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**Examination of the quality of life and the disease burden of patients
who underwent total hip arthroplasty with different approaches
in public and private health care**

Ph.D. Thesis

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1. INTRODUCTION

Osteoarthritis, also referred to as osteoarthrosis (OA) in Anglo-Saxon literature, is one of the most prevalent chronic joint disorders. In 2020, it affected 595 million people worldwide, accounting for 7.6% of the global population. With increasing life expectancy, an aging population, and the rising prevalence of obesity, the prevalence of osteoarthritis continues to grow. In its Global Ageing and Health Report, the World Health Organization (WHO) identified osteoarthritis as one of the leading causes of disability among adults aged 60 and above. As the global population ages, the health care and economic burden of osteoarthritis is also increasing.

Beyond its impact on health, osteoarthritis incurs substantial direct and indirect costs. In 2016, it was estimated to account for \$80 billion in health care expenditures in the United States. A systematic review found that the average annual cost per person for lower limb osteoarthritis ranged from €700 to €12,000, with direct costs accounting for €500–€10,900 and indirect costs estimated at €200–€12,300. To enable effective prevention and intervention, it is essential to quantify the epidemiological and health insurance burden of osteoarthritis, considering gender, age groups, and geographical locations.

The primary goals of osteoarthritis management are to reduce pain and improve joint function by alleviating symptoms in a personalized way. Initially, the therapy focuses on conservative and pharmacological solutions for symptom relief. However, if these prove ineffective and the patient's physical condition allows, surgical intervention is considered. Total hip arthroplasty (THA) has become one of the most successful and commonly performed surgical procedures of the 20th century. Over one million such surgeries are performed annually worldwide, with this figure expected to double in the coming decades. Surgical intervention has been shown to significantly reduce joint pain, improve range of motion, and enhance the quality of life, leading to greater patient satisfaction.

The most common surgical approaches for hip replacement include the posterior approach (also known as the *Moore/Southern* approach), anterolateral approach (ALA, *Watson-Jones*, direct lateral, or *Hardinge/Bauer*, transgluteal approach), and anterior approach (direct anterior approach (DAA) or *Hueter/Smith-Petersen* approach).

Patient demands, such as early hospital discharge and rapid functional recovery, have driven the development of various alternative surgical methods. From a surgical perspective, approaches can be categorized into traditional (involving muscle detachment and cutting)

and minimally invasive (avoiding muscle detachment or cutting). These minimally invasive procedures not only involve smaller incisions but also introduce new surgical techniques, anesthesia, pain management, and physiotherapy protocols. The choice of the appropriate surgical approach depends on numerous factors, including the surgeon's preference and experience, the type of pathology, bone quality, patient age, and body habitus.

There have been several comparative studies on the effectiveness of different surgical approaches and techniques in hip replacement, with findings that are often contradictory and remain a subject of debate. According to international literature, minimally invasive approaches are associated with reduced postoperative pain, faster rehabilitation, earlier removal of walking aids, less muscle and soft tissue damage, reduced blood loss, better cosmetic outcomes, shorter hospital stays, and improved short-term functional results. However, recent studies suggest that they offer no substantial advantages over traditional techniques. Studies comparing surgical approaches also do not show significant differences in long-term functional outcomes and quality of life. Consequently, the differences in surgical approaches for hip replacement are significant in the evaluation of early functional outcomes.

The equitable separation and coexistence of public and private health care systems is a key health policy objective in many countries. One major focus of these objectives is reducing waiting lists. Differences between public and private health care systems manifest not only in waiting times but also in the sociodemographic characteristics of patients, as well as the preferred surgical approaches and techniques, which can significantly influence postoperative health outcomes. These differences between patients operated on in public and private sectors raise concerns about unequal access to health care services.

To ensure optimal recovery following total hip arthroplasty, comprehensive and timely rehabilitation is essential. The main goals of rehabilitation are to optimize the postoperative condition, reduce pain, and facilitate the patient's return to daily life. Rehabilitation not only enhances functional recovery and pain relief but also improves muscle strength, range of motion, and quality of life, accelerating the healing process. It is a complex, multi-component intervention that varies in terms of timing, frequency, intensity, personnel involved, available infrastructure, and the individual patient's social and financial circumstances. Postoperative rehabilitation can be provided as inpatient or outpatient care, in rehabilitation facilities, through home-based care (with or without supervision), or a combination of these options. The utilisation and mode of rehabilitation are determined by

factors such as age, gender, nationality, comorbidities, the type of health care system providing the surgery, and insurance status.

Given the increasing health care and economic burden of osteoarthritis due to an aging population, the WHO has declared the decade from 2021 to 2030 as the *Decade of Healthy Ageing*, emphasizing not only life expectancy but also quality of life. Health-related quality of life (HRQoL) encompasses the physical, psychological, and social aspects of health as experienced and shaped by individual perceptions, beliefs, expectations, and values. Today, quality of life is receiving increasing attention, with subjective patient-reported outcome measures (PROMs) being used to assess it. The results of quality-of-life assessments contribute to measuring health status, developing successful treatment plans, providing patient-centered care, and delivering effective treatments. Additionally, they help improve the quality of care, identify strengths and weaknesses, and provide valuable insights for clinical decision-makers and health care providers. The symptoms associated with hip osteoarthritis significantly affect individuals' physical and mental health, substantially impacting their quality of life. Research findings indicate that the quality of life of patients with osteoarthritis is significantly worse than that of the general population.

While several studies have examined the impact of hip replacement surgery on quality of life, there is currently limited information on the differences in quality of life between patients operated on in public and private health care systems.

2. OBJECTIVES

The aim of this thesis is to examine the quality of life and the disease burden of patients undergoing total hip arthroplasty with different surgical approaches in the Hungarian public and private health care systems.

The main objectives of our research can be summarized as follows:

1. To analyse the epidemiological disease burden of hip osteoarthritis in Hungary using nationwide real-world health insurance data.
2. To assess the health insurance disease burden of hip osteoarthritis in Hungary based on nationwide real-world health insurance data.
3. To investigate the sociodemographic characteristics of patients undergoing total hip arthroplasty in the public and private health care systems.
4. To evaluate the quality of life of patients undergoing total hip arthroplasty in the public and private health care systems.
5. To compare quality-of-life indicators based on sociodemographic and surgical data in the public and private health care systems.
6. To compare the rehabilitation utilisation metrics of patients undergoing total hip arthroplasty in the public and private health care systems.

3. IN-DEPTH EVALUATIONS

3.1. ANNUAL EPIDEMIOLOGICAL AND HEALTH INSURANCE DISEASE BURDEN OF HIP OSTEOARTHRITIS IN HUNGARY BASED ON NATIONWIDE DATA

Introduction: Health services utilisation related to hip osteoarthritis imposes a significant burden on society and health care systems.

Objectives: Our aim was to analyse the epidemiological and health insurance disease burden of hip osteoarthritis in Hungary based on nationwide data.

Methods: Data were extracted from the nationwide financial database of the National Health Insurance Fund Administration (NHIFA) of Hungary for the year 2018. The analysed data included annual patient numbers, prevalence, and age-standardized prevalence per 100,000 population in outpatient care, health insurance costs calculated for age groups and sexes for all types of care. Patients with hip osteoarthritis were identified using code M16 of the International Classification of Diseases (ICD), 10th revision. Age-standardised prevalence rates were calculated using the European Standard Population 2013 (ESP2013).

Results: Based on patient numbers of outpatient care, the prevalence per 100,000 among males was 1,483.7 patients (1.5%), among females 2,905.5 (2.9%), in total 2,226.2 patients (2.2%). The age-standardised prevalence was 1,734.8 (1.7%) for males and 2,594.8 (2.6%) for females per 100,000 population, for a total of 2,237.6 (2.2%). The prevalence per 100,000 population was higher for women in all age groups. In age group 30–39, 40–49, 50–59, 60–69 and 70 + the overall prevalence was 0.2%, 0.8%, 2.7%, 5.0% and 7.7%, respectively, describing a continuously increasing trend. In 2018, the NHIFA spent 42.31 million EUR on the treatment of hip osteoarthritis. Hip osteoarthritis accounts for 1% of total nationwide health insurance expenditures. 36.8% of costs were attributed to the treatment of male patients, and 63.2% to female patients. Acute inpatient care, outpatient care and chronic and rehabilitation inpatient care were the main cost drivers, accounting for 62.7%, 14.6% and 8.2% of the total health care expenditure for men, and 51.0%, 20.0% and 11.2% for women, respectively. The average annual treatment cost per patient was 3,627 EUR for men and 4,194 EUR for women.

Conclusions: The prevalence of hip osteoarthritis was 1.96 times higher (the age-standardised prevalence was 1.5 times higher) in women compared to men. Acute inpatient care was the major cost driver in the treatment of hip osteoarthritis. The average annual treatment cost per patient was 15.6% higher for women compared to men.

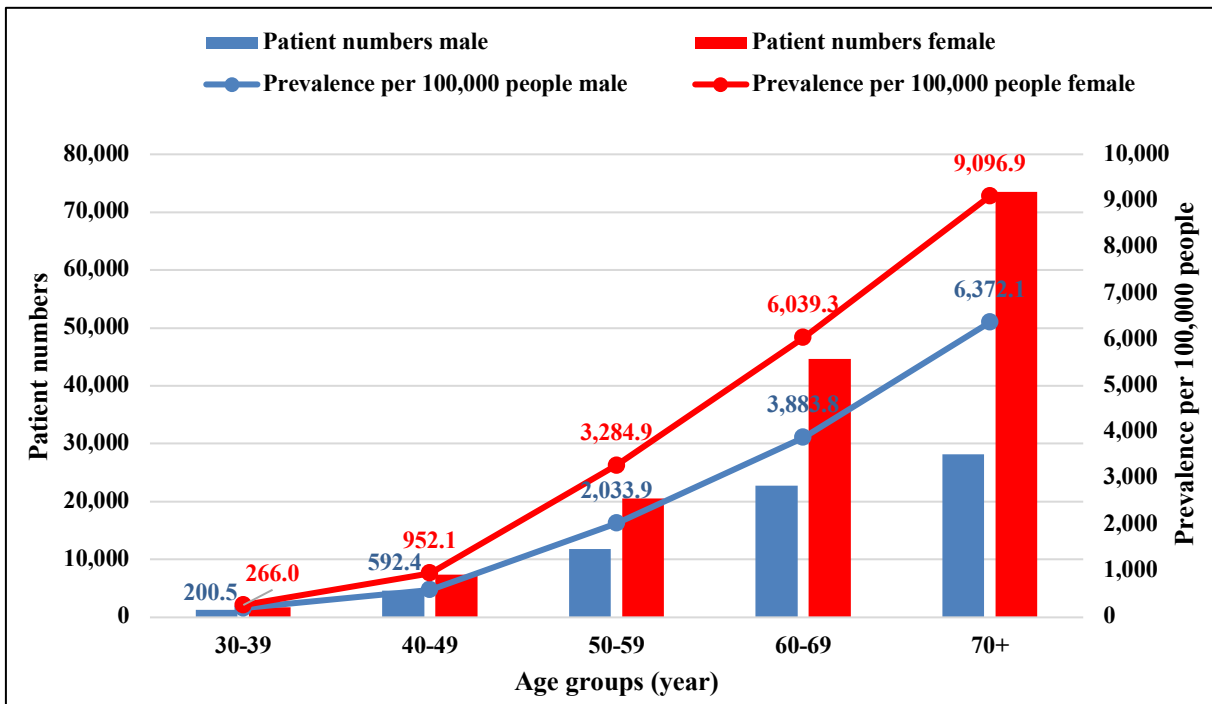


Figure 1 Total patient number and prevalence per 100,000 people according to age groups and sex based on outpatient care in Hungary, 2018 (NHIFA, 2018)

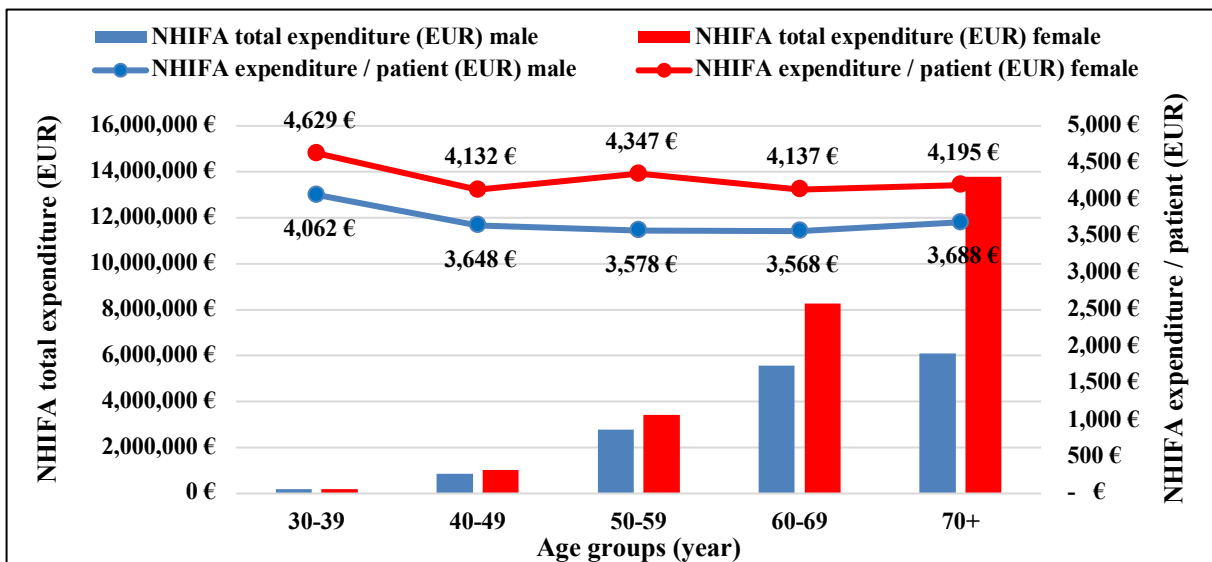


Figure 2 Total health insurance expenditure and average expenditure per patient by age group and sex based on acute inpatient care in Hungary, 2018 (NHIFA, 2018)

3.2. INVESTIGATION OF THE SHORT-TERM QUALITY OF LIFE AND SOCIO-DEMOGRAPHIC FACTORS OF PATIENTS UNDERGOING TOTAL HIP ARTHROPLASTY

Introduction: Among the health needs related to an aging society, the increase in the number of hip replacement surgeries stands out.

Objectives: The study aimed to examine the socio-demographic data of patients operated in the private and public health care with total hip arthroplasty in different approaches, and to compare their quality of life before and after surgery.

Methods: Patients were selected by simple convenience sampling technique at the Department of Orthopedics, Clinical Centre of the University of Pécs and at the Da Vinci Private Clinic in Pécs. Patients completed a complex questionnaire before the surgery and 6 weeks later. We evaluated socio-demographic data, disease and surgical conditions. Two international questionnaires were also completed (SF-36, Oxford Hip Score).

Results: The research involved 164 persons, 75 persons of the public care, 89 persons of the private care. The proportion of villagers was significantly higher in the public care ($p=0.014$), while mainly metropolitans were found in the private care. The proportion of primary ($p<0.001$) and secondary education ($p=0.042$) was significantly higher for public care patients, while higher education was prevalent among patients treated in the private sector ($p<0.001$). In the public care the proportion of pensioners ($p=0.005$), in the private care the proportion of intellectual workers and contractors was significantly higher ($p<0.001$). Both groups' quality of life showed significant improvement ($p<0.001$).

Conclusions: Patients in the two groups significantly differed in socio-demographic characteristics, but both showed significant improvements in the quality of life 6 weeks after surgery.

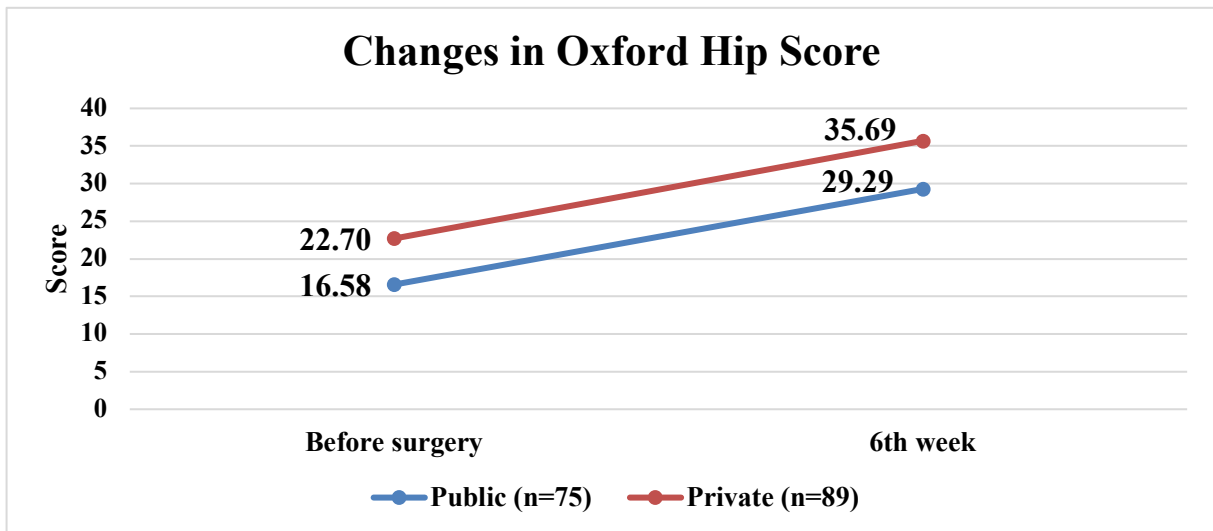


Figure 3 *Changes in Oxford Hip Score over the study period*

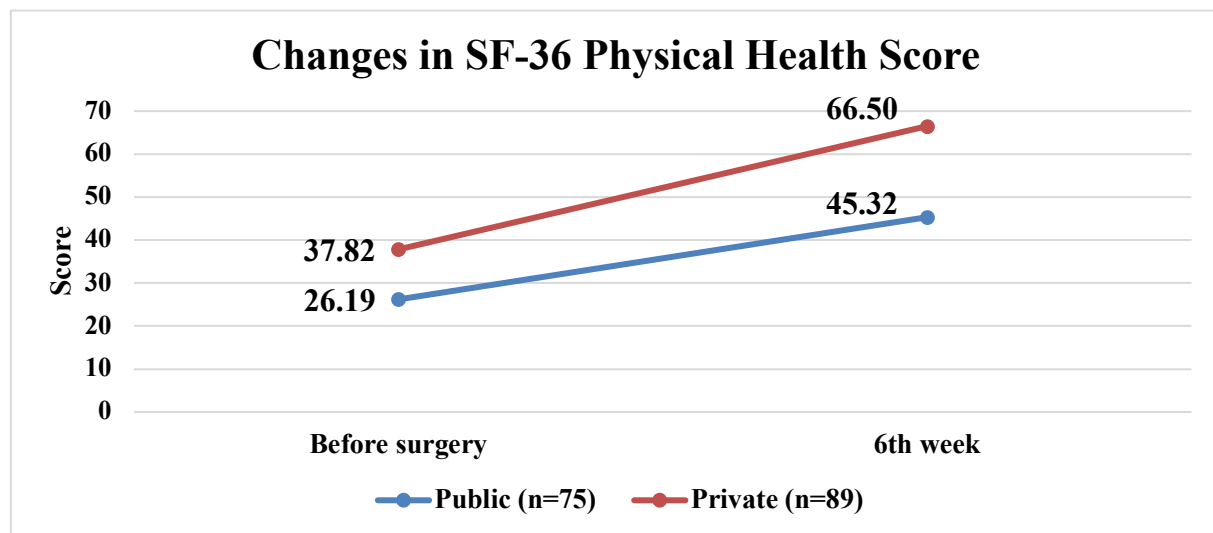


Figure 4 *Changes in SF-36 Physical Health Score over the study period*

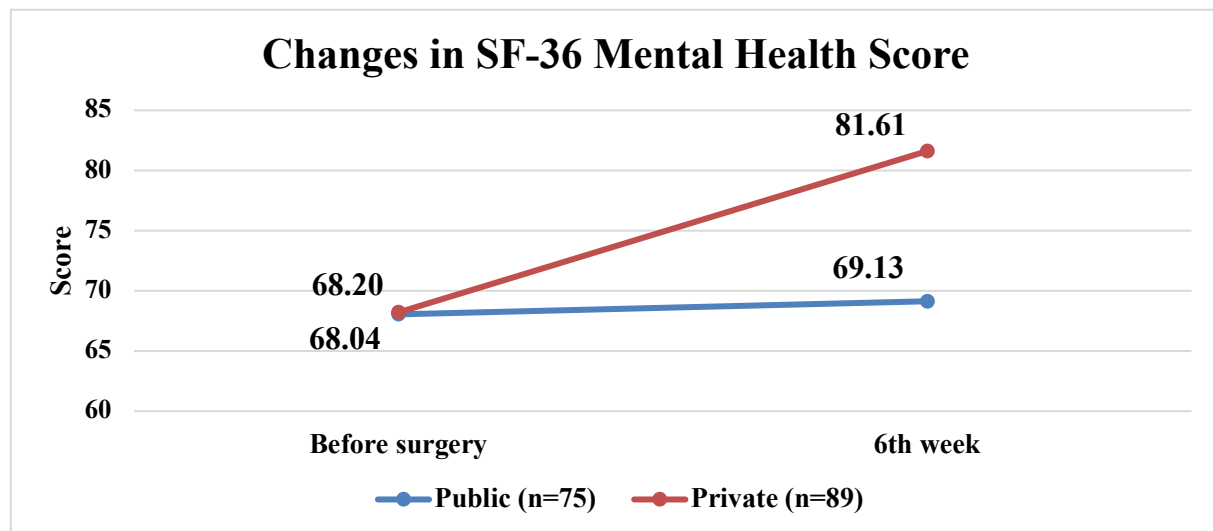


Figure 5 *Changes in SF-36 Mental Health Score over the study period*

3.3. COMPARATIVE ANALYSIS OF THE QUALITY OF LIFE REGARDING PATIENTS WHO UNDERWENT HIP REPLACEMENT IN PUBLIC VERSUS PRIVATE HOSPITALS IN HUNGARY

Objectives: The study aimed to investigate the impact of hip replacement surgery on the quality of life and to compare the outcomes by sociodemographic and surgical data in Hungarian public and private hospitals.

Methods: Patients were selected at the Department of Orthopaedics (Clinical Centre, University of Pécs) and at the Da Vinci Private Clinic in Pécs. Patients completed the SF-36 and Oxford Hip Score (OHS) questionnaires before the surgery, 6 weeks and 3 months later. We also evaluated socio-demographic data, disease and surgical conditions.

Results: The research involved 128 patients, 60 patients in public, 68 patients in private hospital. Despite the different sociodemographic characteristics and surgical outcomes of public and private health care patients, both groups had significantly improved the quality of life 3 months after hip replacement surgery measured by OHS and SF-36 Physical Health scores ($p < 0.001$). In the mental health score, only the patients of the private health sector showed a significant improvement ($p < 0.001$).

Conclusions: The extent of improvement did not differ between the two health care sectors according to the OHS questionnaire ($p = 0.985$). While the SF-36 Physical Health Score showed a higher improvement for public patients ($p = 0.027$), the mental health score showed a higher improvement for private patients ($p = 0.015$).

		Public hospital	Private hospital	p-value
		Score (n=60)	Score (n=68)	
Oxford Hip Score	Before surgery (SD)	16.60 (8.47)	22.78 (10.37)	<0.001*
	6 th week (SD)	28.67 (8.55)	35.01 (7.98)	<0.001*
	3 rd month (SD)	34.68 (8.89)	40.85 (7.22)	<0.001*
	Improvement within the group	<0.001*	<0.001*	
	Improvement between groups	<i>p</i> = 0.985		
SF-36 Physical Health	Before surgery (SD)	26.09 (16.76)	37.32 (20.84)	<0.001*
	6 th week (SD)	44.31 (17.37)	64.89 (20.17)	<0.001*
	3 rd month (SD)	56.68 (21.51)	77.35 (19.75)	<0.001*
	Improvement within the group	<0.001*	<0.001*	
	Improvement between groups	<i>p</i> = 0.027*		
SF-36 Mental Health	Before surgery (SD)	66.85 (23.32)	68.63 (20.43)	
	6 th week (SD)	67.25 (23.98)	81.09 (19.05)	<0.001*
	3 rd month (SD)	73.86 (22.38)	86.18 (16.31)	<0.001*
	Improvement within the group	<i>p</i> = 0.075	<0.001*	
	Improvement between groups	<i>p</i> = 0.015*		

Table 1 Change in quality-of-life score during the study period

*Asterisked data indicate statistically significant results.

SD standard deviation.

3.4. EXAMINATION OF REHABILITATION UTILISATION AMONG PATIENTS UNDERGOING TOTAL HIP ARTHROPLASTY IN PUBLIC AND PRIVATE HEALTH CARE

Objectives: The aim of our study is to compare the rehabilitation utilisation outcomes of patients who underwent total hip arthroplasty in public and private health care in Hungary.

Methods: Patients were selected from the Department of Orthopedics, Clinical Centre of the University of Pécs and at the Da Vinci Private Clinic in Pécs, using a simple convenience sampling technique. In the 6th week postoperatively, they completed a questionnaire about utilisation of rehabilitation (frequency, type of rehabilitation). We also examined the use of walking aids and complications in the postoperative period.

Results: The research involved 164 people, 75 patients in the state and 89 in the private health care. There was a significant difference in the proportion of patients who received rehabilitation, with 90.67% of public sector patients and 59.55% of private sector patients ($p < 0.001$). Among them, 53.33% of public patients visited a public rehabilitation institution ($p < 0.001$) or 25.33% used public home care, while private patients mainly used public (20.22%) and private (17.98%) home care. There was also a significant difference in the timing of utilisation, with 46.67% of public sector patients starting treatment immediately compared to 19.10% of private patients ($p < 0.001$). In the 6th week after surgery, public patients mainly walked with one (36.0%) ($p = 0.003$) or two elbow crutches (45.33%) ($p < 0.001$), and private patients either with one elbow crutch (15.73%) or without a walking aid (71.91%) ($p < 0.001$). We found no significant difference between the groups in the incidence of complications, the rate of post-operative visits to the doctor and the rate of new hospital admissions.

Conclusions: We found significant differences in rehabilitation utilisation between public and private health care patients who underwent total hip arthroplasty. In summary, the rehabilitation utilisation was higher for public patients, and most of them started treatment immediately. The high proportion of private patients had left the walking aid by the 6th week after surgery.

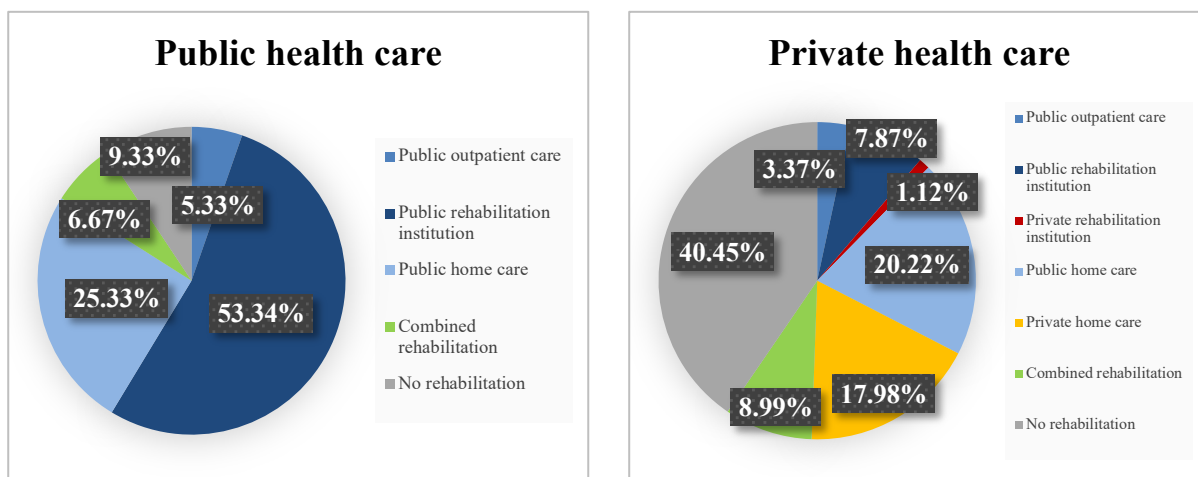


Figure 6-7 Rehabilitation utilisation rate by type of care in public and private health care

		Public health care	Private health care	p-value
Frequency of rehabilitation	Regular	90.67 %	59.55 %	$p < 0.001$
	Occasional	0 %	0 %	
	No rehabilitation	9.33 %	40.45 %	$p < 0.001$
Date of first rehabilitation	Immediately after surgery	46.67 %	19.10 %	$p < 0.001$
	Within one week	20.0 %	21.35 %	
	After one week	24.0 %	19.10 %	
	No rehabilitation	9.33 %	40.45 %	$p < 0.001$
Type of walking aid in the 6 th postoperative week	Without walking aid	10.67 %	71.91 %	$p < 0.001$
	One walking stick	6.67 %	6.74 %	
	One elbow crutch	36.00 %	15.73 %	$p = 0.003$
	Two elbow crutches	45.33 %	4.49 %	$p < 0.001$
	Walking frame	1.33 %	1.12 %	
Complication	Yes	8.00 %	12.36 %	
	No	92.00 %	87.64 %	
Postoperative visit to the doctor	Yes	8.00 %	7.87 %	
	No	92.00 %	92.13 %	
New hospital admission	Yes	1.33 %	2.25 %	
	No	98.66 %	97.75 %	

Table 2 Outcomes of the postoperative period in public and private health care patients: rehabilitation, walking aids, complications

4. DISCUSSION

Osteoarthritis affects approximately 595 million people worldwide, accounting for 7.6% of the global population. Due to growing population and ageing society, the number of osteoarthritis cases is expected to rise continuously.

Hip osteoarthritis, one of the most common indications for total hip arthroplasty (THA), imposes a significant burden on both society and healthcare system. To facilitate effective prevention and treatment strategies, it is essential to quantify the epidemiological and healthcare-related disease burden of osteoarthritis by sex and age. In Hungary, the outpatient prevalence of hip osteoarthritis was 2,226.2 per 100,000 population (2.2%) in 2018. However, a review of the literature reveals significant variability in disease burden estimates, depending on the studied population, data sources, sample size, methodology, and the definition of osteoarthritis. Our analysis by age group and sex showed that the prevalence was higher for women and with increasing age.

The burden of hip osteoarthritis is not only epidemiological but also significant from a healthcare financing perspective. In 2018, the Hungarian National Health Insurance Fund (NHIFA) spent 13.49 billion HUF on hip osteoarthritis treatment, representing 1% of total national healthcare expenditures. The most costly types of care were inpatient (both acute and chronic) and outpatient care. Women accounted for 63.2% of the total expenditures, with an average annual healthcare cost per patient 15.6% higher than for men. The average annual direct cost per patient was 1,264,652 HUF (€3,966) in Hungary in 2018. Indirect expenditure was not examined in our study, but international studies confirm the significant burden of all these.

When conservative treatments fail, total hip arthroplasty (THA) becomes necessary, representing one of the most successful and cost-effective surgical interventions. As the prevalence of hip osteoarthritis rises, so does the demand for THAs, with the number of procedures projected to increase. Our research examined the sociodemographic characteristics of hip arthroplasty patients to better understand which healthcare systems cater to specific patient groups. In public healthcare, there was a significantly higher proportion of rural, lower-educated, retired patients, while private healthcare catered to urban, higher-educated, white-collar workers, and self-employed individuals.

Hip osteoarthritis significantly affects individuals' physical and mental health, impacting their quality of life. Compared to the general population, patients with osteoarthritis have significantly worse quality of life, particularly regarding physical health. Thus, one of the key

indicators of THA success is quality of life. We assessed patients' preoperative and postoperative (6 weeks and 3 months) quality of life using a general measure (SF-36) and a disease-specific questionnaire (Oxford Hip Score). Factors influencing surgical outcomes may be associated with funding sources and the type of health care system. We therefore also compared our results by type of health care system to explore changes in quality of life for public and private patients. Our findings showed that public patients consistently had lower quality-of-life scores at all time points (preoperative, 6 weeks, and 3 months postoperative) compared to private patients, suggesting a worse health condition. The Oxford Hip Score and SF-36 Physical Health scores showed significant improvements for all patients by the 6-week and 3-month postoperative periods. However, the SF-36 Mental Health score only improved significantly among private patients. Public hospitals typically treated more complex and severe cases, reflected in lower quality-of-life scores and a higher prevalence of comorbidities. Longer surgical waiting times, anxiety, and frustration in public health care likely contributed to poorer outcomes.

In terms of the overall improvement over the study period, no significant differences were observed measured by the Oxford Hip Score between public and private patients, both improving at the same rate. However, public patients experienced greater improvement in SF-36 Physical Health scores, while private patients showed more improvement in SF-36 Mental Health scores.

Several factors underlie these quality-of-life differences. Multivariable linear regression revealed that marital status, occupation, and the type of health care system significantly influenced quality of life. Single patients reported higher quality-of-life scores compared to married, coupled, divorced, or widowed patients. Patients performing light physical work had higher scores compared to unemployed or disabled individuals. Furthermore, private health care patients consistently reported better quality-of-life scores than public health care patients. The surgical approach also impacts postoperative quality of life, with anterior approaches being associated with better short-term outcomes and functional results. This was represented in our study by two different health care sectors using different approaches: the public system primarily used anterolateral approach, while the private system favored anterior approach. Anterior-approach patients (private) achieved higher quality-of-life scores, though only the SF-36 Mental Health improvement was statistically significant among analysed variables. Quality of life scores (OHS preoperatively and OHS at postoperative 3rd month) were compared across various sociodemographic and surgical factors, revealing significant differences in

subcategories such as gender, BMI, educational level, occupation, employment status, surgical indication, and type of prosthesis fixation.

The increasing number of hip replacement surgeries has led to growing demand for associated health care services, including preoperative and postoperative rehabilitation. Postoperative rehabilitation can take various forms and approaches. According to recommendations, the postoperative treatment depends on the type of surgical approach, as minimally invasive techniques typically result in faster rehabilitation due to reduced muscle damage. During a 6-week follow-up, we assessed rehabilitation utilisation metrics among our patients, revealing significant differences between those treated in public and private health care in terms of rehabilitation participation rates, the type of care chosen, and the timing of its initiation. Rehabilitation participation was higher among public health care patients (90.67%), who primarily attended public rehabilitation institution or received home care, with most starting treatment immediately. By the 6-week postoperative follow-up, these patients mainly walked with one or two elbow crutches. Conversely, private health care patients had a lower participation rate (59.55%), predominantly opted for home care (via public or private services), and most had discontinued the use of assistive devices by the end of the follow-up period.

There were no significant differences between the two groups in terms of the incidence of complications (e.g., dislocations), postoperative visits to a physician, or hospital readmission rates. The dislocation rate is considered an important outcome indicator; however, current literature does not consistently support differences in dislocation rates between surgical approaches. Avoiding postoperative complications is of critical importance for patient satisfaction in both public and private health care.

5. NOVEL RESULTS

The research objectives outlined in this thesis, along with the investigations conducted, have yielded numerous novel findings, summarized as follows:

New Findings:

1. We determined the real-world annual epidemiological burden of hip osteoarthritis based on routinely collected data from the National Health Insurance Fund of Hungary (NHIFA) database.
2. We assessed the annual health care insurance financial burden of hip osteoarthritis using NHIFA's health insurance data.
3. We analysed the sociodemographic characteristics of patients who underwent total hip arthroplasty with different surgical approaches, comparing the public and private health care sectors.
4. We compared preoperative and postoperative quality of life (SF-36, Oxford Hip Score) of patients who underwent total hip arthroplasty with different surgical approaches in the public and private health care sectors.
5. We evaluated quality-of-life indicators based on sociodemographic and surgical variables across the public and private health care sectors.
6. We identified rehabilitation utilisation metrics among total hip arthroplasty patients operated on in public and private health care.

Practical aspects

The demand for the care of patients with osteoarthritis, including hip replacement surgeries, is increasing globally. Hip osteoarthritis can cause significant problems even at younger ages, emphasizing the importance of prevention, avoiding risk factors, and initiating timely treatment to mitigate severe symptoms and advanced stages of the disease. Long-term, these measures can help prevent the decline in quality of life and delay or avoid hip replacement surgery, thereby alleviating the burden on the health care system.

Systematic differences in socioeconomic characteristics are evident between patients in public and private health care systems, which can lead to inequalities in access to health care services. The limited infrastructure and human resources in health care, the large patient population, the complexity, and the cost of hip replacement surgeries contribute to the formation of long waiting lists. However, the length of waiting times significantly exacerbates the further deterioration of patients' health. Efficient planning of prosthetic surgeries and waiting lists, along with ensuring equitable access to health care, is crucial for the practical application of our findings.

In terms of postoperative rehabilitation, a low utilisation rate was observed among private health care patients in Hungary. Regardless of differences in surgical approaches and better short-term postoperative outcomes, rehabilitation remains essential for achieving and maintaining functional goals. Unequal utilisation was associated with certain forms of rehabilitation. Strengthening and optimizing participation in outpatient care, which currently shows low uptake, could help alleviate the load on inpatient and home care.

The findings presented in this dissertation highlight that the surgical approaches employed in both public and private health care systems are effective in improving patients' functional status and quality of life. In the private sector, marketing plays a prominent role, particularly for the anterior approach and minimally invasive procedures, which enable early mobilization, shorter hospital stays, and better short-term functional outcomes. Overall, both surgical approaches have their advantages, limitations, successes, and challenges. Therefore, selecting the appropriate method should be carefully considered, taking into account the individual's interests, possibilities, and health status.

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7. LIST OF PUBLICATIONS

Publications related to the thesis:

1. **Kajos LF**, Molics B, Elmer D, Pónusz-Kovács D, Kovács B, Horváth L, Csákvári T, Bódis J, Boncz I. Annual epidemiological and health insurance disease burden of hip osteoarthritis in Hungary based on nationwide data. BMC Musculoskeletal Disorders. 2024 May 23;25(1):406.
(Q-2; impact factor: 2,200)
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