

## Determinants of Patient Satisfaction Following Total Hip and Knee Arthroplasty: a Narrative Review

Czynniki determinujące satysfakcję pacjentów po endoprotezoplastyce stawu biodrowego i kolanowego – przegląd narracyjny

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### Abstract

Optimizing patient satisfaction following total hip and knee arthroplasty represents a pivotal challenge in contemporary orthopaedics, contingent upon a complex interaction of clinical and psychosocial factors. A review of the literature demonstrates that patient satisfaction is determined not only by the technical parameters of the surgery but, primarily, by age, social support, psychological status (anxiety, depression), and the efficacy of pain management. A significant issue remains the gap between preoperative expectations and the actual functional outcome which, in the absence of adequate education, frequently becomes a source of dissatisfaction. The results of the analysis indicate the necessity of implementing holistic perioperative care and precise staff – patient communication, both of which, are essential for improving the subjective assessment of treatment effects and the effective management of the recovery process.

**Keywords:** Patient satisfaction, hip replacement, knee replacement, patient expectations, psychosocial factors

## Streszczenie

Optymalizacja satysfakcji pacjentów po endoprotezoplastyce stawu biodrowego i kolanowego stanowi kluczowe wyzwanie współczesnej ortopedii, zależne od złożonej interakcji czynników klinicznych oraz psychospołecznych. Analiza piśmiennictwa dowodzi, że zadowolenie chorego determinują nie tylko parametry techniczne operacji, ale przede wszystkim wiek, wsparcie społeczne, stan psychiczny (lęk, depresja) oraz skuteczność kontroli bólu. Istotnym problemem pozostaje luka między przedoperacyjnymi oczekiwaniami a rzeczywistym wynikiem funkcjonalnym, co przy braku odpowiedniej edukacji staje się częstym źródłem niezadowolenia. Wyniki analizy wskazują na konieczność wdrożenia holistycznej opieki okołoperacyjnej i precyzyjnej komunikacji personelu – pacjent, co jest niezbędne dla poprawy subiektywnej oceny efektów leczenia i skutecznego zarządzania procesem rekonwalescencji.

**Słowa kluczowe:** Satysfakcja pacjenta, endoprotezoplastyka stawu biodrowego, endoprotezoplastyka stawu kolanowego, oczekiwania pacjenta, czynniki psychospołeczne.

## Introduction

Despite the high efficacy and technological advancements in total hip arthroplasty (THA) and total knee arthroplasty (TKA), a considerable proportion of patients remain not fully satisfied with surgical outcomes. Dissatisfaction rates following primary THA range from 7% to 20% [1], while for TKA, they may reach from 15% to as high as 25% [2].

On one hand, patient dissatisfaction with surgical outcomes may stem from purely medical causes; for instance, the significantly higher frequency of dissatisfaction in knee arthroplasty compared to hip arthroplasty is likely attributable to the highly complex kinematics of the knee joint (which performs complex flexion, extension, rotational, and sliding movements made possible by the precise interaction of bones, ligaments, menisci, and the patella) as well as a more demanding surgical technique [3]. On the other hand, it must be noted that patient satisfaction with received services is a complex, multidimensional construct that extends beyond objective, measurable clinical outcomes (e.g., postoperative range of motion) and encompasses the patient's subjective feelings resulting from their satisfaction with the provided medical services. This implies that patient satisfaction is influenced by both medical and non-medical factors [4-5]. From the patient's perspective, what matters

(to varying degrees) is not only the treatment outcome in the form of a successful surgical procedure and the absence of associated complications, but also many other factors, such as the empathy and respect shown by the staff, comfort, and the clinical environment in which the care was provided. The quality of communication with the medical team is also crucial for the patient, i.e., whether they received sufficient and understandable information about their disease, the planned treatment, possible side effects, and prognosis [4]. This indicates that the final assessment of treatment satisfaction is influenced by a multitude of interconnected elements, both strictly medical and non-medical, related to the patient's expectations and perception of the services provided. The literature also highlights that treatment satisfaction, including that with surgical treatment associated with joint arthroplasty, is indirectly influenced (with varying intensity) by various demographic, social, psychological, and other factors, concerning, for example, the patient's health status and support from loved ones during their illness. In the era of patient-centered medicine, understanding these variables becomes crucial important for achieving greater patient satisfaction with treatment and improving the quality of care. Knowledge of the various factors affecting patient satisfaction with the medical service of joint arthroplasty can form the basis for implementing individualized and holistic interventions, which may significantly contribute to increasing patient satisfaction and improving treatment outcomes.

### **Aim of the Study**

This review aims to synthesize current knowledge on patient satisfaction determinants. It focuses specifically on outcomes following total hip and knee arthroplasty. Particular emphasis is placed on demographic, psychosocial, and clinical factors. The crucial role of nursing staff in preoperative education is also discussed. This includes their influence on the subjective evaluation of therapeutic outcomes.

### **Methodology**

This study was conducted as a classic narrative review. Therefore, the rigorous selection criteria of PRISMA guidelines were not applied. Literature searches were performed in selected medical databases, including PubMed and Scopus. English and Polish literature from 2004–2025 was subjected to analysis. The primary selection criterion was the focus on subjective patient satisfaction. The role of preoperative expectations in orthopedic care was also examined.

## **Demographic and Social Factors and Patient Satisfaction**

Various demographic and social factors have been analyzed in the literature. They are evaluated regarding patient satisfaction following joint arthroplasty. The described variables include patient age, sex, and socioeconomic status. Furthermore, race, ethnicity, marital status, and social support were examined.

### **Patient age**

The relationship between patient age and satisfaction following joint arthroplasty is complex and presented variably in the available literature. A study by L. Okafor et al. indicates that younger patients after arthroplasty may experience lower satisfaction, which may be related to their higher functional expectations and more active lifestyle prior to surgery [4]. Choi YJ et al. also note (based on literature data) that patient satisfaction was significantly lower in the group under 55 years of age due to persistent residual symptoms and functional deficits after the procedure [6].

Conversely, Mancuso et al. demonstrated that young patients have the greatest chance of achieving good results and higher satisfaction after arthroplasty. However, they add that patients with higher preoperative expectations may have greater difficulty achieving the expected satisfaction after surgery [1]. Still other analyses indicate that older patient age is a positive predictor of satisfaction, which may result from relatively lower expectations after sometimes many years of living with osteoarthritis [7-8].

It should also be noted that the number of THA and TKA procedures is rapidly increasing among patients of working age (up to 60-65 years old), which makes the desire for a quick return to work an important element of recovery for them, potentially translating into a sense of greater satisfaction with the effects obtained after the entire treatment and rehabilitation process [9].

Literature synthesis indicates that younger age increases the risk of dissatisfaction. This often results from the absence of full functional recovery. Conversely, lower expectations in older patients correlate with higher satisfaction. This occurs despite more limited functional improvements.

### **Patient gender**

The influence of gender on satisfaction is also not unequivocal. Some literature sources state that the female gender is more often a risk factor for lower satisfaction after joint arthroplasty [2, 10]. The reason for this state of affairs is cited as the fact (as shown by

observations) that postoperative residual pain and stiffness occur more frequently in women after arthroplasty [6].

It is also noted that, although not directly related to patient dissatisfaction, lower levels of satisfaction after surgery in women may result from the fact that women primarily perform household chores during which they are forced to adopt various body positions, while most surgeons recommend avoiding squatting after hip or knee arthroplasty, which may cause discomfort from minor mobility limitations [10].

Some publications point out that the male gender is generally associated with slightly higher satisfaction after joint arthroplasty, even with less improvement in terms of pain. However, as the literature emphasizes, in many studies gender is often a component of secondary analysis, which has no connection or has unclear significance for overall patient satisfaction with arthroplasty [4]. Furthermore, interestingly, a study based on the Italian registry of orthopaedic implants found that the risk of septic loosening of the hip prosthesis, which is a serious complication, is almost two times lower in women than in men [11].

Patient satisfaction regarding sex is determined by clinical and social factors [2, 6, 10-11]. Female patients may report lower satisfaction levels [6,10]. This is often associated with higher pain intensity. Limitations in domestic activities also influence these outcomes [6,10].

### **Socioeconomic status**

Socioeconomic status, defined by factors such as education, income, and occupation, belongs to the significant factors causing health inequalities in most fields of medicine. The influence of socioeconomic status on health outcomes is also visible in orthopaedic procedures, such as total hip and knee arthroplasty.

It is noted that patients qualified for joint arthroplasty procedures and those with lower socioeconomic status experience worse clinical outcomes – increased mortality and higher complication rates are observed in this group. It is considered that socioeconomic status is a significant factor influencing health inequalities, including in orthopaedics. Patients with low socioeconomic status report worse preoperative and postoperative results, mainly due to poorer functioning and greater pain complaints.

It is emphasized that the disadvantageous health situation associated with low socioeconomic status may result from several causes, including a less healthy work environment for people with low socioeconomic status and limited access to medical care [12]. Conversely, other studies have shown that patients with higher annual incomes reported greater improvement in pain after arthroplasty [13]. However, the authors of this study

did not explain the significance of this factor (higher annual income) for greater improvement in postoperative pain management.

Nevertheless, it can be assumed that higher income may translate into greater access to private medical consultations (including rehabilitation facilities), more expensive but also more effective methods of postoperative pain management, and may allow for a faster return to fitness and professional activity (e.g., due to the possibility of not returning to work too early after the procedure or appropriate adaptation of the workplace for the patient), which may improve well-being and reduce pain. It should also be remembered that financial issues are generally a strong source of stress, and prolonged sick leave associated with surgical treatment and lack of quick return to work may intensify pain perception and negatively affect treatment outcomes.

Interestingly, as noted by JM Bonsel et al., despite worse clinical outcomes in patients with low socioeconomic status, these differences do not always translate into greater dissatisfaction in the lower status group. This may result from the fact that people in a more difficult material situation generally express greater satisfaction with care, even if other indicators show worse results [12].

The impact of educational level on satisfaction following arthroplasty must also be considered. Some publications identify lower education as a factor leading to reduced postoperative satisfaction [14]. However, another study found that patients with higher education reported significantly less functional improvement. This group consisted of secondary school graduates compared to patients with lower educational levels [13]. Therefore, educational level as an isolated factor is highly non-specific for predicting satisfaction. Socioeconomic status significantly modifies treatment outcomes and pain perception after arthroplasty [12-13]. These complex relationships and the impact of expectations require further in-depth analysis.

### **Race/ethnicity**

Racial differences are another factor that can be considered through the prism of experiencing satisfaction after joint arthroplasty surgery. Studies by O.C. Burke show (N = 2517 after hip arthroplasty, N = 2114 patients after knee arthroplasty) that Black patients are less likely to be fully satisfied with hospital care related to the arthroplasty procedure, including nursing and surgical care, compared to White patients.

The author of this article himself cites observations and conclusions from other researchers of this problem from the literature and indicates that it is a complex issue. Firstly, in some

studies, physicians perceived White patients as more willing to adhere to medical recommendations and confirmed greater sympathy towards them than towards Black patients. These findings indicate the possibility that the physician's implicit bias may influence their perception of Black patients and affect relationships with them.

Secondly, a survey conducted in 2018 by the Harvard T.H. Chan School of Public Health (cited after O.C. Burke) showed that as many as 32% of Black Americans experienced racial discrimination during a visit to a doctor or clinic, which may indicate a tendency for Black individuals to rate medical services worse. Thirdly, Takeshita et al. discovered (cited after O.C. Burke) that Black patients treated by Black surgeons rated medical services better than when provided by light-skinned surgeons or surgeons of Asian descent [14].

Analysis indicates the necessity of eliminating biases in provider-patient relationships. Building trust is essential for patient satisfaction regardless of ethnic origin. These actions form the basis of professional medical care [14].

### **Marital status and social support**

Factors influencing the level of satisfaction after arthroplasty also include the patient's marital status and whether they live alone or with a loved one. As proven in a study by N. Frane et al., the patient's marital status matters in the context of perceived satisfaction after arthroplasty – patients who are married more often report higher satisfaction with surgical treatment of the joint compared to single, divorced, or widowed individuals.

As the author of this study notes, support for the patient from their spouse or close partner after surgery cannot be overestimated. Support obtained after surgery from a loved one can constitute a form of positive emotional and psychological reinforcement, but also physical support (help with self-care activities) and generally positively affects patient treatment outcomes, including pain tolerance and physical fitness [15].

Some studies on patient satisfaction after arthroplasty surgery show that the level of patient satisfaction is also influenced by whether they live alone or with another/other loved ones. As some studies prove, living alone is associated with lower satisfaction [16], while patients living, for example, with three adults (implicitly, who can help the patient after surgery) report greater functional improvement and are thus more satisfied with treatment outcomes [13].

Similar observations were made by L. Yao et al., who, based on their own research in patients after hip and knee arthroplasty (N = 139), stated that social support (including family, friends, and other significant persons for the patient) is an important factor positively influencing

the level of participation in treatment perceived by the patient themselves and the independence of patients after surgery [17]. As other studies prove ( $N = 119$ ), social support is also an important factor for patients in the rehabilitation process after arthroplasty, because it positively affects the patient's sense of health and their general functioning; a study based on the Groningen Social Support Scale (GSSS) [18].

Interesting observations regarding the role of patient support after joint arthroplasty are provided by T. Kamp et al., who demonstrated based on their own research ( $N = 190$ ) that the occupational medicine physician plays a special role in patient support after arthroplasty in the context of returning to professional activity. In the study, T. Kamp et al. observed that social support from the occupational medicine physician, both before and after surgery (but also from the patient's supervisor after surgery), was significantly associated (contributed) to returning to work within 6 months from the moment the surgical procedure was performed.

These authors proved that patients who felt support from the occupational medicine physician before surgery had as much as a 2.5 times greater chance of returning to work, and after surgery, these chances increased to 3 times in the case of support from the occupational medicine physician and 2.6 times in the case of support from the supervisor at work [9].

Patients living with another person report higher satisfaction after arthroplasty than those living alone. This observation indicates the significant role of family and social support during recovery. Practical help from family or partners includes assistance with hygiene, dressing, and shopping. Transport to medical appointments and physiotherapy visits is also a vital component of support. Furthermore, adapting living environments to current medical needs reduces the patient's physical burden. Such assistance decreases stress and improves overall patient well-being. Consequently, these factors positively influence the subjective evaluation of therapeutic outcomes. Support from physicians and employers is also essential for the recovery process. This professional and workplace encouragement facilitates a faster return to employment.

## **Psychological factors and patient satisfaction**

Among the psychological factors that have been analyzed and described in the literature regarding patient satisfaction after joint arthroplasty are the patient's emotional and mental state and (in some publications) the role of the patient's personality is also mentioned.

**Patient's emotional and mental state prior to surgery (anxiety, depression, pain catastrophizing)**

The patient's mental state has a significant impact on the overall level of satisfaction assessing a given medical service. Preoperative psychological factors, such as depression, anxiety, and pain catastrophizing (exaggerated, negative thinking about pain, magnifying pain), as well as low self-sufficiency (low independence), and poor skills in coping with daily problems due to illness, can be predictors of unsatisfactory treatment outcomes [19].

As noted by Z. Shao et al., a history of depression in a patient is an important factor for dissatisfaction after joint arthroplasty. Patients with preoperative symptoms of anxiety and depression are more at risk of dissatisfaction after arthroplasty than patients without these symptoms [1]. Furthermore, pain catastrophizing is a significant negative factor influencing the level of satisfaction.

Pain catastrophizing can lead not only to intensified anxiety, depression, and stress but also contribute to isolation and problems in interpersonal relationships and may lead to limitation of physical activity. In sum, this negatively affects the final result of arthroplasty in both functional and pain aspects, consequently diminishing the importance and satisfaction of joint arthroplasty in the patient's perception [19].

However, in one study conducted six months after surgery, depressive symptoms in the patient did not appear to have a significant impact on the level of patient participation in social life. As the authors of this study write, this may result from the fact that individuals with pre-existing depression who have already undergone joint replacement surgery ultimately felt a reduction in depressive symptoms, which can be attributed to the improvement in joint function caused by the surgery and the reduction of adverse symptoms, such as pain [17].

**Role of patient personality**

Some studies suggest that a patient's sense of satisfaction after surgery may also result from their personality type. In one such study, patients with an extroverted personality were more satisfied with the effects of arthroplasty than those with an introverted or anxious personality [20]. However, it is noted that the influence of human personality on the level of satisfaction with received medical services is not simple to determine. This is emphasized by other publications indicating that patient satisfaction appears to be only marginally related to personality [21].

As follows from the above, the patient's mental state is of great importance for their satisfaction after joint arthroplasty, because preoperative symptoms of anxiety, depression, and pain catastrophizing may predispose to unsatisfactory treatment outcomes. However, it should be emphasized that in some patients, depressive symptoms may decrease after surgery due to the improvement in joint function and pain reduction obtained after the procedure. Thus, the influence of the patient's personality on their satisfaction after joint arthroplasty is an important factor that may significantly affect the overall level of satisfaction with medical care.

## **Comorbidities and general patient health status vs. patient satisfaction**

### **Primary osteoarthritis**

Patients with primary osteoarthritis, as shown by the study of J. Lošťák et al., demonstrate significantly high satisfaction with treatment results. Their satisfaction is related to a higher level of activity assessment and greater functional abilities after the performed arthroplasty [22]. Y.J. Choi et al. also note that patients with rheumatoid arthritis report high satisfaction after arthroplasty, which may be related to achieving their main expectation, i.e., relief from pain after the procedure, or it may also result from the generally lower expectations of this group of patients [6].

### **Number of previous surgeries**

As indicated by the observations of J. Lošťák, previous surgeries on the joint undergoing arthroplasty are a burdening factor (associated with a greater risk of complications, as well as longer and more difficult recovery), generally, patients undergoing another surgery are less satisfied with the obtained effects than the group of patients operated on for the first time [22].

### **Other chronic diseases**

The results of some studies indicate that the presence of various chronic comorbidities may significantly affect the perioperative course and thus be associated with worse post-operative results and a lower assessment of satisfaction with provided medical services. It was found, among other things, that patients with diabetes, chronic lung disease, and kidney disease (in the absence of good control of these conditions) are exposed, inter alia, to a greater risk of surgical site infections, thromboembolic disease, and various surgical complications. Therefore, in the perioperative period, care should be taken to optimize the patient's condition in order to ensure the lowest perioperative risk and thus increase their physical and mental comfort [15].

Furthermore, it is also indicated that chronic back pain or pain in joints other than the operated joint significantly affects the level of patient dissatisfaction after joint arthroplasty. Relieving the patient or reducing their pain ailments as a result of the procedure does not mean that they will always be fully satisfied after the procedure – the elimination of pain in one place does not necessarily mean the complete release of the patient from discomfort [6].

### **ASA score**

As indicated by various studies, the higher the score the patient received in the preoperative ASA (American Society of Anesthesiologists) scale, which indicates a greater burden of various systemic diseases and greater perioperative risk, the less satisfied the patient is with the effects of arthroplasty [1,10,22]. Multimorbidity usually means a greater risk of various perioperative complications, which may affect the length and nature of recovery.

As follows from the results of the studies cited above, patients with primary osteoarthritis or rheumatoid arthritis show a high level of satisfaction after joint arthroplasty, often due to pain relief and improvement in function. However, it should be emphasized that previous surgeries on the same joint, the presence of other chronic diseases in the patient (such as diabetes or lung diseases), and a high score on the ASA scale (indicating a greater health burden) negatively affect the level of satisfaction in the patient due to the increased risk of complications and sometimes persisting pain in other parts of the body.

## **Other factors and patient satisfaction**

### **Body Mass Index (BMI)**

A number of scientific studies indicate a lack of a direct relationship between patient obesity and the level of their satisfaction after surgery [22]. In a study by I. Pasqualini et al., it was found that although obese patients after total knee arthroplasty initially felt greater improvement in terms of pain reduction and functional improvement in the short term after the procedure, at 1 year from the surgery, their level of satisfaction was comparable to patients with a lower BMI [23]. Similar conclusions were drawn when studying patients after hip arthroplasty, where it was found that patient satisfaction after the procedure did not differ depending on the BMI result [24].

An interesting factor that may explain the lack of large differences in satisfaction felt by a patient with obesity after the procedure compared to patients without obesity is their preoperative expectations. It is suggested that patients with obesity may feel (despite the

risk and greater probability of various complications related to obesity and multimorbidity) comparable satisfaction to other patients (i.e., without obesity) precisely because of their own lower preoperative expectations.

This is confirmed by data from the Australian registry, which indicate that patients with a higher BMI have significantly lower expectations regarding mobility, joint pain, and general health status. Although objectively worse postoperative results were noted in the group of patients with obesity, the satisfaction of these patients was comparable to non-obese individuals. This may result from the fact that even with worse functional results (e.g., pain scales, functionality), the achieved improvement meets or even exceeds their low expectations [25]. In contrast to the above data, one new study indicates that a higher BMI index was a strong predictor of postoperative satisfaction after knee arthroplasty [8].

### **Pain management**

Management of pain associated with arthroplasty surgery is a very important element of perioperative care and has a direct impact on patient satisfaction. From the patient's perspective, the assessment of pain intensity and its treatment can be considered from at least a twofold, i.e., 1. effective pain treatment in the early postoperative period and 2. the impact of the performed procedure on chronically felt pain (prior to the surgical procedure in connection with joint degeneration) and its comparison with the possible presence and intensity of pain after surgery (e.g., several months or 1 year after the procedure).

It is considered that one of the main indications for joint arthroplasty is pain, and its alleviation is a very important element of maximizing patient satisfaction [4,16]. L. Okafor et al. point out that preoperative pain management using non-steroidal anti-inflammatory drugs (NSAIDs) is associated with improved recovery, increasing both general patient satisfaction and satisfaction with effective pain management; however – as emphasized by the cited authors – pain management in the postoperative period is strictly correlated with patient satisfaction. Interestingly, some studies indicate a negative relationship between increased postoperative use of opioids and patient satisfaction with pain management; pain reduction through the administration of opioids alone may adversely affect patients due to various negative side effects, which may be assessed by the patient as significantly affecting their well-being and thus influence the level of satisfaction [4].

Interestingly, in the study by Lošťák et al., no relationship was found between pain intensity assessed on the VAS scale before surgery and postoperative satisfaction [22]. It must be emphasized that some studies indicate a positive correlation between the patient's

perception of pain control after joint arthroplasty and their perception and assessment of the orthopaedist, nurse, and overall satisfaction with the entirety of surgical treatment [26], which indicates that appropriate pain management is a significant factor influencing the level of patient satisfaction with provided medical services [4].

### **Length of hospital stay**

Some publications indicate that a longer patient stay in the hospital after joint arthroplasty is associated with lower satisfaction – each additional day of stay may be associated with a reduced level of patient satisfaction. It is noted that the earliest possible discharge of the patient after the procedure (provided there are no specific medical contraindications) is generally well perceived by them and positively affects patient satisfaction. It is also pointed out that the patient's positive perception after early discharge following the procedure occurs mainly when the patient returns from the hospital to their own home (where they receive family support), and not to a rehabilitation center [4, 15].

### **Shared decision-making**

One of the important factors influencing patient satisfaction after joint arthroplasty is shared decision-making, i.e., a process in which the physician and patient cooperate in making decisions regarding the patient's treatment. It is considered that the patient's participation in making any decisions concerning their treatment (e.g., the choice – if possible – of the type of prosthesis, the choice of room – single vs. multi-person – where the patient will stay during hospitalization, or the type of diet preferred by them) emphasizes their importance and thus contributes to increasing the level of satisfaction [27].

### **Preoperative education**

Patient satisfaction levels after arthroplasty are also influenced by preoperative education –such as a longer conversation or a dedicated information meeting discussing all important issues of interest to the patient related to the entire perioperative period. As shown by the study of J.L. Giardina et al., preoperative education in patients undergoing joint arthroplasty (N = 49) plays a very important role in shaping realistic expectations related to the procedure and its results, which contributes to increasing patient satisfaction [28].

Similar conclusions were obtained in other studies; Z. Shao et al. showed that patients who took additional courses (educational meetings) in the field of physiotherapy methods and techniques indicated after arthroplasty were more satisfied than the control group [1], while the study by M.C. Wang et al. indicates that knowledge of what the patient can expect before surgery and how to cope with pain during the recovery period is one of the

significant factors influencing higher ratings of satisfaction with medical care related to arthroplasty [27].

### **Quality of care and patient-staff relationships**

Factors influencing the level of patient satisfaction with medical services related to joint arthroplasty also include the quality of the patient's interaction with the medical staff. Among the factors of importance to the patient are the respect shown to them by the staff, the quality of communication (type of information conveyed to the patient and its understanding by the patient), and the speed of staff's reaction to symptoms reported by the patient [14].

Scientific studies also draw attention to the significant role of the orthopaedic nurse in the quality of medical services and the patient's quick return to health, and thus a high level of patient satisfaction. It is emphasized that the nurse on the orthopaedic ward is the person who provides the patient with emotional support and educates them on necessary issues related to management after the arthroplasty procedure [29].

Furthermore, as indicated by an analysis on a large group of Medicare patients (N = 112,017) from 495 hospitals, improvement in the nursing work environment is associated with lower rates of patient readmissions to the hospital, which obviously affects their final level of satisfaction with provided medical services. As indicated by the study of K.B. Lasater et al., who analyzed patient readmissions to the hospital (10 and 30 days after initial discharge) after arthroplasty, 6% of patients were readmitted to the hospital due to various health complications and/or medical complications, of which half had to be re-hospitalized within the first 10 days after earlier discharge.

As indicated by the authors of this analysis, after adjusting for patient and hospital characteristics, patients had an 8% higher probability of re-hospitalization within 30 days after discharge and a 12% higher probability of re-hospitalization within 10 days after discharge in the case of increasing nursing workloads with care for additional patients on the ward. Patients covered by nursing care in the best working conditions had a 12% lower probability of re-hospitalization after initial discharge [30].

### **Postoperative complications**

The occurrence of postoperative complications, especially those requiring readmission to the hospital, is a strong predictor of patient dissatisfaction after joint arthroplasty (1.9 times greater risk of patient dissatisfaction after arthroplasty in the study by R.B. Bourne et al.) [16]. In another study, surgical complications were associated with

a significant drop in KOOS, JR (Knee injury and Osteoarthritis Outcome Score Joint Replacement) scores, where it was found that surgical complications were associated with a drop of 3.5 points on the KOOS, JR scale [31], which may also into decrease in satisfaction with care in these patients.

### **Preoperative patient expectations and their impact on satisfaction**

Patient expectations are one of the most heavily researched and most significant factors influencing the level of satisfaction with provided medical services. It is believed that reducing the discrepancy between patient expectations and the surgical result, as well as the entire postoperative course (both in the hospital and after discharge) is very important for patient satisfaction [4,32]. As proven in studies, unmet patient expectations are the strongest predictor of dissatisfaction after arthroplasty [16], although the very nature of these expectations is highly complex. It should be noted that patients with higher preoperative expectations are very critical and may have greater difficulty achieving the expected satisfaction [1]. Also significantly, some studies indicate that it is not the initial expectations themselves, but rather the degree of their fulfillment after surgery that is a key factor associated with improvement in pain, joint function, and overall patient satisfaction [33].

As proven, some patients before surgery demonstrate unrealistic expectations regarding hospitalization and the surgical procedure itself. This applies in particular to the intensity of postoperative pain and the range of joint motion possible to achieve after arthroplasty. Often, preoperative perceptions do not correlate with the objective postoperative state. The results of selected studies indicate that over 50% of patients undergoing arthroplasty did not expect the occurrence of pain ailments after surgery. This suggests the necessity of implementing more comprehensive communication and preoperative education in the medical staff-patient relationship [34].

In summary, it should be emphasized that the degree of fulfillment of individual patient expectations after arthroplasty is an important determinant of patient satisfaction. Therefore, proactive management of patient expectations through comprehensive preoperative education, building a partnership relationship between staff and the patient, and ensuring effective postoperative pain control is of fundamental importance for maximizing patient satisfaction. The ultimate therapeutic success, measured by patient satisfaction, thus depends on an integrated approach combining favorable treatment results (successful surgery, short hospitalization, and minimization of complication risk) with high-quality medical care focused on a conscious and engaged patient.

## Summary

Patient satisfaction following total hip and knee arthroplasty is an important measure of healthcare quality. Its level is influenced by a very wide range of factors, from demographic and social, through psychological, to clinical aspects of the patient's health status and the course of treatment on the surgical ward and subsequent rehabilitation. Understanding that the patient's age, gender, socioeconomic status, preoperative expectations, mental state and comorbidities, as well as pain felt before surgery, and the quality of hospital care and social support co-create the final patient experience, seems essential to understanding how complex the concept of patient satisfaction with medical services provided to them is. For the staff, who play a very important role in the treatment and care process, this knowledge constitutes the basis for implementing individualized interventions.

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