

Impact of total hip arthroplasty on the quality of life of elderly individuals with osteoarthritis

Impacto da artroplastia total de quadril na qualidade de vida de idosos com osteoartrite

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ABSTRACT

Objective: To evaluate the impact of total hip arthroplasty (THA) on the quality of life of elderly individuals with osteoarthritis. **Methods:** A systematic literature review was conducted, including primary studies published in Portuguese, English, or Spanish that investigated the effect of THA on the quality of life of elderly individuals. The search was conducted in the MEDLINE/PubMed, SciELO, and LILACS databases, using controlled (MeSH) and uncontrolled descriptors, in addition to the Boolean operators AND and OR. Exclusion criteria included a mean age of participants under 60 years and studies on partial arthroplasty. **Results:** THA showed significant positive effects on pain, mobility, and functional capacity in elderly individuals, with 83% of patients reporting postoperative satisfaction. The included studies analyzed several quality of life instruments, such as EQ-5D, EQ-VAS, HHS, MdAP, WOMAC, and SF-36. This analysis revealed an increase in quality of life and the ability to perform daily and recreational activities, especially in the first year after the procedure. However, 17% of patients experienced dissatisfaction, often due to persistent physical limitations and discrepancies between patient and surgeon expectations, with complaints of nighttime pain and difficulties with daily activities. **Conclusions:** THA is highly effective in improving the quality of life of elderly patients with osteoarthritis. However, challenges such as muscle strengthening and aligning expectations suggest the need for more personalized interventions. Valuing social factors and adopting measures such as participation in activities, psychological support, and community assistance during rehabilitation can optimize results.

Keywords: Hip arthroplasty; Quality of life; Osteoarthritis; Aged.

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RESUMO

Objetivo: Avaliar o impacto da artroplastia total de quadril (ATQ) na qualidade de vida de idosos com osteoartrite. **Métodos:** Realizou-se uma revisão sistemática da literatura, incluindo estudos primários publicados em português, inglês ou espanhol que investigassem o efeito da ATQ na qualidade de vida de idosos. A busca foi realizada nas bases MEDLINE/PubMed, SciELO e LILACS, utilizando descritores controlados (MeSH) e não controlados, além dos operadores booleanos AND e OR. Critérios de exclusão incluíram idade média dos participantes inferior a 60 anos e estudos sobre artroplastia parcial. **Resultados:** A ATQ apresentou efeitos positivos significativos na dor, mobilidade e capacidade funcional de idosos, com 83% dos pacientes relatando satisfação pós-operatória. Os estudos incluídos analisaram diversos instrumentos de qualidade de vida, tais como EQ-5D, EQ-VAS, HHS, MdAP, WOMAC e SF-36. A partir dessa análise, observou-se aumento da qualidade de vida e da capacidade de realizar atividades diárias e recreativas, especialmente no primeiro ano após o procedimento. Contudo, 17% dos pacientes experimentaram insatisfação, muitas vezes devido a limitações físicas persistentes e discrepâncias entre expectativas de pacientes e cirurgiões, com queixas de dor noturna e dificuldades em atividades cotidianas. **Conclusões:** A ATQ é altamente eficaz na melhoria da qualidade de vida de idosos com osteoartrite. Porém, desafios como o fortalecimento muscular e o alinhamento de expectativas sugerem a necessidade de intervenções mais personalizadas. A valorização dos fatores sociais e a adoção de medidas como a participação em atividades, o suporte psicológico e o auxílio comunitário durante a reabilitação podem otimizar os resultados.

Palavras-chave: Artroplastia de quadril; Qualidade de vida; Osteoartrite; Idoso.

INTRODUCTION

Osteoarthritis (OA), also known as osteoarthritis, is a degenerative disease that mainly affects synovial joints, especially the hip joint¹. OA is characterized by localized degeneration of articular cartilage, thickening of the subchondral bone, and the formation of marginal osteophytes. Clinically, it manifests with recurrent episodes of pain, decreased muscle strength, and impaired function, balance, and range of motion^{2,3}. Osteoarthritis affects approximately 240 million people worldwide, corresponding to approximately 10% of men and 18% of women. Among people over 65 years of age, the prevalence of the disease reaches 40%^{4,5}, making it the main cause of pain and disability in the elderly population⁶. The limitations imposed by osteoarthritis prevent the performance of several daily activities, both work and recreational. Individuals with advanced hip osteoarthritis often have muscle strength deficits and reduced range of motion, which contribute to gait disturbances and predispose to falls^{5,6}.

First-line treatment for OA consists of conservative therapeutic interventions, such as physical therapy, with the aim of controlling pain and improving joint function^{1,2}. However, when these conservative therapies fail, total hip arthroplasty (THA) becomes the treatment of choice¹. THA is currently the most effective procedure for reducing disability in individuals with advanced hip osteoarthritis, being one of the joint replacement interventions with the highest success rate in the medium and long term. This procedure provides excellent pain relief, as well as significant improvements in function, well-being and increased survival in the first decade after surgery⁷⁻⁹.

The procedure's promising results are possible because, in recent years, new, less invasive surgical approaches have emerged, aiming to reduce hospital stays and provide patients with faster functional recovery⁸. In this context, estimates for 2030 predict a 174% increase in total hip arthroplasties in the United States compared to 2005, totaling 572,000 patients who may undergo THA each year^{7,10}.

Regarding the benefits of THA, the studies analyzed showed a significant improvement in several parameters

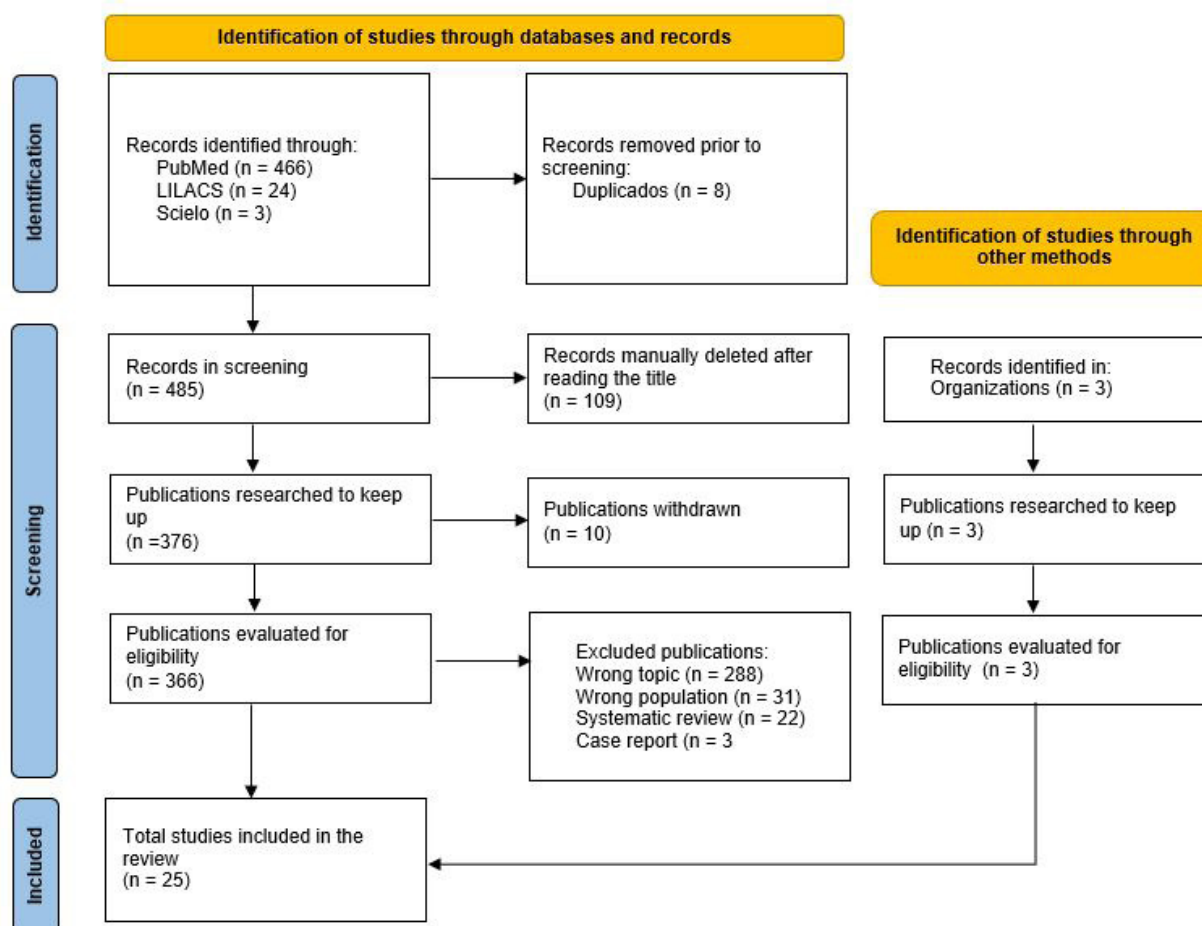
that reflect quality of life¹⁰, including pain relief, increased range of motion and, consequently, improved functions in cases of severe joint degeneration³. Despite these advances, research indicates that some patients continue to face physical challenges after surgery, such as nighttime pain and difficulty with routine activities such as putting on shoes, exercising, and maintaining sexual activity^{6,7}. These factors can compromise the perception of the benefits obtained from the procedure, especially with regard to quality of life. Considering this scenario, a deeper understanding of the true effects of THA on the daily experience of older adults is essential. Therefore, the present study aimed to analyze the impact of total hip arthroplasty on the quality of life of older adults with osteoarthritis.

METHODS

This study is a systematic literature review, considering as inclusion criteria primary studies, published in Portuguese, English, or Spanish, with no publication date restrictions, and demonstrating the impact of total hip arthroplasty on

the quality of life of older adults as the primary outcome. Articles whose average participant age was under sixty years; studies in the form of brief communications or case reports; systematic reviews or meta-analyses; studies addressing partial hip arthroplasty or other types of treatment; and studies in which the surgical indication for THA was hip fracture or acute trauma, rather than osteoarthritis or degenerative conditions, were excluded.

The initial electronic search identified 493 studies, of which 22 were selected for inclusion in this systematic review. In addition, three additional studies were incorporated to provide methodological support: the Rayyan Qatar Computing Research Institute (Rayyan QCRI) platform¹¹, used for data screening and selection; the Joanna Briggs Institute (JBI) guidelines¹², which guided the review process; and the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart¹³, used for organizing and presenting the results. Thus, the review included a total of 25 studies, as illustrated in Figure 1, which details the steps of the selection process and the exclusion criteria applied



Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

Figure 1. Search strategy for articles on the impact of total hip arthroplasty on the quality of life of elderly people with osteoarthritis.

Source: Page et al. (2021)¹³.

The review included searches performed in the Medical Literature Analysis and Retrieval System Online (MEDLINE) databases, via PubMed, Scielo and LILACS, in July 2024. For the search in MEDLINE/PubMed, controlled Medical Subject Headings (MeSH) descriptors were used, while in the Scielo and LILACS databases, uncontrolled descriptors (keywords) were used. The descriptors were combined with the Boolean operators AND and OR, without adding complementary searches. The combinations of descriptors used for each database are described in Table 1.

RESULTS

Some of the articles analyzed highlighted as a motivation for research the lack of studies or uncertainties about the functional impact of total hip arthroplasty in elderly individuals over time^{2,5}. Others pointed out the scarcity of investigations regarding the level of involvement of these individuals in activities after the procedure^{14,15}. In addition, some literature has shown a lack of understanding about the variation in results after treatment¹⁶, the relationship between THA and increased life expectancy⁹, as well as the differences in function and disability between men and women after THA¹⁷. Doubts were also raised about the impact of the procedure on the quality of life of elderly individuals with osteoarthritis¹⁸.

Regarding the research objective, some of the studies proposed to analyze the quality of life of patients with total hip arthroplasty^{3,16,18,19}, developing criteria for classifying treatments and quality of life¹⁴ or establishing predictors for these outcomes¹⁹. Other studies focused on the evaluation of medium-term clinical and radiographic results in patients undergoing arthroplasty²⁰, identifying factors associated with involvement in post-THA activities^{14,15}, in the description of the survival rate after the procedure⁹ and in the comparison of function and pain between men and women¹⁷. Furthermore, they investigated functional capacity after THA^{2,3,18,21}, and the possible need for additional rehabilitation for these patients²².

Regarding the location of the studies, some of them were carried out in Canada^{14,16}, Sweden^{9,18,21} and Germany^{2,15}. Other countries where studies were conducted include:

Norway²⁰, Poland⁵, Spain¹⁹, USA¹⁷, United Kingdom²³, Brazil³ and Denmark²².

Most studies investigated the quality of life of the elderly after total hip arthroplasty^{15-17,19-22}, including predictors¹⁹ and capacity for recreational activities³. They also analyzed functional capacity before and after THA^{3,17,19-22}. In addition, they explored the presence of functional limitations¹⁴, pain^{17,19}, satisfaction with the procedure²⁰, postural performance^{5,17}, level of physical activity after surgery³, general health status¹⁸, life expectancy and complications⁹, as well as risk factors associated with unsatisfactory joint performance²³.

Regarding data collection, most articles used primary data to compose the study^{2,3,14-17,19,21,22}. Other studies, however, used secondary sources, such as databases, records and government information^{5,9,18,20,23}.

Table 2 presents the characteristics of the included studies, detailing information about the author, year of publication, study time, study design, demographic data of the participants, group division, variables analyzed and main results.

Despite the methodological and geographic variety of the studies analyzed, some important limitations were observed. The heterogeneity of the instruments used to measure quality of life, such as the EQ-5D, WOMAC, SF-36, and others, hinders the standardization of results and direct comparisons between studies. Furthermore, many studies presented small sample sizes, short follow-up periods, or the absence of a control group, which can compromise the generalizability of the findings. Another limitation was the scarcity of data on contextual variables, such as socioeconomic status, family support, and the presence of comorbidities, which are relevant factors in the functional experience of older adults after THA. These limitations reinforce the need for more longitudinal, multicenter studies with robust designs that also consider psychosocial aspects. For clinical practice, the findings suggest that the indication and follow-up of THA should go beyond orthopedic evaluation, integrating multidisciplinary teams capable of working on the physical rehabilitation, emotional support, and social reintegration of older patients.

DISCUSSION

Total hip arthroplasty (THA) is widely recognized for its positive impact on the quality of life of elderly patients with osteoarthritis, providing significant pain relief and improvement in physical and psychological function. Studies conducted between 2008 and 2022 indicate that up to 83% of patients reported satisfaction after the procedure, with substantial improvements in pain (66% of patients), mobility (55%), self-care (19%), and performance of usual activities (47%) in the first postoperative year.^{20,24} This increase in quality of life was particularly observed in patients who experienced a reduction from moderate or severe limitations to no limitations, indicating a strong correlation between surgical satisfaction and pain relief, along with functional recovery^{21,24}.

Table 1. Combinations performed in the databases, Paracatu/MG, 2025.

Databases	Combinations in the referred databases
Medline/PubMed (MeSH)	("Aged"[Mesh] AND "Arthroplasty, Replacement, Hip"[Majr]) AND "Quality of Life"[Majr]
SciELO (Keywords)	"Aged" AND "Arthroplasty, Hip" AND "Quality of life"
LILACS (Keywords)	"Aged" AND "Arthroplasty, Hip" AND "Quality of life".

Table 2. Characteristics and results of the studies included in the review. Paracatu/MG, 2025.

Author/Year (references)	Study time	Study design and subjects	Patient demographics	Intervention Group (IG)	Control Group (CG)	Variables studied	Results
Hulleberg et al. (2008) ²⁰	13 years	Longitudinal study n=123	Average age: 66 years Women: 96 (75%) Men: 27 (25%)	Total hip arthroplasty (THA)	IN	Patient satisfaction (visual analogue scale), quality of life (EQ-5D and EQ-VAS), and hip functionality (HHS and MdAP)	Mean HHS was 83 (29–100) points, with 61 hips (65%) rated as good or excellent. Mean VAS satisfaction score was 0 (0–85) points. Mean EQ-5D index was 0.75 (-0.74–1.0) points. Mean EQ-VAS score was 69 (5–100). MdAP improved after 13 years ($p<0.001$) compared with preoperative function. Regarding pain, (89%) of hips had a good or excellent result.
MacKay et al. (2017) ¹⁴	12 months	Prospective cohort study n=376	Average age: 64 years Women: 203 (54%) Men: 173 (46%)	Total hip arthroplasty (THA)	IN	Pain and function (WOMAC) and life limitation in older age (LLDI)	WOMAC revealed a significant reduction in pain ($p<0.05$) and improvement in physical function after surgery, with pain and function scores showing mean improvements of 0.05 and 0.13, respectively. Increased LLDI showed significant positive results ($p<0.05$). The presence of new comorbidities showed no significant association with pain and function outcomes.
Gordon et al. (2014) ¹⁸	2 years	Prospective cohort study n=27 245	Average age: 69 years Women: 15,619 (57%) Men: 11,625 (43%)	Total hip arthroplasty (THA)	IN	Health status (EQ-5D and EQ VAS)	EQ-5D ranged from 0.34 to 0.97, with a mean of 0.70 after 1 year of surgery. The mean EQ VAS was 70, indicating a moderate to good health perception. Younger patients showed a mean gain of 0.030 in the EQ-5D index and 5.4 in the EQ VAS compared to older patients.
Ray et al. (2020) ²⁴	17 years old	Prospective observational study n=69 083	Average age: 68 years Women: 38,994 (56%) Men: 30,089 (44%)	Total hip arthroplasty (THA)	IN	Quality of life (EQ-5D) and patient satisfaction (VAS)	Greater satisfaction was associated with improvements in pain/discomfort (66% improved), mobility (55%), and usual activities (47%). Greater satisfaction was reported by those who went from moderate/severe problems to no problems.

<p>Xu et al. (2005)¹⁶</p>	<p>12 months Prospective cohort study n=149</p>	<p>Average age: 64.8 years Women: 83 (56%) Men: 66 (44%)</p>	<p>Total hip arthroplasty (THA)</p>	<p>Quality of life (WOMAC)</p>	<p>The mean WOMAC functional follow-up score is 14 (SD=14). Its minimum is 0 points and the median is 8.5 points. At the end of follow-up, the distribution of WOMAC functional scores shows a truncated distribution because the result of follow-up is almost as good as a complete recovery or normal function.</p>
<p>Palazzo et al. (2014)⁷</p>	<p>12 months Observational longitudinal study n=123</p>	<p>Average age: 63.5 years Women: 61 (49.6%) Men: 65 (50.4%)</p>	<p>Total hip arthroplasty (THA)</p>	<p>Fulfillment of expectations (THR survey), satisfaction, functional outcome (WOMAC) and health-related quality of life (SF 12).</p>	<p>91.9% of patients were satisfied after THA. WOMAC ($p<0.001$). WOMAC was lower and the physical component of the SF-12 was higher for satisfied patients. Patient satisfaction scores correlated strongly with functional outcome ($\rho = -0.71$ for WOMAC).</p>
<p>Cnudde et al. (2018)⁹</p>	<p>13 years old Longitudinal retrospective study n=131808</p>	<p>Average age: 68 years Women: 76,035 (58%) Men: 55,773 (42%)</p>	<p>Total hip arthroplasty (THA)</p>	<p>Relative survival rate and comorbidities (Elixhauser comorbidity index)</p>	<p>Patients undergoing THA had slightly higher survival than expected compared with the general population. At 10 years, the difference was 2% ($p<0.001$). After 12 years, survival of patients undergoing THA was equal to that of the general population. Comorbidities and the Elixhauser comorbidity index were negatively associated with patient survival</p>
<p>Wareńczak et al. (2019)⁵</p>	<p>12 months Observational case-control study n=60</p>	<p>Intervention group: Mean age: 68.8 years Women: 25 (83%) Men: 5 (17%) Control group: Mean age: 69.4 years Women: 25 (83%) Men: 5 (17%)</p>	<p>Total hip arthroplasty (THA) n=30 Healthy individuals n=30</p>	<p>Postural performance and static stability in different positions (average speed of displacement of the center of pressure (COP) in the frontal (X) and sagittal (Y) planes).</p>	<p>In the standing position with eyes closed, the THA group showed a higher mean COP displacement velocity in the sagittal plane (Y) ($p = 0.021$), as well as in terms of spectrum frequency in the sagittal plane ($p = 0.023$). In the one-leg stance test, the mean balance time on the operated leg in the THA group was shorter than that of the control group ($p = 0.002$). The THA group also had greater difficulty maintaining balance without vision, especially in the sagittal plane.</p>

Moarrfzadeh et al. (2022) ²⁵	12 months	Prospective observational study n=161	Average age: 69.1 years Women: 119 (74%) Men: 42 (26%)	Total hip arthroplasty (THA)	IN	Health-related quality of life measured (SF-36), which include physical aspect of quality of life (PCS) and mental aspect of quality of life (MCS).	Most SF-36 subscales showed significant increases, except for the role-emotional and vitality subscales ($P < 0.05$). Improvement in PCS; indicated a significant increase in physical quality of life in the first 6 months after surgery. Improvement in MCS; demonstrated an increase in mental quality of life in the last 6 months of follow-up.
Lavernia et al. (2011) ¹⁷	16 years old	Longitudinal retrospective study n=532	Average age: 61 years Women: 316 (59%) Men: 216 (41%)	Total hip arthroplasty (THA)	IN	Quality of Well-Being (QWB), Physical Function (SF-36), Bodily Pain (SF-36), Function, Pain and Stiffness (WOMAC).	There was no difference between genders in the postoperative period, with greater improvement for women in WOMAC dimensions. QWB and SF-36 showed significant differences in the preoperative period ($p < 0.0001$), while no significant differences were observed postoperatively.
Nilsdotter et al. (2010) ²¹	7 years	Prospective cohort study n=216	Intervention group: Mean age: 71 years Women: 120 (55%) Men: 99 (45%) Control group: Mean age: 72 years Women: 67 (57%) Men: 50 (43%)	Total hip arthroplasty (THA) n=151	Individuals without complaints n=65	Patient satisfaction, physical function and vitality (SF-36), pain and stiffness (WOMAC) and comorbidities.	96% of patients satisfied. Significant improvements in SF-36 (PF, $p = 0.01$) and WOMAC (Stiffness, $p < 0.001$). SF-36 (VT) and WOMAC (Pain) with marginal improvements ($p = 0.05$). Co-morbidities: 19% reported 2 or more conditions.
John et al. (2021) ²	(...)	Cross-sectional study n=26	Intervention group: Mean age: 65.2 years Women: 10 (62.5%) Men: 6 (37.5) Control group: Mean age: 60.85 Women: 6 (60%) Men: 4 (40%)	Total hip arthroplasty (THA) n=16	Individuals without complaints n=10	Maximal isometric strength of hip muscles, active range of motion (ROM) of the hip joint, balance (COP) and gait parameters (gait).	Isometric strength deficits on the operated side in abduction ($p = 0.02$) and flexion/extension/abduction ($p \leq 0.01$) vs. control. ROM: deficit in flexion ($p < 0.01$). Balance: increased COP in single-leg stance on the operated side ($p = 0.04$). No differences in gait ($p > 0.05$). The data demonstrate that even years after surgery, asymmetries and deficits persist in relation to healthy individuals.

<p>Health-related quality of life (SF-36 and WOMAC), measuring physical and mental aspects, including physical function, pain, mental health and social function.</p>	<p>Quintana et al. (2009)¹⁹ 12 months Prospective cohort study n=788 Average age: 69.13 years Women: 381 (48.35%) Men: 407 (51.65%) Total hip arthroplasty (THA)</p>	<p>SF-36 (6 months after THA): Improvement in Physical Function (-8.64), Body Pain (-7.77), General Health (-4.73) and MCSS ($p<0.001$) related to preoperative condition. WOMAC: Reductions in Pain (-8.85), Stiffness (-8.98) and Functional Limitation (-8.23), indicating greater improvement for patients with worse initial condition.</p>
<p>Recreational activity level (UCLA Activity Scale and Schulthess Clinic Activity Questionnaire) and health-related quality of life (VR-12).</p>	<p>Zimmerer et al. (2022)¹⁵ 6.3 years Retrospective study n=79 Average age: 78 years Women: 46 (58%) Men: 33 (42%) Total hip arthroplasty (THA)</p>	<p>Recreational Activity: 72% of patients returned within 1 month. UCLA scale: improvement from 3.3 to 3.7 ($p<0.007$). VR-12: PCS 43.5 and MCS 41.8. Sports Activities: frequency reduced from 3.1 to 1.8 sessions/week, and duration from 32 to 17 min ($p<0.0001$). Increase in short walks (+700%), reduction in cycling (-85%) and long walks (-79%). Despite the reduction, recreational activity was maintained in the medium term after THA.</p>
<p>Complications (deep infection, dislocation, death, need for prosthesis revision), improvement in HHS over time, and risk factors associated with poorer function.</p>	<p>Watson et al. (2013)²³ 6 years Prospective cohort study n=1,564 Intervention group: Mean age: 65 years Women: 75 (70%) Men: 32 (30%) Control group: Mean age: 67 years Women: 787 (61%) Men: 507 (39%) Group A: Patients with Harris hip score (HHS) less than 70 (poor function) after THA Group B: Patients with HHS equal to or greater than 70 (good or excellent function) after THA</p>	<p>Complications included deep infection (Group A: 3% vs. Group B: 0.3%), dislocation (Group A: 2.6% vs. Group B: 0.4%), and mortality (Group A: 14% vs. Group B: 9%). Revision rates were 7.4% in Group A and 1.4% in Group B. The Harris Hip Score (HHS) increased from 57.7 (± 9.7) to 76.2 (± 14.2) in Group A between six months and five years, while in Group B it increased from 87.7 (± 7.9) to 90.3 (± 9.4). The difference between the groups was significant, with Group A showing improvement but remaining below the levels of Group B ($p<0.001$).</p>

<p>Patrizzi et al. (2008)³</p>	<p>60 days</p>	<p>Observational study n=12</p>	<p>Average age: 69 years Women: 6 (50%) Men: 6 (50%)</p>	<p>Total hip arthroplasty (THA)</p>	<p>IN</p>	<p>Harris Hip Score increased from 39.7 to 74.1 ($p < 0.000001$). Range of motion showed significant improvements: flexion from 58.17 to 77.50; extension from 1.67 to 5.00; abduction from 11.92 to 25.00; medial rotation from 11.67 to 23.75; and lateral rotation from 17.50 to 25.42 ($p < 0.05$ for all). Adduction was not significant (10.42 to 11.67; $p = 0.08$). There was a significant improvement in functional capacity and range of motion of patients after THA.</p> <p>Functional capacity of the hip joint (HHS), range of motion of the hip joint (goniometry), level of pain and functionality in activities of daily living</p>
<p>Larsen et al. (2010)²²</p>	<p>(...)</p>	<p>Prospective cohort study n=196</p>	<p>Average age: 70 years Women: 89 (45%) Men: 107 (55%)</p>	<p>Total hip arthroplasty (THA)</p>	<p>IN</p>	<p>HRQOL (EQ-5D): at 3 months, 0.84 (± 0.14), with no significant difference in relation to the population norm ($p = 0.33$); at 12 months, exceeded the norm ($p < 0.01$). Physical Function (SF-36): at 3 months, 67.8 (± 19.1), below the norm ($p < 0.01$); at 12 months, similar to the norm ($p = 0.35$). Harris Hip Score (HHS): patients did not reach the population norm at any time in the 12 months. The results indicate significant improvement in HRQOL and hip function after THA.</p> <p>Health-related quality of life (EQ-5D and SF-36), hip function (HHS and WOMAC) and muscle strength (strength tests)</p>

Legends: (...) = Missing information; NA = not applicable; EQ-5D = EuroQol-5 Dimensions; EQ-VAS = EuroQol Visual Analog Scale; HHS = Harris Hip; MdAP = Merle d'Aubigné and Postel scoring system; WOMAC = Western Ontario and McMaster Universities Osteoarthritis Index; LLDI = Late Life Disability Instrument; HRT = Total Hip Replacement; SF-12 = 12-Item Short Form Health Survey; SF-36 = 36-Item Short Form Health Survey; PCS = Physical Component Summary; QWB = Quality of Well-Being Scale.

In addition, THA contributes to social and occupational rehabilitation, with most patients being able to resume their work and leisure activities. Studies have shown that approximately 89% of individuals resumed recreational activities, and 71% remained active in some form of physical activity, although with a tendency to prefer lower-impact and lower-intensity activities¹⁵. Pain control, widely reported as the first improvement observed by patients after THA, is crucial to facilitate reintegration into daily activities and mobility²⁵. Patient satisfaction with THA is influenced by several factors, expectations being among the main ones: studies indicate that patients and surgeons had their expectations met in crucial aspects, such as pain relief and functional mobility⁷.

In terms of gains related to longevity, patients undergoing elective THA had a slightly longer survival than the general population in the first decade after surgery, which can be attributed to pain relief, increased mobility and improved overall quality of life⁹. Comparative analysis between patients and age-matched controls demonstrates that THA offers physical gains that exceed the population norm in up to 12 months, a finding that reinforces the success of this intervention in the management of osteoarthritis in elderly²². In the first six months after surgery, health-related quality of life (HRQoL) improves rapidly, particularly due to pain control and physical recovery, while psychological gains become more pronounced in the subsequent six months²⁵.

However, THA presents challenges and limitations that affect the satisfaction and recovery of a portion of patients. Approximately 17% of individuals reported unsatisfactory results at six months, especially among those who presented postoperative complications or sequelae without apparent causes. These patients are at greater risk of developing additional problems between six months and five years after surgery²³. In specific studies, residual claudication was reported in approximately 17% of patients, while persistent pain was observed in a considerable proportion, compromising quality of life and generating dissatisfaction^{3,7}.

In addition to clinical aspects, unmet expectations were a significant factor in dissatisfaction. Approximately 50% of patients reported frustration with the inability to resume activities such as putting on shoes, cutting their nails, or improving sexual function⁷. Part of this dissatisfaction can be attributed to sensorimotor impairment, which impairs postural stability and limits fine motor control. The presence of residual claudication postoperatively can also have a negative psychological impact, adversely affecting patients' perception of the effectiveness of the intervention⁵. Postoperative complications, although less frequent, contribute to dissatisfaction: deep infection and prosthetic dislocation²¹. Dissatisfaction has also been shown to be associated with functional deterioration in several dimensions of quality of life, including mobility, pain/discomfort, usual activities, and psychological symptoms such as anxiety and depression²⁴.

Another important point is the discrepancies between the expectations of patients and surgeons, which were

observed in areas such as nighttime pain relief (42% of patients versus 20% of surgeons with unmet expectations) and elimination of cane use (40% of patients versus 21% of surgeons)⁷. These data indicate that alignment of expectations between patients and medical staff is a crucial element for the success of THA, and may directly influence postoperative satisfaction.

Regarding physical deficits, rehabilitation after THA has shown limitations. Studies show that, four to five years after the procedure, approximately 25% of patients still have asymmetries in strength and range of motion between the operated and non-operated sides. These deficits, especially in abduction strength and single-leg balance, can lead to residual musculoskeletal discomfort and a lower quality of life than expected²⁵. These deficiencies suggest the need for prolonged postoperative rehabilitation interventions focused on muscle strengthening, especially of the gluteal muscles, to improve balance and prevent falls. Finally, variables such as age, mental health, and preoperative functional status influence the results of THA. Older patients (especially those over 80 years of age) have smaller gains in quality of life, possibly due to preexisting physical limitations and slower recovery¹⁸. In patients with compromised mental and functional health before surgery, the impact of THA is smaller, suggesting that the initial health status should be carefully considered for a more accurate assessment of the potential benefits and limitations of the intervention.¹⁹ Additionally, although factors such as age and comorbidities are not directly associated with satisfaction, patients' mental health and social support have been shown to be essential for achieving better results^{16,19}.

FINAL CONSIDERATIONS

Although THA has demonstrated significant benefits for the quality of life of elderly patients with osteoarthritis, challenges still remain that require advances in care. The implementation of more specific and personalized rehabilitation protocols, focusing on aligning expectations, muscle strengthening, and functional recovery, can improve patient satisfaction and long-term results. In addition, preoperative interventions that assess and prepare patients' physical and mental state are essential to ensure that the positive impact of THA is maximized and any negative results minimized. Finally, the inclusion of sociocultural and community support factors in care practices could further contribute to the comprehensive recovery and well-being of patients, favoring holistic and sustainable rehabilitation over time.

However, this review has some limitations that should be considered. The heterogeneity of the included studies, both in terms of methodology and the instruments used to assess quality of life, made it difficult to directly compare the results. Furthermore, the inclusion of only freely available articles may have restricted the scope of the analysis. Therefore, future research is needed, especially longitudinal studies with greater methodological rigor and representative samples, exploring not only clinical outcomes but also the

social, emotional, and functional factors involved in the recovery of older adults undergoing THA.

AUTHORS' CONTRIBUTION:

We describe contributions to the paper using the taxonomy (CRediT) provided above: *Conceptualization, Investigation, Methodology, Visualization & Writing – review & editing*: LCC Silva; PA Fernandes. *Project administration, Supervision & Writing – original draft*: LCC Silva; PA Fernandes. *Validation & Software*: FVS Leal. *Resources & Funding acquisition*: Not applicable. *Data curation & Formal analysis*: LCC Silva. *Visualization & Writing – review (references)*: M Fernandes. *Visualization & Writing – review (Portuguese and English abstracts)*: CFL de Oliveira.

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