of residence (p=0.026), with higher scores among women, university graduates, and residents of metropolitan areas.

Table 1. The Sociodemographic Characteristics of the Participants

Characteristics	n	%
Gender		
Female	46	92.0
Male	4	8.0
Educational Status		
Illiterate	2	4.0
Primary School	13	26.0
Middle School	4	8.0
High School	13	26.0
University	14	28.0
Postgraduate	4	8.0
Marital Status		
Single	7	14.0
Widowed	10	20.0
Married	33	66.0
Having Children		
No	5	10.0
Yes	45	90.0
Number of Children		
1 child	11	24.5
2 children	28	62.2
3 or more	6	13.3
Employment Status		
Employed	8	16.0
Unemployed	42	84.0
Income Level		
Income meets expenses	48	96.0
Income does not meet expenses	2	4.0
Total	50	100.0

Table 2. Mean Scores of IPQ Subscales

Subscales of IPQ	Score Range	Mean ± SD
Illness Identity	0–8	4.26 ± 1.71
Timeline (Chronic)	9–30	20.88 ± 4.82
Consequences	15–29	25.24 ± 3.18
Personal Control	8–27	19.78 ± 4.19
Treatment Control	11–23	19.30 ± 2.58
Illness Coherence	5–25	16.22 ± 6.41
Timeline (Cyclical)	4–20	14.12 ± 4.76
Emotional Representations	18–30	26.56 ± 3.59
Psychological Attributions	6–19	10.68 ± 3.30
Risk Factors	7–23	16.36 ± 4.41
Immune System	3–9	4.58 ± 2.15
Chance/Accident	2–6	4.72 ± 1.29

Qualitative findings

Based on in-depth individual interviews with 10 participants, four main themes were identified. The participants' narratives reflect a deep emotional and psychosocial engagement with the illness process. The findings below highlight not only the lived impact of OA, but also the meaning participants attributed to the disease in the context of their daily lives and self-perceptions.

Illness perception

Participants frequently equated the diagnosis of OA and the need for knee replacement surgery with aging, decline, and physical inadequacy. The onset of symptoms was not merely viewed as a biological event but as a symbolic turning point, marking the end of youth, independence, and social productivity. For many, the diagnosis evoked a profound emotional response—feelings of sadness, shame, and fear of being perceived as "old and useless."

"The first feeling I had was that I had grown very old. I felt awful, and I got into the mindset of being old. It felt like the world collapsed on me."

(Participant 1, Female, 57 years old)

This internalization of aging-related stigma led to a concealment of their condition and withdrawal from social environments. Such illness perceptions were closely tied to self-worth, body image, and expectations of social roles, especially for women participants.

Effects of the illness

Participants described OA as a force that radically altered their lives, limiting their ability to engage in once-enjoyed activities and straining their relationships. Social isolation emerged as one of the most significant consequences. Many participants spoke of losing access to cultural, recreational, and communal spaces due to mobility issues.

"I used to go to exhibitions, concerts, football matches... But now I can't walk. I stopped socializing without even realizing it."

(Participant 1, Female, 57 years old)

The loss of occupational functioning and income—particularly for women who were not yet retired—intensified the emotional toll of the disease. The inability to fulfill familial or economic roles created a sense of helplessness, especially in those who had been primary caregivers or wage earners.

"There was no income. I wasn't retired. I was working to support my son and not depend on others."

(Participant 2, Female, 78 years old)

Treatment experiences

Participants overwhelmingly viewed available treatments—particularly pharmacological options—as inadequate for long-term relief. Medications were perceived as offering only short-lived comfort, and physiotherapy was often discontinued due to pain or accessibility barriers. Many participants expressed frustration and hopelessness regarding conventional treatment paths.

"I took a lot of medication. The effect was temporary. Once work ended, the pain returned."

(Participant 9, Female, 69 years old)

In a bid to regain control, several turned to alternative therapies such as cupping, herbal remedies, or creams. However, these too failed to meet expectations, leading to disillusionment and resignation.

"I used seaweed cream, mud, natural oils... It didn't work."

(Participant 2, Female, 78 years old)

This narrative reflects a broader issue of unmet needs in OA care and underscores the gap between patient expectations and treatment outcomes.

Nature of the disease

Participants described OA as a relentless, progressive condition that gradually stripped away their physical independence and self-sufficiency. Many felt that the disease marked the beginning of a downward spiral in both physical and emotional terms.

"My decline started with my knee. Everything else followed like pulling a thread."

(Participant 10, Female, 71 years old)

The experience of constant pain was a central theme—more than just a physical sensation, pain was described as mentally exhausting, eroding the will to remain active or hopeful. Daily activities that once seemed routine—such as walking, bathing, or dressing—became insurmountable tasks requiring assistance.

"When you can't even enter the bathroom alone, it feels like your life is over."

(Participant 2, Female, 78 years old)

The disease thus created a deep sense of dependency and loss of dignity. Participants' accounts emphasized that OA not only affected mobility but also had profound existential consequences.

Discussion

The findings of this study demonstrate that illness perceptions among individuals diagnosed with OA and scheduled for knee replacement surgery are shaped by a complex interplay of sociodemographic characteristics, symptom experiences, and evaluations of treatment efficacy.

Pain, joint stiffness, fatigue, and loss of strength emerged as the most frequently reported symptoms, consistent with existing literature that identifies these as hallmark features of OA (21, 22). Beyond their physical toll, these symptoms significantly impact quality of life and social participation. Participants in this study often described mobility limitations that contributed to reduced social engagement, loneliness, and emotional isolation—findings echoed in the work of Hawker et al. (2014) and Stubbs et al. (2016), who linked OA-related mobility restrictions to social withdrawal and increased risk of depression (23,24).

Illness perception played a key role in shaping these experiences. A notable proportion of participants viewed OA as a natural and inevitable consequence of aging, perceiving surgical intervention as an unavoidable step in a preordained trajectory. These beliefs were frequently accompanied by negative self-perceptions associated with aging. This aging-related interpretation also affected patients' engagement with treatment and their expectations for recovery. Those who viewed osteoarthritis as a normal part of aging showed lower motivation to adhere to non-surgical treatments and tended to expect limited postoperative improvement. These perceptions also influenced the timing of surgical decisions. Participants who viewed OA as a natural part of aging tended to postpone surgery, whereas those who perceived it as a treatable condition approached surgical intervention earlier with clearer expectations. Sargent-Cox et al. (2012) showed that such negative views of aging are associated with accelerated declines in physical functioning, reinforcing maladaptive coping responses (25). Similarly, Jinks et al. (2007) found that OA symptoms are often dismissed by others as "normal aging," which contributes to patients feeling invisible and emotionally invalidated (12).

The perception of OA as a condition that is both unchangeable and underrecognized was further reinforced by dissatisfaction with conventional treatments. Participants frequently reported that pharmacological and physical therapy interventions offered only temporary relief and failed to address the long-term burden of disease. Nicolson and Holden (2023) similarly emphasized that patients prioritize sustained functional improvements and minimal side effects over short-term symptom relief (26). Consistent with these findings, Ginnerup-Nielsen et al. (2021) identified five illness perception profiles in older adults with knee pain and showed that those with more negative perceptions were significantly less engaged in self-management behaviors (9).

The emotional consequences of these perceptions were also striking. Feelings of fear, frustration, hopelessness, and identity loss were prominent among participants, particularly when they perceived the disease as limiting their autonomy and social roles. In the mixed-method integration phase, findings from the quantitative and qualitative components complemented each other, strengthening the study by demonstrating not only the severity of symptom burden quantitatively but also the emotional and cognitive interpretations of these symptoms through qualitative narratives. This integration illustrates how illness perceptions transform symptom experiences into expectations regarding surgery. Overall, participants' narratives revealed that the effects of osteoarthritis led to profound disruptions in daily life, social roles, and emotional well-being, underscoring that OA is not merely a physical health condition but a life-altering experience that fundamentally affects autonomy, identity, and psychosocial functioning (27, 28).

The high pain and fatigue scores identified in the quantitative data overlapped with the "helplessness" and "loss of autonomy" themes that emerged from the qualitative interviews. While numerical results demonstrated the symptom burden of osteoarthritis, the qualitative narratives provided emotional and cognitive depth, illustrating how patients internalized these symptoms as signs of aging and inevitability.

This convergence between quantitative severity and qualitative meaning underscores the importance of understanding illness perception not only through physical parameters but also through lived experiences. These findings are consistent with those of Carmona-Terés et al. (2017), who highlighted emotional burden and fear of dependency as central concerns among individuals with knee OA (11). Similarly, Xie et al. (2025) reported that internalized beliefs about aging, emotional exhaustion, and distrust in healthcare systems significantly influenced older adults' adaptation and treatment-seeking behavior (10).

Moreover, many participants attributed their illness to internal causes, such as psychological distress or immune system dysfunction. This reflects a tendency toward internal attribution, which is associated with a lower sense of control and worse long-term outcomes (29). Such beliefs often led participants to resign themselves to their condition rather than engage in proactive coping. These experiences were echoed in the work of van der Kraan et al. (2023) and Pouli et al. (2014), who found that OA patients frequently feel emotionally drained and unheard, perceiving a gap between their needs and the support provided by healthcare systems (13, 30).

Another key dimension of CSM is perceived control, which was also reflected in the participants' experiences. Quantitatively, participants demonstrated moderate levels of both personal and treatment control, suggesting partial confidence in managing their illness and its treatment. Qualitatively, this was mirrored in statements expressing limited agency—patients often believed that osteoarthritis was an inevitable part of aging and that little could be done beyond surgery. This sense of reduced control was associated with lower engagement in self-management behaviors and greater emotional distress, underscoring the importance of enhancing patients' perceived control through education and nursing interventions.

These findings strongly align with CSM, which posits that individuals construct cognitive and emotional representations of illness across dimensions such as symptom identity, timeline, perceived consequences, control, coherence, and emotional response (6-8). Our participants' narratives reflected these components clearly. For example, the perception of OA as a chronic, uncontrollable, and emotionally distressing condition—coupled with dissatisfaction in treatment—illustrated how beliefs directly shape coping, adaptation, and treatment decisions.

The originality of this study lies in demonstrating that illness perceptions—particularly aging-related beliefs and emotional representations—shape not only coping responses but also patients' readiness for knee replacement surgery. By linking cognitive interpretations of illness with treatment-related decision-making, the study offers novel insight into how patient beliefs influence clinical trajectories in osteoarthritis care.

In this context, illness perception should not be viewed as a passive reflection of disease severity, but rather as an active cognitive schema through which patients interpret their condition, engage with healthcare, and evaluate treatment options. These findings highlight the need for nursing practice to move beyond symptom-focused care and systematically assess the cognitive and emotional dimensions of illness perception. Guided by Leventhal's Common-Sense Model, nurses can tailor education, counseling, and care planning to patients' beliefs, emotional needs, and treatment goals, thereby strengthening therapeutic communication, improving adherence, and supporting psychological well-being.

The findings further underscore the pivotal role of nursing in addressing maladaptive illness perceptions among patients with osteoarthritis. Through therapeutic communication and ongoing patient engagement, nurses are uniquely positioned to explore emotional responses, clarify illness-related beliefs, and promote adaptive coping strategies. For patients who perceive osteoarthritis as an uncontrollable, age-related process, targeted nursing interventions that reinforce self-efficacy and self-management may enhance psychological readiness for surgery, patient satisfaction, and person-centered perioperative care.

Limitations

This study has some limitations. The quantitative sample size was relatively small (n=50), which may limit the generalizability of the findings. No formal power analysis was performed because all eligible patients diagnosed with osteoarthritis and scheduled for knee replacement surgery during the data collection period were included. Therefore, the sample reflects a comprehensive cohort rather than a statistically determined population. However, the inclusion of a qualitative phase enriched the data and provided deeper insights into patients' illness perceptions.

Conclusion

This study demonstrated that, among patients with osteoarthritis scheduled for knee replacement, both symptom burden and illness perceptions significantly influence treatment expectations and adaptation. Commonly reported symptoms

such as pain, stiffness, and fatigue impose a substantial physical and emotional strain. The findings, consistent with Leventhal's Common-Sense Model of Self-Regulation, highlight illness perceptions as key determinants of coping strategies and engagement in care (6,7). Therefore, nursing practice should address not only physical symptoms but also patients' beliefs and emotional responses to their condition. Attention to illness perceptions may also guide clinicians in supporting earlier and more informed surgical decision—making. The results emphasize the need to integrate illness perceptions into nursing assessments, to implement educational and psychosocial interventions based on the Common-Sense Model, and to foster multidisciplinary collaboration in patient care. Furthermore, targeted patient education and community-based support programs may enhance adaptation and functional outcomes.

For patients who perceive osteoarthritis as an uncontrollable, age-related condition, nursing interventions should include cognitive restructuring and motivational counseling to challenge maladaptive beliefs and enhance self-efficacy. Preoperative education should focus particularly on the treatment control dimension—helping patients recognize that osteoarthritis is a manageable condition and that surgery is one of several complementary options in the continuum of care. Tailoring counseling and education to patients' illness perception profiles can improve treatment adherence, psychological adjustment, and postoperative recovery. Enhancing the visibility and involment of nurses in osteoarthritis care —especially in therapeutic communication, guidance, and holistic patient support—may significantly improve patients' adaptation, disease understanding, and overall quality of life.

Future longitudinal research is warranted to examine how illness perceptions evolve over time and how changes in perception influence surgical outcomes, rehabilitation, and long-term psychological well-being.

Statement of ethical approval

The study was approved by the Yeditepe University Clinical Research Ethics Committee (Decision no: 770, Date: 07.12.2017).

Informed consent

Written and verbal informed consent was obtained from all participants prior to data collection.

Conflict of interest

The authors declare no conflict of interest.

Financial disclosure

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References

1. Neogi, T. The epidemiology and impact of pain in osteoarthritis. Osteoarthr. Cartil.2013;21(9), 1145–53.
2. Zhang Y, Jordan JM. Epidemiology of osteoarthritis. Clin Geriatr Med. 2010;26(3):355–69.
3. World Health Organization. Osteoarthritis fact sheet [Internet]. Geneva: WHO; 2023 [cited 2025 Jul 10]. Available from: https://www.who.int/news-room/fact-sheets/detail/osteoarthritis.
4. Tschon M, Contartese D, Pagani S, Borsari V, Fini M. Gender and sex are key determinants in osteoarthritis, not only confounding variables: a systematic review of clinical data. J Clin Med. 2021;10(14):3178.
5. Leventhal H, Brissette I, Leventhal EA. The common-sense model of self-regulation of health and illness. In: Cameron LD, Leventhal H, editors. The self-regulation of health and illness behaviour. London: Routledge; 2003. p. 42–65.
6. Hagger MS, Orbell S. A meta-analytic review of the common-sense model of illness representations. Psychol Health. 2003;18(2):141–84.
7. Leventhal H, Phillips LA, Burns E. The Common-Sense Model of Self-Regulation (CSM): A dynamic framework for understanding illness self-management. J Behav Med. 2016;39(6):935–46.
8. Broadbent E, Petrie KJ, Main J, Weinman J. The brief illness perception questionnaire. J Psychosom Res. 2006;60(6):631–7.
9. Ginnerup-Nielsen, E., Christensen, R., Heitmann, B. L., Altman, R. D., March, L., Woolf, A., ... & Henriksen, M. Estimating the prevalence of knee pain and the association between illness perception profiles and self-management strategies in the Frederiksberg cohort of elderly individuals with knee pain: a cross-sectional study. J. Clin. Med. 2021;10(4):668.
10. Xie, X., Kaewthummanukul, T., Mesukko, J., & Lirtmunlikaporn, S. Factors Influencing Care-Seeking Behavior among Chinese Older Adults with Knee Osteoarthritis: A Mixed Methods Study. Pac. Rim Int. J. Nurs. Res. 2025;29(3):573-90.
11. Carmona-Terés, V., Moix-Queraltó, J., Pujol-Ribera, E., Lumillo-Gutiérrez, I., Mas, X., Batlle-Gualda, E., ... & Berenguera, A. Understanding knee osteoarthritis from the patients' perspective: a qualitative study. BMC Musculoskelet. Disord. 2017; 18(1), 225.
12. Jinks, C., Ong, B. N., & Richardson, J. A mixed methods study to investigate needs assessment for knee pain and disability: population and individual perspectives. BMC Musculoskelet. Disord. 2007 8(1), 59.
13. Pouli N, Nair RD, Lincoln NB, Walsh D. The experience of living with knee osteoarthritis: exploring illness and treatment beliefs through thematic analysis. Disabil Rehabil. 2014;36(7):600–7.
14. Tsianakas, V., Maben, J., Wiseman, T., Robert, G., Richardson, A., Madden, P., ... & Davies, E. A. Using patients' experiences to identify priorities for quality improvement in breast cancer care: patient narratives, surveys or both?. BMC health services research. 2012;12(1), 271.
15. Hou SX, Dai FJ, Wang XX, Wang SW, Tian T. Correlation linking illness perception, negative emotions, and the post-operative recovery effect in patients with perianal disease. World J Psychiatry. 2024;14(11):1718–1727.
16. Balck F, Jeszenszky C, Günther KP, Kirschner S, Linke M. The impact of illness perception on functionality, pain, stiffness, and activity of daily living after total hip replacement surgery. J Psychosom Res. 2022;155:110749. doi:10.1016/j.jpsychores.2022.110749.
17. Erkan E, Narin AN. Post-op total diz artroplastili hastalarda Hastalık Algısı Ölçeği ile Hastane Anksiyete ve Depresyon Ölçeği sonuçları. Gevher Nesibe J Health Sci. 2020;5(7):19–23.

18. Kocaman N, Özkan M, Özkan S, Armay Z. Hastalık Algısı Ölçeği'nin Türkçe uyarlamasının geçerlilik ve güvenilirlik çalışması. Anadolu Psikiyatri Derg. 2007;8(4):271-80.
19. Moss-Morris R, Weinman J, Petrie KJ, Horne R, Cameron LD, Buick D. The revised illness perception questionnaire (IPQ-R). Psychol Health. 2002;17(1):1–16.
20. Colaizzi PF. Psychological research as the phenomenologist views it. In: Valle RS, King M, editors. Existential phenomenological alternatives for psychology. New York: Oxford University Press; 1978. p. 48–71.
21. Cross M, Smith E, Hoy D, et al. The global burden of hip and knee osteoarthritis: estimates from the Global Burden of Disease 2010 study. Ann Rheum Dis. 2014;73(7):1323–30.
22. Knoop J, van der Leeden M, Thorstensson CA, et al. Identification of phenotypes with different clinical outcomes in knee osteoarthritis: data from the Osteoarthritis Initiative. Arthritis Care Res (Hoboken). 2020;72(5):558–66.
23. Hawker GA, Stewart L, French MR, et al. Understanding the pain experience in hip and knee osteoarthritis – an OARSI/OMERACT initiative. Osteoarthritis Cartilage. 2014;22(3):385–92.
24. Stubbs B, Aluko Y, Myint PK, Smith TO. Prevalence of depressive symptoms and anxiety in osteoarthritis: a systematic review and meta-analysis. Age Ageing. 2016;45(2):228–35.
25. Sargent-Cox KA, Anstey KJ, Luszcz MA. The relationship between change in self-perceptions of aging and physical functioning in older adults. Psychol Aging. 2012;27(3):750–60.
26. Nicolson PJ, Holden MA. Patient preferences and osteoarthritis care: what do we know about what patients want from osteoarthritis treatment? Curr Treat Options Rheumatol. 2023;9(1):120–31.
27. Hawker GA. Osteoarthritis is a serious disease. Clin Exp Rheumatol. 2019;37(Suppl 120):3–6.
28. Rosado SE. Osteoarthritis, social role participation, and satisfaction with life: a quantitative study informed by the Social Identity Model of Identity Change (SIMIC) [dissertation]. Tampa (FL): University of South Florida; 2023.
29. Kaptein AA, Bijsterbosch J, Scharloo M, Hampson SE, Kroon HM, Kloppenburg M. Using the common sense model of illness perceptions to examine osteoarthritis change: a 6-year longitudinal study. Health Psychol. 2010;29(1):56–64.
30. van der Kraan, Y. M., Paap, D., Lennips, N., Veenstra, E. C., Wink, F. R., Kieskamp, S. C., & Spoorenberg, A. Patients' needs concerning patient education in axial spondyloarthritis: a qualitative study. Rheumatology and Therapy.2023;10(5), 1349-68.