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A community dweller's perspective of a day shoulder arthroplasty surgery.

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A thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Health and Rehabilitation Sciences

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Abstract

The following study was a qualitative interpretive descriptive study aimed at investigating immediate barriers or difficulties in the lives of the community dwellers as well as modifications occurring in the daily routine activities shortly after the out-patient total shoulder arthroplasty procedure. The personal and surgical factors affecting at-home recovery were focussed alongside exploring the coping mechanisms and adaptations in everyday day life. The study mainly focused on the initial three weeks' duration after the discharge. The study followed the constructivist paradigm, adopting the interpretive description methodology. A total of 19 subjects who underwent same/ single day discharge total shoulder arthroplasty were targeted for recruitment at the Hand & Upper Limb Centre, St. Joseph's Hospital by purposeful sampling method. The participants were interviewed either in person or over the telephone. Data was analyzed by Braun and Clarke's Thematic Analysis Approach. The identified themes shed light upon the physical, emotional, and environmental impacts caused by a day surgery. These are further influenced by demographic characteristics such as age, gender, marital status, and type of occupation as well as surgery-related factors like reason for surgery, availability of supports, surgical literacy, and patient and caregiver education. The adaptations for basic everyday tasks were dependent upon the living conditions post-operatively. The importance of social and community supports as well as patient and caregiver education especially after a day surgery were highlighted. Preparedness for surgical procedures yield higher satisfaction and better patient experience was a noble finding.

Keywords:

Same/ Single Day Discharge, Total Shoulder Arthroplasty, Community Dweller, Short-Term Challenges, Independent Living, Adaptations, Perceived need of Assistance, COVID-19.

Summary for Lay Audience

In a day shoulder arthroplasty surgery, patients are admitted, undergo the operation, and return home within twenty hours. The responsibility for recovery largely falls on the patients and their caregivers. This study aimed to identify the challenges faced and adaptations made in various aspects of life during this recovery period. To conduct the study, a constructivist paradigm was employed, emphasizing the co-construction of knowledge through participant-researcher interactions. The interpretive description method was chosen to overcome the limitations of traditional qualitative approaches, allowing a comprehensive exploration of participants' health experiences from holistic, interpretive, and relational viewpoints. Participants were recruited from the Hand and Upper Limb Centre at St. Joseph's Hospital in London and interviewed by the first author either in person or over the phone after providing informed consent. The collected data was transcribed verbatim and subjected to thematic analysis, resulting in major themes depicting the outcomes of the dataset. The study highlighted significant difficulties and discomfort experienced by participants while carrying out daily activities, along with the adaptive techniques they employed. It underscored the vital role of social and community support in facilitating better recovery, particularly in the context of single-day surgeries. Understanding the need for a well-structured post-operative plan, especially for patients living alone without close family members, was another important finding. Pre-surgical preparedness and patient and caregiver education emerged as critical factors affecting patient satisfaction and experiences. The study revealed that day surgery had physical, emotional, and environmental impacts on a patient's life, further influenced by personal factors like demographic characteristics and surgery-related factors. In conclusion, this research sheds light on the challenges and adjustments faced by individuals undergoing day shoulder arthroplasty surgery, emphasizing the significance of supportive networks and well-planned post-operative care in enhancing the overall recovery process.

Co-Authorship Statement

The study protocol, specific objectives, and the research design were developed by Dr. Joy MacDermid and Bansari Patel. The advisory committee members, Dr. Kenneth Faber and Dr. Paul Parikh were included as co-authors for the specific chapters as per their contributions. Rochelle Furtado contributed as a co-author for here immense contribution in data extraction, developing themes and reviewing manuscript.

CHAPTER 1: Introduction

Bansari Patel – responsible for study design, literature review, quality appraisal, data extraction, narrative synthesis and manuscript writing

Joy C. MacDermid – study design, data analysis and reviewed manuscript

CHAPTER 2: A qualitative study exploring short-term challenges after a day shoulder arthroplasty and factors affecting recovery at home from a community dweller's perspective.

Bansari Patel – Primary author, study design, data analysis and wrote manuscript

Joy C. MacDermid – Study design, data analysis and reviewed manuscript Dianne Bryant - Study design and reviewed manuscript

Kenneth J. Faber – Study design, provided subjects and reviewed manuscript

Pulak Parikh– Study design, provided subjects and reviewed manuscript

Rochelle Furtado – Quality appraisal, data extraction and developing themes and reviewed manuscript

CHAPTER 3: A qualitative study exploring adaptations and management strategies approached following a day shoulder surgery by community dwelling population

Bansari Patel – Primary author, study design, data analysis and wrote manuscript

Joy C. MacDermid – Study design, data analysis and reviewed manuscript

Kenneth J. Faber – Study design, provided subjects and reviewed manuscript

Pulak Parikh – Study design, provided subjects and reviewed manuscript

Rochelle Furtado – Quality appraisal, data extraction and developing themes and reviewed manuscript

CHAPTER 4: Grand Discussion

Bansari Patel – sole author

Acknowledgments

I would like to thank Dr. Joy for her continual guidance and help throughout my project. The project would have never been possible in these difficult times of the pandemic where everything was virtual. I am grateful for all her dedication to my thesis study and constant communication via zoom.

Next, I would like to thank and appreciate the inputs given by Dr. Faber and Dr. Parikh, my advisory committee members. I am fortunate and honored to have such supportive members in my advisory committee who have provided me with their constant support and encouragement.

I cannot thank Rochelle enough for all her efforts, directions, and enlightenment whenever I felt stuck or clueless. I cannot imagine my thesis project completed without her aid. Special thanks for being there in person as well as via emails and texts whenever I needed your help. I hope to be in touch even after graduating.

Additionally, how can I forget Katrina Munro for her immense and valuable contribution to my ethics submission. Also, I thank you for making me familiar with the Hand and Upper Limb Centre (HULC) family. I feel honored to be a part of the HULC family.

Most importantly and above all, I am thankful to Nita Patel (mother), late. Mr. Daxeshkumar Patel (father), Pathik Patel (brother) and Sagar Patel (boyfriend), who has been my backbone and a constant source of encouragement. Special thanks to my friends Sandeep, Jaini, Hetal, Nirva and Avani who have stood by me during the difficult times and whenever I was alone. Special thanks to Hajra Batool, Nishtha Bhavsar, Dimple Bhojwani Patel, and Vrushali Sonera, who encouraged to choose the MSc. HRS program. I will always be more than grateful for all the encouragements.

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CHAPTER 1

Introduction to Total Shoulder Arthroplasty and Literature Review.



1.0 Introduction

1.0.1 Shoulder Joint Anatomy:

The human shoulder is composed of the articulation between the humeral head and the glenoid cavity, hence also referred to as the glenohumeral joint (Javed et al, 2022). The glenohumeral joint is a highly mobile ball and socket variety of synovial joints having a multiaxial range of movements (Miniato et al, 2022). The blood and nerve supply is via the axillary artery (anterior and posterior circumflex humeral branches) and axillary nerve (C5, C6, C7, C8, T1 (*brachial plexus*)) respectively (McCausland et. al, 2022).

The musculature surrounding the joint includes the rotator cuff, deltoid, and biceps tendon (Javed et al, 2022). The rotator cuff comprises four muscles including supraspinatus, infraspinatus, subscapularis, and teres minor (McCausland et. al, 2022). Other supporting structures around the shoulder complex involve ligaments, bursae, and cartilage called Labrum (Miniato et al, 2022). The three major ligaments present around the articulation are glenohumeral, coracoclavicular, and coracohumeral ligaments (Chang et al, 2022) and the bursae are named subdeltoid, sub-coracoid, and subscapular bursa around it (McCausland et. al, 2022). The ligaments provide stabilization, while the bursae function as a cushion around the shoulder joint (Javed et al, 2022).

The shoulder joint allows for numerous movements in different planes and axis, thereby making our daily life movements possible. Following are the movements permitted by the shoulder joint:

- a) Flexion: Humerus moves straight anteriorly,
- b) Extension: Humerus moves straight posteriorly,
- c) Abduction: Humerus move upward laterally (away from the body),
- d) Adduction: Humerus moves downward medial (towards the body),
- e) External rotation: Humerus, along its axis move laterally (away from the midline),
- f) Internal rotation: Humerus, along its long axis move medially (towards the midline),
- g) Horizontal abduction or Transverse flexion: Humerus moves away from the chest in a transverse plane,
- h) Horizontal Adduction or Transverse Extension: Humerus moves towards the chest in the transverse plane (Miniato et al, 2022).

The glenohumeral joint is extremely prone to injuries (McCausland et. al, 2022), the major reason for it being the huge difference in the size of the humeral head and the shallow glenoidal

fossa surface area (Chang et al, 2022). This ratio is 4:1, responsible for its high mobility as well as the culprit for being the most dislocated joint of the human body (Chang et al, 2022; McCausland et. al, 2022). As per the data published almost a decade ago, approximately 7.5 million people suffered shoulder joint injuries (*Common shoulder injuries - orthoinfo - aaos* 2023).

1.0.2 Total Shoulder Arthroplasty

Surgical repair of shoulder injuries is commonly suggested by orthopedic surgeons through an operating procedure called Total Shoulder Arthroplasty (TSA) (Gregory et al., 2017). It is the gold standard treatment for shoulder pathologies (Longo et al., 2022). This procedure is mainly performed for the treatment of degenerative conditions such as include glenohumeral osteoarthritis, rheumatoid arthritis, osteonecrosis, and rotator cuff arthropathy (Longo et al., 2022; Wilcox et al., 2005) alongside humerus fracture cases (Kramer et al., 2020). TSA is mainly suggested when pain relief and the improvement of range of motion is the ultimate goal (Kramer et al., 2020). An arthroplasty is also an option for patients having shoulder pathologies that are unable to treat conservatively (Brolin et al., 2017). In general, the surgery is essentially performed to restore the shoulder joint stability by bringing the humeral head to the center of the glenoid cavity and repairing the proximally situated ruptured muscle groups, commonly the rotator cuff muscles (Drake et al., 2010).

Thus, Total Shoulder Arthroplasty is a surgical procedure performed to treat shoulder-related pain, stiffness, or weakness by replacing the damaged bony part with metallic implants (Arslanian, 2005). Sometimes, plastic material is also utilized for the same (Sheth & Saltzman, 2019). The shoulder arthroplasty procedures involve complete as well as partial replacement options through the availability of a huge variety of sizes and shapes of implants (Sheth & Saltzman, 2019). Complete shoulder replacement is Total shoulder arthroplasty whereas partial replacement is attributed as partial shoulder replacement or shoulder hemiarthroplasty (Longo et al., 2022).

1.0.3 Epidemiology

The number of Total Shoulder Arthroplasty surgeries performed within the last decade has increased dramatically (Ahmed et al., 2021; Bohsali, 2006; Farley et al., 2021; Gregory et al., 2017). In the year 2022, the total of TSA procedures carried out was around 9,200 i.e., more than

765 surgeries per month despite the ongoing pandemic situation globally (*Canada shoulder replacement procedures count by segments and forecast, 2015-2030* 2023). Primary or Total shoulder replacement surgery is commonly performed within Canadian healthcare, however other types of replacement procedures such as partial shoulder replacement, reverse shoulder replacement, shoulder resurfacing procedures, and revision shoulder replacement are also on the rise (*Canada shoulder replacement procedures count by segments and forecast, 2015-2030* 2023). More than 8,22,000 population was living with shoulder replacement in the year 2017 in the United States (Farley et al., 2021). A five folds increase in TSA occurrence rate was reported in the USA (Ahmed et al., 2021) and a similar trend has been seen all over Canada as well. The prevalence rate of TSA in 1995 was nearly 0.030%, which elevated to nearly 0.083% by 2005 (Farley et al., 2021). Hence, an overall acceleration in the prevalence rate was 0.260% approximately in a decade (Farley et al., 2021). Additionally, comparing the data by age, it is represented that over 2% of the population of 80 years or older had undergone the surgical procedure (Farley et al., 2021). The female-to-male prevalence rate exhibited about .0295% higher occurrence in females as compared to males (Farley et al., 2021). Furthermore, taking into consideration the number of revision surgeries performed, nearly 60% of revision procedures were performed between 2013 and 2017 (Farley et al., 2021). Hence, the rate of revision surgeries is on the rise recently (Farley et al., 2021).

1.0.4 Indications of Total Shoulder Arthroplasty:

Total shoulder arthroplasty, since its introduction and application into the healthcare system, till now, has reached a wider application and is indicated in several shoulder-associated deformities, disabilities, and trauma conditions (Rugg et al., 2019).

Starting with the most common indication of total shoulder arthroplasty, and then a few uncommon applications of the surgical procedure are also mentioned below.

Common indications Following are the usual indications for the TSA: 1) Rotator cuff arthropathy 2) glenohumeral osteoarthritis 3) post-traumatic arthritis 4) acute fractures 5) avascular necrosis 6) inflammatory and degenerative shoulder conditions 7) glenohumeral dislocation 8) massive irreparable cuff tear 9) proximal humerus fracture 10) tumor 11) Chronic Pseudoparalysis with a Massive Rotator Cuff Tear and No Arthritis and many more 12) malunited/non-united shoulder

fractures (Arslanian, 2005; Drake et al., 2010; Hyun et al., 2013; Neer et al., 1982; Rugg et al., 2019).

Uncommon indications Apart from this, there are quite a few uncommon applications of the surgical procedure where successful results have been achieved for several patients. Below mentioned are the uncommon applications of TSA: 1) glenohumeral arthritis with severe glenoid bone loss 2) shoulder dysplasia 3) chronic locked dislocation (anterior and posterior) 4) immunological arthritis with or without associated rotator cuff tears 5) deltoid deficiency (Arslanian, 2005; Hyun et al., 2013).

Apart from this, a study by Kozak and colleagues suggested that the procedure would be successfully incorporated to reduce scapula notching and increase external rotation without decreasing stability in the near future by the use of modern TSA designs with lower neck shafts (Kozak et al., 2021).

From a patient's perspective, any individual is suggested this surgical procedure due to the reasons mentioned below:

- a) Shoulder pain hampering daily routine activities,
- b) A major decrease in the shoulder ROM,
- c) Shoulder weakness,
- d) Shoulder pain interfering with the sleep schedule,
- e) Failure of anti-inflammatory drugs, steroid injections, physiotherapy and
- f) Previous history of shoulder trauma/ condition that does not relieve the symptoms even after the primary repair procedure performed (Neer et al., 1982; *Shoulder replacement: Surgery & recovery* 2021).

1.0.5 Types of Total Shoulder Arthroplasty

The arthroplasty procedure was first introduced in 1893 for the treatment of tuberculous osteoarthritis by Pean and later it was modified through modernization by Neer and colleagues for the treatment of proximal humerus fracture in the 1950s (Bohsali, 2006). Since then, the procedure has been refined and undergone several modernizations in terms of technique, designs as well as procedural management (Ahmed et al., 2021).

These days, various types of shoulder arthroplasties are being offered based on type of the joint damage and the surgeon's recommendation to the patient's need (*Shoulder replacement surgery* 2021). A few of the many available options are:

1. Anatomical Shoulder Replacement: Here, the damaged portion of the joint is removed and replaced with a metal ball and plastic cup. The metal ball sits over a stem to the humerus head and the plastic cup fits within the glenoid socket (Arthritis Society Canada, n.d.).
2. Reverse Shoulder Replacement: In this procedure, the joint is reversed in its literal sense, meaning a metal ball is placed within the glenoid cavity and a plastic cup is attached to the stem which goes over the humeral stem (Arthritis Society Canada, n.d.).
3. Stemless Total Shoulder Arthroplasty: It is a bone-preserving alternative of the total shoulder replacement where there is no stem and the metal ball is directly attached to the upper part of the shaft (Arthritis Society Canada, n.d.; Churchill, 2014; Kiet TK et al, n.d.).

1.0.6 Outcomes of Total Shoulder Arthroplasty:

As per the recent data released, it has been reported that more than 98% of patients witnessed an overall improvement in the shoulder ROM, shoulder function, relief from painful symptoms as well as a higher rate of satisfaction one year post the operation (Kazis et al., 2004; Leggin et al., 2006). Additionally, nearly 77% of the patient population observed an increment in overall physical health (Kazis et al., 2004; Leggin et al., 2006). According to a study conducted in 2019, an exceptional decrease in pain levels and achievement of functional gains were observed after six months of the TSA surgery, and maximal improvement was evidently experienced by the patients 12 months post-surgery (Shields et al., 2019). A study was conducted to study the long-term benefits of TSA in patients under the age of 60 (Ernstbrunner et al., 2017). The results showcased that, postoperatively a standard assessment of shoulder ROM, strength, and associated pain as well as the daily activities using the shoulder changed evidently over 12 months (Ernstbrunner et al., 2017). In addition to that, discussing the patient's opinion, they advocated having improved shoulder value by around 30% (Ernstbrunner et al., 2017).

Hence, it can be summed up that the surgical procedure is advantageous and applicable to improve the patient's quality of life by improving shoulder functionality in day-to-day activities (Wong et al., 2016). The surgical procedure adds value to the patients' lives by relieving pain, improving stability, and contributing to strength (Wong et al., 2016).

1.0.7 Complications of Total Shoulder Arthroplasty

Like any surgical procedure, arthroplasty has complications and a few disadvantages. A study by Gregory and his colleagues, divided the complications associated with shoulder replacement surgery into three as 1) short-term complications 2) mid-term complications, and 3) Long-term complications (Gregory et al., 2017; Neer et al., 1982).

We will discuss each of them briefly in the coming segment.

1) **SHORT-TERM COMPLICATIONS:** This category includes a) intraoperative fractures b) re-admissions to the hospital c) instability and dislocations 4) infections (Gregory et al., 2017; Kim et al., 2021)

Intraoperative fractures are the most immediate complication and contribute about 2% of all post-surgical complications (Gregory et al., 2017; Kim et al., 2021). It is common in the tuberosity and metaphyseal region of the humerus bone (Gregory et al., 2017; Kim et al., 2021).

Readmissions to the hospital: Many readmissions to the hospital occur within the initial 60 days post-operatively, followed by 90 days post-operatively (Gregory et al., 2017). The common reason for readmissions is surgical site infections or rotator cuff tears (Gregory et al., 2017).

Instability and dislocation occur due to incorrect positioning of the glenoid or humeral shaft, soft tissue laxity, or rotator cuff deficiency (Boardman et al., 2001; Gregory et al., 2017).

Infections: these are more common in male patients (Gregory et al., 2017; Kim et al., 2021). The bacterial group majorly contributing to infections are Staphylococcus and Propionibacterium acne (Gregory et al., 2017; Kim et al., 2021).

2) **MID-TERM COMPLICATIONS:** The major mid-term complication is a) subscapularis failure (Gregory et al., 2017).

Subscapularis failure: Several patients suffer from loss of internal rotation and subscapularis function post-operatively and found out on examination during their follow-up appointments by the doctor (Boardman et al., 2001; Gregory et al., 2017; Kim et al., 2021).

3) **LONG-TERM COMPLICATIONS:** In the long run, there is a fear of either a) humeral implant loosening or b) glenoidal implant loosening (Boardman et al., 2001; Gregory et al., 2017).

Aseptic loosening is the commonest complication in the long run, contributing about 39% of the total number of postoperative complications (Boardman et al., 2001; Gregory et al., 2017).

1.1 Literature review

1.1.1 Transition: The advancement towards same/ single day discharge Total Shoulder Arthroplasty

TSA is a commonly performed surgical procedure with an approximate rise of 10% in cases annually (Berman et al., 2019). TSA was initially an in-patient procedure (Duchman et al., 2017; Vajapey et al., 2021), with a longer hospitalization period and causing heavy financial costs. The procedure approximately costs around 12,000 USD- 50,000 USD per patient and the societal cost is around 450M USD- 1.5B USD per year (Steinhaus et al., 2018). However, recently the TSA procedures have undergone many changes in terms of the design of the prosthesis and the implant. These advances are made with the focus of reducing the length of hospital stay, reducing the hospitalization period, and delivering rapid recovery (Kramer et al., 2020). There has been a great difference in the hospital stay period right from 1993, where the average hospitalization duration was 5.8 days as against the one in 2007, which was nearly 2.4 days (Berman et al., 2019).

Large institutions and orthopedic hospitals are now considering single-day discharge TSA surgeries because of their observable benefits (Kramer et al., 2020). Due to the increased importance given to the management of hospital resources and their allocation, there is an increased number of single-day discharge TSA performed (Berman et al., 2019). From January 1, 2021, in U.S National Healthcare for patients more than or equal to 65 years of age, the TSA surgery was removed from the “in-patient only” list (Trudeau et al., 2022). This might be the ignition to the hike in the number of same-day discharge surgery cases concerning private insurance as well (Trudeau et al., 2022). COVID-19 has accelerated the shift towards a reduced hospitalization period; hence, more and more single-day discharge arthroplasties are being performed (Menendez et al., 2021). The pandemic has forced healthcare professionals to develop an innovative mode of delivery of care that reduces the length of stay and visits to the emergency department, hence reducing their exposure to the hospital environment in the COVID-19 era (O’Donnell et al., 2021). Additionally, the post-COVID-19 era has laid an increased emphasis on switching over from in-patient arthroplasties into the outpatient setting, keeping in mind the need to reduce overload on inpatient resources as well as financial costs (O’Donnell et al., 2021).

Same-day discharge shoulder arthroplasties are safe and effective options (Sher et al., 2017). It overcomes the disadvantages of in-patient TSA surgery of having high expenditure costs

and longer hospital stays. Single-day discharge gives accelerated recovery and improved patient satisfaction (Sher et al., 2017). It is associated with improved quality of care and cost-saving (Berman et al., 2019; Sher et al., 2017). Brolin and Steinhaus, in their study, reported that there is a significant cost difference between in-patient and out-patient TSA surgeries (Brolin et al., 2017; Steinhaus et al., 2018). These surgeries reduce the length of stay and complication rates (Sher et al., 2017), without any observable increase in the rate of readmissions or reoperations (Brolin et al., 2017; Menendez et al., 2021). The study by Antonacci and colleagues proved that the rate of readmission and complication post-out-patient shoulder surgery is the same as that of in-patient (Antonacci et al., 2021). Studies have reported that TSA has fewer complications than Total Hip Replacement (THR) and Total Knee Replacement (TKR) surgeries (Duchman et al., 2017). In regards to older adults, same-day discharge TSA is a safe option when patients are selected wisely (Antonacci et al., 2021). In addition, Surgeons have conveyed an overall good experience in performing the outpatient TSA (Brolin et al., 2018).

1.1.2 Community Dweller and Aging in Place

“Aging in place” is a commonly used term under the Aging policy, however, it is least explored from the older adults’ perspectives themselves (Wiles et al., 2011). As explained by Davey and colleagues, aging in place is a concept where an individual prefers to live in the place (their homes) within the community, having some level of independence, rather than accessing nursing homes or residential facilities (Davey et al., 2004). The term ‘community dweller’ in the context of our thesis project is, similarly, the individuals returning to their homes post-surgery within the community rather than going to the other available residential facilities. It was important to explore the topic from their viewpoint due to many obvious reasons.

Older adults prefer to live in their own homes (Communities, *Beyond 50.05: A report to the Nation on Livable Communities*; Frank, 2002). Additionally, the housing data in a paper by Houser and colleagues, suggested that more than 75% of older adults live independently in their homes where they lived all their lives (Houser et al., 2009). People find their homes to be enabling and helpful while maintaining independence, autonomy, and relations with their social support (friends and family) (Wiles et al., 2011). A “home” is a locality of dynamically evolving and constant negotiation of meanings (Peace et al., 2006; Wiles et al., 2011), acquiring not just a

physical asset but an overall accommodation, right from dwelling to a social community (Wiles, 2003; Wiles, 2005; Wiles et al., 2011).

Similarly, to humans, the environment is dynamic and fluctuates its nature from time to time (Fausset et al., 2011). With the moving lifespan, an individual's abilities, potential, and limitations come into play (Fausset et al., 2011). They may show up predictably and sometimes, unpredictably (Fausset et al., 2011). For an individual, aging in the place, living on their own, and experiencing an acute injury or surgery can cause a significant reduction in the ability to interact with the environment on a successful basis (Fausset et al., 2011). The aging population encounters several other influential factors in their daily lives categorized into extrinsic and intrinsic (Szanton et al., 2011). Additionally, there are intrinsic individual and intrinsic physiologic factors that affect the aged within their home environments (Szanton et al., 2011). Limitation to accommodate these day-to-day influences, makes it difficult to age in place (Szanton et al., 2011; Wiles et al., 2011). Lastly, to enable oneself to live successfully in place, successful performance Activities of Daily Living (ADL) and instrumental Activities of Daily Living (IADL) are inevitable (Fausset et al., 2011).

The paper published by Fausset, and colleagues demonstrated that the elderly depended on their family and social members for these essential tasks (Fausset et al., 2011). They also established that sex and marital status were extremely important demographics that influenced task performances (Fausset et al., 2011). Hence, there is essentially a need to explore further from the end of different service providers, including clinicians to make their lives better and serve them a quality of care (Fausset et al., 2011). Thus, we targeted this population in our study.

1.1.3 Independent Living

The North American continent has a constantly growing older population (Mack et al., 1997). The level of independence is certainly traditionally associated with the functional capabilities of the older adult (Mack et al., 1997). To conceptualize this model of independence, assessment of physical functioning is assessed based on Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) (Mack et al., 1997). The tasks included in ADL involve bathing, toileting, eating, and other tasks required for independent survival, whereas IADL

includes activities like cooking, housework, managing medications, performing financial tasks, and others that need higher functioning (Fausset et al., 2011).

A study by Reschovsky and Newman suggested that for the elderly individual to live independently, they should be able to meet three requirements, namely health-associated tasks, household operational works, and housing consumption adjustments (Reschovsky & Newman, 1990). For aging in place, the performance of these essential tasks counts as important and inevitable especially when the individual is living alone (Fausset et al., 2011). Regarding this study, ‘independent living’ means the capabilities or functioning of the individual making it possible for them to live safely and carry out their daily tasks individually.

1.1.4 Independent Living after Shoulder Surgery

Study data revealed that, almost 50% of the patients who survived after the surgical procedure became dependent, one-third portion of which were custodial (bed-ridden, incapable of feeding or toileting themselves) (van AALST et al., 1991). Very commonly after shoulder surgery, there is a decreased quality of life and loss of independent life, specifically for older adults (Wolfensperger et al., 2017). Maintaining function, limiting complications and pain control are a few important aspects post shoulder surgery (Wolfensperger et al., 2017). Additionally, independence in the life of an older adult is also an essential factor to reduce the financial burden of being retired and having limited funds with no active monetary flow in their old age (Wolfensperger et al., 2017).

1.1.5 Short-Term Challenges and Recovery

The level up to which the desired health outcomes are achieved by health services can be defined as ‘Quality of Healthcare’ (Sink et al., 2012). The quality of healthcare is directly associated with the quality of life of the patient post-surgery (Sink et al., 2012). The measures of quantifying quality of life involve two crucial aspects, a) objective dimensions (functional status post-surgery) and b) subjective dimensions (patient satisfaction post-surgery) (Sink et al., 2012). Additionally, the factors contributing to patient satisfaction include ease of access and convenience, abode structure, social relationships, patient expectations, and competence of the healthcare system (Sink et al., 2012).

No method exists to date to measure the patient's quality of health and safety after an orthopedic surgery from a patient's perspective (Myles et al., 2000). Many patients face difficulties in managing themselves after discharge from an acute care setting in multiple aspects, making it difficult for them to cope-up and return to normalcy (Peper K, 1992).

'Recovery' is an abstract term, having multiple definitions and an institutionally decided time frame for it, sometimes also decided by the clinicians or patients (Bowyer & Royse, 2015). Very recently, the postoperative recovery is being assessed by three different time frames, including 1. the end of surgery to discharge from the postanesthetic care unit; 2. then until hospital discharge; and 3. until the normal function has been restored (Bowyer & Royse, 2015).

The current study priorly focuses on the above-described third duration segment. It is the phase of the initial six weeks post-discharge or sometimes also the initial three months after the surgery (Bowyer & Royse, 2015). During this phase of recovery, the patient-associated symptoms present in the initial two phases such as pain, nausea, anxiety, depression, or physical impairments may be persisting or extend into it (Bowyer & Royse, 2015). With the context of our study, the term 'short-term challenges' emphasizes identifying the challenges/ difficulties as well as the modifications occurring in routine activities during the first half of the third phase of recovery, i.e., the initial three weeks after the discharge because it is pretty evident that post-operative recovery has huge existing gaps from the patient's perspective (Berg et al., 2013). Following a day surgery, post-operative recovery burdens the patients with extensive responsibilities at home (Berg et al., 2013).

1.1.6 COVID-19 and Impact on Total Shoulder Arthroplasty

In the pre-pandemic era, annual cases of Total Shoulder Arthroplasty (TSA) increased tremendously due to an increase in the demand as well as the indications, thereby over-shadowing the growth rates of total knee arthroplasty and total hip arthroplasty (Gordon et al., 2022). From 2002 to 2011, the increase in TSA rates in patients aged <55 was nearly 8.5% and approximately around 12.1% in >55 years old patients (Khan et al., 2022). Looking at the rate of increase from 2011 to 2017, there was an increase of more than 102% in TSA performed (Khan et al., 2022). During the same time frame, the increase in TKA and THA was around only 18% and 30% respectively (Khan et al., 2022). It is anticipated that from 2011 to 2030, the volume increase in

patients aged <55 years will be 300% and older adult populations will be 750% approximately (Khan et al., 2022).

On March 10, 2020, COVID-19 was declared a worldwide pandemic by the World Health Organisation (WHO) (Mahase, 2020). The orthopedic and trauma department were quite disrupted because of this. In order to manage patient safety and system resource allocation, elective surgeries, also including joint arthroplasties were suspended (Gordon et al., 2022; Khan et al., 2022). As a result of this, the case volumes declined enormously by 54.6% during the year 2020 before reaching the pre-pandemic baseline (Gordon et al., 2022). However, even though there was an overall decline in the number of surgeries performed, the number of surgeries transitioned from in-patient setting to out-patient setting was almost doubled (Gordon et al., 2022; Menendez et al., 2021; Seetharam et al., 2022). To be precise, there was a 1.5 times increase in the volume of outpatient shoulder surgeries performed from 11.8% to 26.8% of yearly cases (Gordon et al., 2022; Menendez et al., 2021).

With the switch from in-patient procedure to out-patient, there was an unexpected outgrowth of same/ single-day discharge of the patient (Menendez et al., 2021; Seetharam et al., 2022). The number of readmissions within 30 days and 90 days of the operation was not affected at all. No major complications were reported (Menendez et al., 2021; Seetharam et al., 2022). The number of complications remained similar to those of outpatient surgical procedures (Menendez et al., 2021; Seetharam et al., 2022).

1.2 Thesis Rationale and Objectives

As the transition of total shoulder arthroplasty from an in-patient surgery to out-patient surgery is very recent, there are few or no studies available in the literature related to it, especially from a patient's perspective. It becomes essential to report the surgical procedure from a patient's perspective to determine the rate of success and satisfaction overall to the citizens. Also, after a day of surgery, as the patient is immediately at home, there is no constant supervision by the clinicians. Hence, the patient's responsibility increases. It is necessary to address the topic from a patient's point of view, with an aim and expectations to prepare future patients in a better way, ensure the best delivery of care and enable them to be prepared for the procedure both, mentally and physically.

The objective of this study was to explore the perceptions of independent living in the early postoperative period, community-dwelling adults who returned home following a same-day or single-day discharge Total Shoulder Arthroplasty (TSA). Specific areas of inquiry included:

1. What are the difficulties/ barriers experienced in everyday life aspects?
2. What are the perceived needs for assistance?
3. What are the immediate (early) adaptations/ changes in daily routine activities (within the initial three weeks) occurring post-surgery?

Thesis composition

The thesis comprises 4 chapters. The current Chapter 1 is an introduction to Total Shoulder Arthroplasty and a literature review to explore the nature and scope of research from the context of shoulder arthroplasty as a day surgery procedure; Chapter 2 is the main study, answering the first research question about difficulties and challenges following same day shoulder surgery; Chapter 3 is focussed to address the second research question about the adaptations occurring in response to overcoming the difficulties in every day activities by the community dwellers. Lastly, Chapter 4 contains a discussion and conclusion section.

The thesis objectives are answered in the main study (Chapter 2 and Chapter 3) which was conducted as part of the requirements for the master's program at the University of Western Ontario.

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CHAPTER 2:

A qualitative study exploring short-term challenges after a day shoulder arthroplasty and factors affecting recovery at home from a community dweller's perspective.



Title

A qualitative study exploring short-term challenges after a day shoulder arthroplasty and factors affecting recovery at home from a community dweller's perspective.

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ABSTRACT

Introduction: Total shoulder arthroplasty (TSA) is on the rise, and the care model is transitioning to shorter hospital stays, with patients having day surgery or single-day stays. With this comes a greater need to understand and optimize the early recovery period at home.

Purpose: This study explored community dweller's experience and functioning at home in the early post-operative period following a TSA. We explored what difficulties the patient experienced in symptoms, daily life activities, and life roles. Additionally, we focussed on the factors affecting recovery at home from the community-dwelling individual's perspective

Study Design: Qualitative Interpretive Description

Methods: Nineteen community-dwelling individuals, eligible and opting for outpatient shoulder arthroplasty surgery were recruited through purposeful sampling. Semi-structured interviews were conducted by a single interviewer (physiotherapist). Interviews were recorded and transcribed verbatim. A thematic analysis was conducted aligned with study purposes.

Results: Patients found TSA day surgery to be physically and emotionally demanding, especially during the early recovery phase. The everyday aspects of life that were heavily impacted include sleeping patterns, mobility and independence to perform activities of daily living, mental health, and relationship dynamics, especially between couples and common law partners. The sleep schedule was severely affected. Despite the hospitalization period not being more than twenty-four hours, patients reported it to be the major cause of mental distress. A major concern was the temporary loss of independence. Younger patients reported challenges related to managing their finances and getting back to their work life. Many patients report postponing or avoiding social commitments. People in relationships reported that the dynamics and roles within their relationship substantially changed in the short term to accommodate their symptoms and disability. The nature of impact was influenced by age, sex/gender, side of the extremity involved, availability of support, and the reason for surgery.

Conclusions: Patients struggled and felt-ill-prepared for their early recovery at home following TSA. Their experience was dependent on preparation and supports which was highly variable.

Planning for reduced length of stay following TSA should include how to prepare patients, families, and home care supports for the downloaded burden.

Keywords: Qualitative study, Total Shoulder Arthroplasty, Outpatient surgery, Short -term challenges.

Introduction

Total shoulder arthroplasty (TSA) is an end-stage salvage surgical procedure for treating shoulder damage, particularly arthritis or irreparable humerus fractures (Longo et al., 2022; Kramer et al., 2020). The primary treatment goals of TSA are improving joint range of motion and relieving pain. The surgery involves joint replacement and repairing rotator cuff muscles to restore joint stability (Kramer et al., 2020; Drake et al., 2010). Indications for shoulder arthroplasty include shoulder joint arthritis, osteonecrosis, rotator cuff arthropathy, rheumatoid arthritis, and cases that are not manageable conservatively (Kramer et al., 2020; Longo et al., 2022; Wilcox et al., 2005; Brodin et al., 2017).

Due to the increasing focus on healthcare resource management, there has been a rise in the number of ambulatory shoulder procedures (Berman et al., 2019). Since January 2021, TSA has been withdrawn from the "in-patient only" category for patients aged 65 years and above, allowing large-scale orthopedic centers to perform outpatient TSA and reap the benefits associated with the procedure, including private insurance considerations (Kramer et al., 2020; Trudeau et al., 2022). The demands imposed by the global pandemic, with the need for shorter hospital stays and reduced visits to the emergency room to minimize exposure, have further accelerated the preference for day shoulder arthroplasty surgery (Menendez et al., 2021; O'Donnell et al., 2021).

Ambulatory TSA offers several advantages over in-patient arthroplasty, such as cost savings, shorter hospitalization, and increased patient satisfaction levels (Berman et al., 2019; Sher et al., 2017). The incidence of postoperative complications is relatively low, and there is no significant difference in 90-day readmission rates or re-operative cases compared to in-patient procedures (Antonacci et al., 2021; Brodin et al., 2017; Menendez et al., 2021; Sher et al., 2017). Studies in the literature suggest a lower rate of complications for TSA compared to total hip or knee arthroplasties (Duchman et al., 2017). Surgeons' perspectives and experiences with outpatient shoulder surgery have generally been positive (Brodin et al., 2018), and outpatient shoulder surgery is considered a safe option even for older adults when patients are selected carefully (Antonacci et al., 2021).

A day shoulder surgery involves admission to the hospital, performing the surgery, and discharging the patient on the same day, with minimal disruption to their daily routine (Toftgard 2009). Many patients appreciate this opportunity due to the comparatively lower associated risks and the potential to be closer to their families in a shorter timeframe (Rhodes et al., 2006).

However, post-operative expert supervision and monitoring from trained staff are lacking, placing additional responsibilities on patients and their families to arrange for after-discharge needs (Kleinbeck, 2000; Boughton and Halliday, 2009). It is common for patients to expect an immediate return to their routine activities, but such expectations are often delayed, including socializing activities (Mottram, 2011).

While outpatient surgeries, including shoulder surgeries, ligament repairs, and laparoscopic procedures, are not uncommon in several countries (Toftgard, 2009), the safety and efficiency of transitioning from in-patient to out-patient procedures must be carefully examined (Kramer et al., 2020). Although numerous research studies have investigated patient outcomes and safety after hip and knee replacement surgeries, studies focusing on ambulatory shoulder surgery are limited (Kramer et al., 2020; Steinhaus et al., 2018). The concept of outpatient shoulder surgery is still in the early stages of development, and the available literature presents findings from a limited number of populations, necessitating further exploration (Leroux et al., 2018). Understanding patients' perspectives on elective surgery is crucial for implementing systematic schemes and gaining insights into how patients perceive "quality care" (Menendez et al., 2019).

Despite the increasing number of day surgeries and the benefits they offer at the institutional level, there remains a gap in understanding the post-discharge proceedings and the support available to patients and their families for home recovery (Mitchell 2006; Mottram, 2011). Recognizing patients' needs is essential for delivering patient-centered care (Berg et al., 2013). The existing literature mainly provides descriptive information about the surgical procedure (Kramer et al., 2020). Therefore, conducting research with a patient-specific approach and developing pathways for the effective management of recovery is necessary (Mitchell, 2014). Gaining in-depth knowledge of the concept and understanding patients' perspectives are crucial aspects (Berg et al., 2013). Research on the trade-offs between in-patient and ambulatory procedures has the potential to benefit not only patients but also clinicians, researchers, and policymakers (Steinhaus et al., 2018). Accordingly, the present research project was conducted to address these gaps and gain insights into the day surgery concept from patients' perspectives and experiences.

Purpose of study

The study was designed with the primary aim to investigate the different aspects of life affected after discharge and short-term challenges (initial three weeks post-surgery) experienced in living independently by the community dwellers after the same-day or single-day discharge Total Shoulder Arthroplasty (TSA). The secondary objective of the study was to identify the factors affecting recovery at home after discharge.

Method

Study design and sample

The project was a qualitative study utilizing an interpretive description research approach. Purposeful sampling was conducted to recruit participants to explore the short-term challenges experienced by patients returning to their homes following a TSA. Interpretive Description is well suited for the study as this approach provides an enriched and in-depth knowledge of the clinical phenomenon by creating interconnections (generating themes and patterns), aiding in the explanation of deeper concepts through accuracy and precision (Teodoro et al., 2018). This accelerates a better understanding of the clinical aspect initiating a clear vision and plan of action related to practice (Teodoro et al., 2018). All participants were recruited at the Hand and Upper Limb Center (HULC), St. Joseph's Health Centre, London, Ontario, between October 2022 and January 2023. Patients were considered eligible to participate if they met the following inclusion criteria: a) is a community dweller; b) is eighteen years and above; c) underwent same/ single-day discharge Total Shoulder Arthroplasty; d) able to speak, read and write English; e) able to give informed consent.

Participants

The site for participant recruitment was the Hand and Upper Limb Centre at St. Joseph's Health Centre, London, Ontario. A purposeful sampling technique of participant recruitment was adopted to recruit diverse participants for the semi-structured interviews. The study involved a total of nineteen participants [n=19]. Informed consent was obtained from all participants involved in the study. The first author approached the participants while they were waiting for their appointment at the Hand and Upper Limb Centre in the presence of the research team member. The author explained the study purpose and the goals of the project and asked if they were

interested in participating. Each participant was given a letter of information and a consent form for obtaining their informed consent. Participants were given as much time as they needed to review the letter of information. The participants had a choice to withdraw their participation from the study at any point. Of the total nineteen participants, seventeen participants chose telephonic interviews, and two opted for in-person interviews. The entire participant recruitment process lasted for nearly four months, from October 2022 to January 2023. The demographic details of each participant are available in Table 1

Data collection and ethics

The study protocol was approved by the Western University Research Ethic Board (REB) in London, Ontario, Canada, and LAWSON Health Research Institute in London, Ontario, Canada. For data collection, a semi-structured interview guide was developed by the first author after a discussion with the senior author. The guide involved broad questions, leading to detailed information through follow-up questions, giving prompts and cues. The interview guide covered questions regarding the topics of 1) personal care; 2) household chores; 3) family roles related to children/grandchildren; 4) family roles related to their partners; 5) occupational responsibilities; 6) physiotherapy/ occupational therapy/ rehabilitation/ exercises; 7) other supports. To further obtain information, cues like “Would you like to talk more”, “Can you tell me more about that” etc. were given. Lastly, the closing question emphasized their perspectives about the surgical procedure and a piece of advice for future patients to be better prepared for what to expect after discharge. The complete semi-structured interview guide is available in the appendix. All the interviews were conducted by the first author. One of the co-authors stayed for the very first interview to help the first author to be accustomed to the process. There were seventeen telephonic interviews (n=17) and two in-person interviews (n=2) as per each participant’s personal preference. Each interview lasted about 30- 60 minutes, making a total of 650.65 minutes of audio-recorded interviews. The average interview time was thirty-four minutes and twenty seconds (maximum: 50 minutes and minimum: 11 minutes). Participants who opted for telephonic interviews were at home at the time of the interview, whereas the in-person interview was conducted in the research lab room at Hand and Upper Limb Center. All the interviews were audio-recorded and transcribed verbatim by the first author.

Table 1: Demographic Data

<u>DEMOGRAPHIC CHARACTERISTICS</u>			
Sex	Marital status	Occupation	Extremity involved
Women (n=12)	Married (n=8)	Retired (n=12)	Dominant (n=13)
Men (n=7)	Common-law married (n=2)	Working (n=7)	Non-dominant (n=6)
	Divorced (n=1)		
	Single (n=3)		
	Separated (n=1)		
	Widowed (n=4)		

Data analysis

For data analysis, the first author adopted manual coding procedures and code content blocks using an interpretive descriptive approach (Thorne, 2017). The analysis involved repetitive reading of the transcribed data set and identifying the immersed categories and themes within it. The first author and another co-author were involved in the coding procedure. According to O'Connor and Joffe, the trustworthiness of the coded data is further enhanced by intercoder reliability (O'Connor & Joffe, 2020). Having more than one coder reduces biases associated with the data (Seibert et al., 2022). The coders relied on constant comparative techniques. Hence, they performed a comparison of the codes within as well as across each participant's dataset. Lastly, the coded work was discussed between both authors, and mutually decided categories and themes were generated. Braun and Clarke's described steps of effective data analysis were followed by both authors during the analysis process (Braun & Clarke, 2006). Braun and Clarke's guides to thematic analysis describe six important steps starting with a) familiarizing with the data b) line-by-line coding of the raw data c) merging codes from all textual data into initial themes d)

reviewing themes and considering the relationship between them e) creating the final themes and f) writing up the report (Braun & Clarke, 2006).

The data collection, analysis, and interpretation process was conducted by the first author, who was a young physiotherapist with international training and limited experience working with shoulder arthroplasty patients in their home country. The research team consisted of the senior author and other co-authors, all of whom were experienced physiotherapists specializing in treating upper extremity patients. These individuals provided guidance and expertise throughout the research process.

Results

Participants

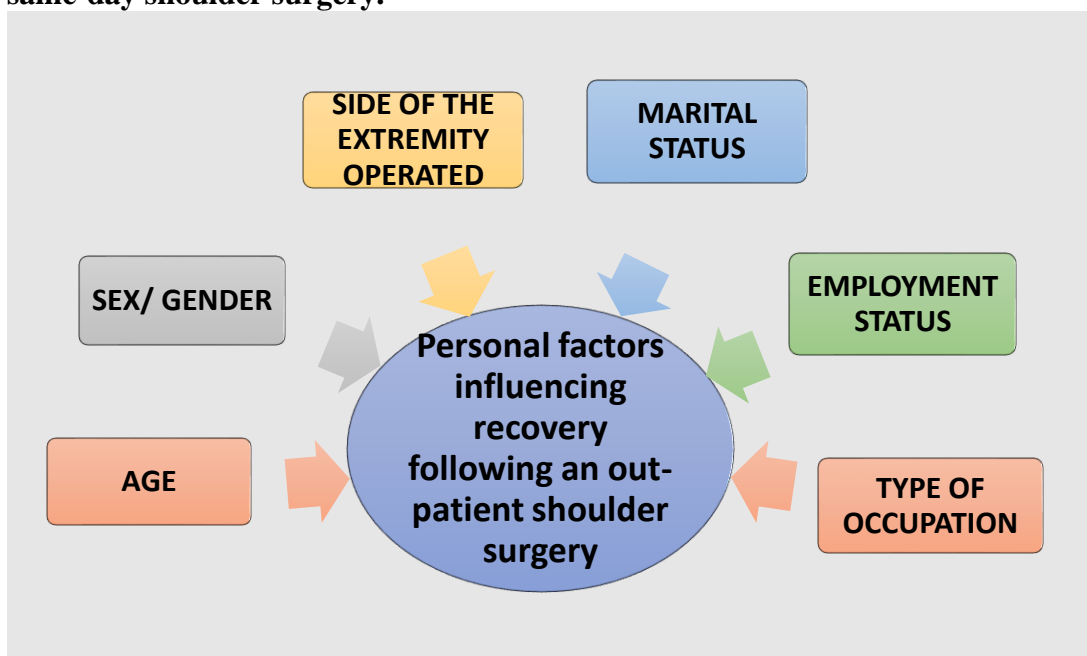
Nineteen participants contributed to this study. Of the total participants (n=19), there were twelve women (n=12) and seven men (n=7). The average age of study participants was 70.23 years. A majority of the participants had their dominant extremity involved (n=13), while six individuals had their non-dominant extremity involved (n=6). The study had twelve retired individuals (n=12) and the other seven were working (n=7)

Most participant population had undergone the Reverse TSA procedure (n=14), whereas the remaining five participants received the Anatomic TSA procedure (n=5). The cause for the surgical procedure had a huge variation, however, osteoarthritis was the highest contributor followed by falls. The cause-wise participant distribution is as follows: Osteoarthritis (n=8), Fall (n=5), Irreparable dislocation of the shoulder (n=2), Trauma (n=2), Revision surgeries (n=2). The number of married participants was eight (n=8), Widowed (n=4), Single (n=3), Common law partners (n=2), Divorced (n=1), and others (n=1). Out of the total participants, eight study participants lived alone (n=8) and eleven of the rest lived with their partners or family (n=11).

Figure 3.1 Summary of different everyday life aspects impacted following a day shoulder surgery.



Figure 3.2: Summary of non-modifiable personal factors influencing recovery following same-day shoulder surgery.



Identified themes

❖ **Pain and loss of joint mobility contribute to physical impairment and interrupted sleep.**

All 19 participants shared some sort of difficulties while sleeping. The majority of the participants described it as the most ‘challenging’ part after discharge. Postoperative pain and joint mobility restrictions contributed to difficulty sleeping. Patients reported having difficulty finding a comfortable position, being unable to lie on the operative side, sleeping in a recliner as a temporary solution, and experiencing night aches, cramps, and arm stiffness.

“... and this is where I really feel that everybody dropped the ball, is the whole sleeping thing. I am a natural side sleeper and I sleep on my left side. So sitting in an upward position because you can't really. I can't sleep in my recliner. I still don't sleep. So I have to sit up basically in my bed. And that has been the biggest challenge because if you don't get rest everything else falls apart. You can go with food and water, you cannot go to sleep. And that really messes with your everything. So, sleeping has been a real big issue for me...” (Rec4)

For some patients, the altered sleeping position caused secondary problems.

“...because if I sleep on my bed, on my back, I lose the feeling in my leg. I get a sciatic nerve issue. You know, that only happens if I stay on my back for too long” (Rec17)

“...So, and the chair's not comfortable anymore, but sometimes if I get up through the night and I can't go back to sleep in the bed, I'll come to lay in the chair [continued] I catch myself through the night... rolling on my side and then if it's on my other side my, like, my right. My arm gets really crampy, and it hurts” (Rec10)

All nineteen participants complained about discomfort (painful movements) due to mobility restrictions. The experience was even worse for those having their dominant arm operated. Performing simple tasks also required assistance.

“...I can't lift anything or push anything. No, I can't cut anything, like after the surgery, cutting anything is pretty tricky when you're not allowed to apply any pressure with that arm...” (Rec9)

“...and I can't lift the bags. I'm getting there. I know it'll be soon. I got it. It's just gonna take time...” (Rec10)

The majority of the participants reported minimal or tolerable postoperative pain. Some were able to compare their pain levels with that of a prior knee replacement surgery finding the pain less severe but the immobilization more problematic. Participants suggested that the sling was a leading cause of associated pain in the neck, opposite shoulder, and upper back.

“...definitely, a knee pain is more painful than the shoulder, but the shoulder was more confining. I found that very restrictive...” (Rec16)

“...The particular model of this sling that I had was very difficult on the neck [continued] within the first two days of wearing that sling and walking about. I started having trouble swallowing because it was putting too much weight on the arm [continued] so it was not a very good experience...” (Rec17)

“I'm not going to lie, it [sling] sucked. It's very bulky. It's very awkward. It would strain around my neck. and, and pull, sometimes I find my shoulder aches in the back, like where the shoulder blade is...” (Rec10)

❖ **Unable to be independent in self-care**

Participants faced challenges performing basic ADLs. It was more difficult for those having their dominant arm involved. Complaints of having to do their tasks very slowly and carefully while getting fatigued were common.

“I only had my left non-dominant hand to use, it's really hard to cook with just your left hand or measure with just your left hand...” (Rec19)

“...managed personal care, but it was somehow exhausting. It took more time than the normal, and it was kind of difficult, absolutely and it's humbling...” (Rec17)

“I shave with my left hand and what not, I've adapted. I just go slow at it yeah...I've slowed down but to at least try...” (Rec13)

Many participants reported that their ADLs diminished dramatically. They completely relied on family, friends, or neighbors for these tasks. Whereas those living alone were dependent on community help or private services.

“my mom used to help me She would come over and wrap my shoulder in a garbage bag to keep the sling dry. I could only use one hand, she put the shampoo on my head and rubbed it. I can brush my hair. ...if I want my hair in a ponytail, I'll either get my daughter to do it or if I lean to my left because my arm doesn't quite make it there yet. (Rec10)

“...and we did have a PSW come in who basically just washed hair and gave a sponge bath. That PSW came through the province...through healthcare. So that was not a private hire., that has not been particularly successful.” (Rec18)

❖ **Feeling overwhelmed.**

Eighteen out of nineteen participants expressed that the surgical period was overwhelming for them. The top reasons that put participants into mental distress were dealing with pain, limited mobility, and the resulting temporary loss of independence.

“...a hundred percent... it's been a very, it's been very difficult, I've not cried as much in my life as I've had in the last three weeks... I'm a very strong and independent woman... [participant crying] ... it's just you know, it's still very fresh.” (Rec4)

“...just after the surgery is kind of overwhelming. There's lots of pain and limited motion, so you kind of feel overwhelmed about it...” (Rec3)

In part, the need to ask for help exacerbated the challenges in coping as participants reported being overwhelmed by multiple emotions from gratitude, humbleness, frustration, guilt, and ego.

“...operation this time, there is an element of frustration...taking longer than I anticipated and, certainly the loss of independence in doing any task gets a bit frustrating and increases I think over time...” (Rec7)

*“...And I have difficulty typically asking for...So this has been a very humbling experience. Especially, when...my friend came over to help me (shower)... that's very humbling. Have somebody shower you... So, mental health wise, it's been hard [**participant crying**] ...” (Rec4)*

“... it's difficult... your pride and your ego always want you to do things on your own, but I mean, you got to realize you need to be asking for help...” (Rec13)

On several occasions, participants reported how their age, marital status, and gender played a role in impacting their mental states. Most women felt less satisfied with the help being offered by their caregivers, which caused mental frustration and made them feel helpless.

“...and I thought maybe if I was 10 years younger...it would've been easier...” (Rec 16)

“... For people who are that are single it is certainly more challenging... And going through surgery in an overnight process is really overwhelming.” (Rec 4)

❖ **Uncertain resumption of work and social roles**

Overall, 42% of the participant population was still working. Older adults who were retired had a variety of unpaid work roles and social roles. Two different categories of paid work were involved and affected the recovery process, those involved in heavy physical work (blue-collar jobs) and others, involved in desk work with minimal physical needs (white-collar jobs). Both types of work were compromised by the TSA. Apart from the usual discomfort, complaints

regarding being slow-paced, and the arm/hand being swollen, sore, stiff, and fatigued were reported.

“I am managing, ... I work slower...it's a little better now because the arm is healing. I can really use the full fingers to tighten now, but in the early going, it was slower....” Rec 7 (white collar job participant)

“... My future work... using my arms up all day fatigue is involved...I'm going to have days where it's going to be really sore. So, of course, this play in the back of my mind...” Rec 4 (blue-collar job participant)

The type of work performed before surgery influenced the required time off, and ability to initiate work or do modified tasks.

“...and, but I did go to work on the second day of the surgery. You know I did a slightly shorter day and slightly lengthened it as much as I could...” Rec17 (white collar job participant)

“...I haven't worked since February. My doctor pulled me from work because I couldn't do my job... I'm on complete leave right now” Rec10 (blue-collar job participant)

Both groups reported experiencing mental distress due to work loss and uncertainty about planning to return to work. Unable to get enough rest and having to start work too quickly were complaints by the desk-job workers. On the contrary, restrictions to work or the requirement of doing modified tasks were the reason for mental distress for those working blue-collar jobs.

“...because I'm working at home in front of a computer. So, it was exhausting initially. The first week was, mentally fatiguing.” Rec 17 (white-collar job participant)

“So, I was really devastated that it (arm) was broken and shattered. I knew that this was going to impact my career. I've been doing hair for 35 years, so this plays on my mind about me going back to work.” Rec 4 (blue-collar job participant)

Patients with office jobs were more confident about their ability to recover pain-free movements and improved function that could suffice for their occupational performance. Conversely, blue-job workers expressed more work-related insecurities and were skeptical about being able to use their arms sufficiently to meet work demands.

“..... because my job in the kitchen does involve a lot of lifting, bending, twisting. I want to make sure that my shoulder can handle it. ...as I know, it'll be a graduated back to work...” Rec10 (blue-collar job participant)

Since more than 50% of the participant population was retired, a halt in social participation was a huge impact on retired individuals. Younger patients also complained of boredom by being restricted at home. The commonest barriers to social engagement were the inability to drive, arrange for transportation, and physical exhaustion.

“... For the one reason, I couldn't drive...another reason was I didn't feel like seeing people. ...your schedule is completely off ... you're, tired, fatigued.” (Rec19)

“I can't go out visiting because I can't drive. So, I'm stuck in the house and some friends have come by to visit, which has been great, but like I have to rely on other people to find a ride if I want to go visit...like I said, the boredom.” (Rec10)

These changes were mentally taxing for many.

“what affects me the most mentally is not being able to get up and go because I am a social person and I get up and do tasks very independently. ..there were days when I had really bad days, but then I pulled myself out of it, ...I don't think you're ever mentally prepared for any of it.” (Rec3)

Most women and a few men reported their physical appearance as being the reason for not attending social gatherings.

“...it's just not me to go out in public dressed like that. I want to be dressed properly, have my hair combed properly, and do some makeup try to put some makeup on with your left hand. You look like its Halloween.” (Rec12)

“I didn't attend the dinner you know...I am not as comfortable eating because number one and had the sling on...in the first two weeks before I see the doctor. I don't remove the sling, so I just have a t-shirt pulled, Extra large, pulled over the sling. So, you don't, you know, you don't feel as presentable.” (Rec7)

Occupation influenced social interactions. Blue-collar workers experienced that time off work interfered with their social engagement and led to boredom. This was less of a concern to those in office jobs or who were already working at home.

“...(work) it gets me out of the house... to engage with a lot of people...” Rec4 (blue collar job participant)

“...I'm going stir crazy. The boredom really is a lot.” Rec10 (blue-collar job participant)

❖ **Financial burden**

Financial concerns and the increased burden placed on these concerns by the TSA were less commonly raised, but a concern for some. One-third of the participants, who had their caregivers within their proximity during the time of the interview did not raise financial concerns. However, many times caregivers raised financial concerns, and the participants later agreed and opened up about the concern. Some openly expressed discomfort discussing financial issues. Older participants had to deal with changing markets or fixed incomes, whereas younger participants had more direct impacts on income earning.

“I'm opting out of any financial questions.” (Rec 15)

“Well, I don't know what you can say. The markets are up. They're down. They're up. They're down. I think they're more down than up and everybody's in the same boat, so it's not just me.”
(Rec 9)

The financial concerns acted as a significant stressor based on their age and occupation. Young and working participants acknowledged a cut down in monthly income due to work restrictions. Participants expressed concerns if they would be able to pay the bills on time.

“...with being a hairdresser I live off my tips and my pay ... bills and rent and stuff like that. So, my income has been cut down to, probably about 40% of what I was making before..., so that is really difficult...” (Rec 4)

The cause of the injury and the context of the injury influenced what income supports were available to different patients. Those injured at their worksite, had WSIB to support them temporarily, whereas others who were working but affected by degenerative conditions like RA were more likely to rely on Employment Insurance (EI) for their short income support.

“No, but that's because I fell at work, so WSIB. I took a little bit of a cut, but...” (Rec 3)

“I am not able to work, and I am absolutely terrified because, I'm getting sick benefits through EI and, they don't really pay a whole lot...” (Rec4)

On the other hand, older retired patients experienced less change in income so were more likely to be able to fulfill their basic financial commitments. A number stated that the fact that they did not have funds for leisure travel but were able to fulfill their basic needs.

“...I'm doing okay. I couldn't go out. I couldn't afford a trip to Hawaii or anything really spectacular. But I've got enough income for what interests me.” (Rec 14)

❖ **Redefining Relationship Roles and Dynamics**

All nineteen participants discussed relationships directly or indirectly. Half acknowledged changes in their relationship.

Gender played a huge role in relationship dynamics between married couples and common-law partners. Men and women had different opinions with respect to the nature and importance of these changes this; however, it was common to have experienced a change in the dynamics with their partners. Men typically mentioned ‘stress’ in their relationship. Whereas women more often talked about the need for ‘adjustment’. Women were more likely to talk about marriage as teamwork, and their obligation to be there when the other is in need.

“...The only thing is to prepare people....it does add stress to a relationship. But you know nothing ...that is crazy.” (Rec19, male)

“...I would say it's changed dramatically...I am just a little more dependent upon her. I do feel a little guilty about that...” (Rec7, male)

“...when you've been married for almost 59 years, you just do things for each other. That's why you're still married?” (Rec16, woman)

“...Sometimes they have relied too much on me. And now I have to get, rely on them ...it is an adjustment for both of us. Now the tables have turned...” (Rec10, woman)

Relationship dynamics with children and grandkids

Participants who had their children living within the proximity expressed a positive change in the relationship, while those having their children living far away experienced no change. In these cases, they were more likely to rely on neighbors, friends, or other relatives for help as they did not have their children around all the time.

“...I think, appreciate more the quality of the time that I am spending with my children now...I think when you're the age I am, you see less of your children because they have lives to live too. ...when they're discarding part of their life, normal life to spend time helping me out, you begin to realize how valuable and how wonderful it is to have them...” (Rec14)

“...my son lives in Ohio, so he can't really help too much, but I'm relying on my friends and neighbors ...” (Rec12)

“...they are (children) good, but they have their own lives to lead and their jobs. And their things. They are far away...and so they can only come when they can come, and that's not often...” (Rec9)

A few participants (n=2) were instrumentally involved with their grandkids, in what might be considered a combination of caregiving (unpaid work), social interaction, or community-based social engagement. All these participants experienced not being able to spend time and contribute towards their caring tasks enough as they would normally do.

“...My granddaughter plays hockey. I would normally be going to watch her play hockey twice a week, and ... I haven't been to her games...” (Rec16)

Lastly, a few participants (n=2) of the total sample size were responsible for caring responsibilities towards their elderly parents, another form of unpaid work. Most had to limit or discontinue these roles.

“...It went from significant support, giving him significant support to zero...I had to rely on my partner to do all of that” (Rec19)

Discussion

The study gained insights into the challenges faced by community-dwelling individuals in their daily lives shortly after getting discharged following a TSA. The findings underscore the disturbance in sleep schedule, postoperative symptoms, difficulties pertaining to ADLs, emotional changes, stress, financial burden, uncertainties regarding return to work, and a shift in relationship dynamics. Furthermore, patient experiences showcased how demographic characteristics such as age, gender, marital status, type of occupation, and employment status influence their initial recovery process. Overall, the study highlighted the unique experiences of each patient based on a composite of factors, a factor that should be considered by healthcare providers during pre-operative shared decisions or preparatory education. Patients and caregivers while taking care should understand this variable experience when preparing for surgery.

Intriguingly, nearly all participants drew comparisons between their present pain levels and those experienced after knee or hip surgeries. Although no instances of problematic postoperative

pain were reported (Horrall Stith et al., 2020), a prevailing sentiment emerged that the current TSA imposed greater restrictions compared to prior interventions. Thus, considering factors beyond pain management in assessing the overall success and patient experience of a surgical procedure is necessary. The disruption of the sleep schedule emerged as the most formidable challenge encountered (Horrall Stith et al., 2020). The current study underscores a few of the many reasons for sleep interruption. The transition to accommodate sleeping in a chair, the inability to assume a side-sleeping position, the utilization of the abductor sling, and the arduous task of finding a comfortable resting posture were identified as the primary factors contributing to sleep disturbances. Moreover, a few participants mentioned experiencing sciatic nerve issues when sleeping on their backs for too long. This is an unusual and unexpected complication related to the surgical procedure and altered sleeping positions. It highlights the diverse range of challenges that patients may face during their recovery. Beyond mere impediments to rest, the abductor sling posed significant constraints during the performance of routine activities of daily living (Horrall Stith et al., 2020). Several participants reported that the sling used post-surgery caused discomfort and pain in the neck, opposite shoulder, and upper back. This unexpected side effect of the sling emphasizes the need for further examination and improvement in the design and usage of postoperative slings to minimize associated pain and discomfort.

Requiring assistance, being dependent for ADLs (Horrall Stith et al., 2020), working slowly, and consuming more time than usual to complete the tasks were common challenges experienced by participants. The common sentiment expressed by patients was that having a paid/ unpaid caregiver is of utmost necessity to manage the initial recovery period, especially from a day surgery perspective where the major responsibility is upon the patients within their home environment. This portrays the extent of physical demands laid upon older adults in managing themselves at home. Participants mentioned the experience of having a personal support worker (PSW) provided through healthcare services for assistance with tasks like washing hair and providing a sponge bath. However, they described this support as not being particularly successful. This finding highlights potential gaps in public support services and the need for improved quality and effectiveness of assistance provided to patients during the recovery process.

Being retired, for most participants, social engagements and hobbies held considerable importance. The majority of participants expressed profound impacts on their social lives (Horrall Stith et al., 2020). However, the combination of wearing loose-fitting attire and the presence of the sling, compounded by physical exhaustion and apprehensions surrounding arm reinjury, constrained active participation in social gatherings. The study highlights the psychological impact of physical limitations on self-perception and confidence in social settings. Several participants, particularly women, reported avoiding social gatherings due to concerns about their physical appearance while wearing slings or struggling with grooming tasks. This unique aspect adds a psychological and emotional dimension to the recovery process, emphasizing the need for support and understanding from the patient's social circle.

Stessel and colleagues conducted a quantitative study that demonstrated how longer hospitalization acts as a barrier to home recovery (Stessel et al, 2015). Interestingly, our study found that despite the relatively short hospitalization period of no more than twenty-four hours, participants still considered hospitalization as the primary reason for experiencing mental effects. The entire process of admission, surgery, and same-day discharge resulted in mental fatigue. A similar correlation between age and the ability to cope mentally during the initial recovery phase was identified in an earlier research study (O'Hara et al.,1989). Moreover, the temporary loss of independence was a significant stressor, particularly in the post-discharge phase. Similar insights were demonstrated in a qualitative study by Horrall and colleagues that explored the lived experiences of patients regarding limitations in ADL performance following shoulder arthroplasty. (Horrall Stith et al., 2020). Participants in our study expressed the profound impact of needing assistance with simple routine tasks on their mental well-being. They often hesitated to ask for help, leading to feelings of guilt, frustration, and disappointment in themselves, while also feeling grateful towards their caregivers. This experience was humbling for both men and women, although gender influenced the level of satisfaction when receiving help. Women, in particular, expressed less satisfaction with the assistance provided by their partners. A narrative review investigating post-operative influences on recovery stated similar opinions regarding women's dissatisfaction (Jaensson et al., 2019).

Age and working status influence specific challenges post-operatively, which aligns with the findings of Stessel and the team regarding barriers to recovery after day surgery (Stessel et al.,2015). The nature of one's occupation influenced various aspects of post-surgery work, including the ability to engage in modified tasks, work-related insecurities, and satisfaction with post-surgery productivity. This finding is consistent with the systematic review highlighting work-related factors that influence return to work post-injury, such as work expectations, work-related insecurities, and the level of disability (Cancelliere et al.,2016). Participants mentioned the shattered arm affecting their ability to perform their job and the uncertainty surrounding their return to work. This highlights the unique challenges faced by individuals in specific professions that require physical dexterity and specialized skills. While it is common for physically demanding blue-collar workers to experience work-related insecurities during their recovery, it is unusual to observe similar concerns among desk job workers. Participants engaged in office jobs expressed worries about mental fatigue and the ability to meet work demands due to physical discomfort, highlighting the broader impact of the surgical procedure on various occupations. Interestingly, certain occupations served as significant sources of social interaction, and participants in these fields experienced a notable impact on their socialization tendencies. This led to feelings of boredom and, consequently, significant levels of mental distress.

In terms of financial burden, the study revealed that factors such as age, occupation type, surgical indications, and context of the incident influenced the financial constraints faced by participants. Occupations involving physical labor were heavily impacted as they required a longer recovery period before work could be resumed. On the other hand, the retired population did not experience significant financial constraints following surgery. These findings contrast with the results of a quantitative analysis study conducted by Francoeur (2007), which demonstrated that financial insecurities tend to increase with age across various contexts. Furthermore, professions relying on tips and gratuities were particularly affected by the surgery which resulted in a significant reduction in monthly income. Participants expressed concerns about the impact of changing markets on their financial situation, particularly older participants who relied on fixed incomes. This finding highlights the potential vulnerability of individuals in certain age groups and the need for financial support systems that can adapt to fluctuations in the economy. Lastly, it was unusual to observe caregivers expressing these concerns on behalf of the patients. This

highlights the wider impact of the surgical procedure not only on the patients themselves but also on their caregivers, who may bear additional financial burdens and stresses.

The dynamics of relationships emerged as a significant aspect of the study. Approximately half of the participants expressed negative influences in their interactions with their partners, aligning with previous research on factors associated with marital satisfaction and spousal distress among individuals with partners who have experienced orthopedic trauma (Geisser et al., 2005). Leonard and Cano (2006) highlighted the prevalence of spousal depression, decreased quality of life, and marital dissatisfaction in living with partners suffering chronic pain. Similar patterns were observed in our study among married couples and common-law partners. However, caring for the patient's parents and grandchildren transitioned from extensive to minimal contribution. A few participants mentioned being responsible for caring for their elderly parents, in addition to dealing with their recovery. The surgical procedure forced them to limit or discontinue these caring roles, adding a layer of stress and adjustment to their lives. This sheds light on the complex dynamics of caregiving and the challenges faced by individuals who must balance their recovery with the needs of others.

The findings of the project highlight the biopsychosocial impacts of surgery on patients during the initial recovery phase, which are further influenced by personal factors such as age, sex, gender, marital status, affected extremity, and the underlying reason for the surgery. These findings demonstrate the diverse and often unexpected ways in which physical impairment, recovery, and surgical procedures can impact various aspects of patients' lives. They underscore the importance of comprehensive care that addresses not only the physical aspects of recovery but also the psychological, social, and financial dimensions to support patients holistically. They emphasize the need for healthcare professionals to consider these factors when providing care and support to patients, as well as the importance of further research and improvements in postoperative care strategies to address these unique challenges, especially after a day surgery. Conducting a study that delves deeper into the specific adaptations based on the presence or absence of caregiver support would provide valuable insights. It is vital to identify the factors associated with surgery that contribute to successful recovery at home.

Methodological considerations and trustworthiness

We adopted an interpretive descriptive methodology to explore and understand in depth the patient's experience living within the community after a day shoulder surgery (Thorne, 2017). The thematic analysis process was utilized to develop knowledge regarding individual participant experiences. The trustworthiness of the results can be conferred through the constant maintenance of credibility, confirmability, and lastly, dependability (Berg, 2012). A purposeful sampling technique successfully establishes credibility. Assurance regarding confirmability can be verified by the author's constant effort of checking in with the information provided by the participant and its correct interpretation. Conscious efforts were put together about reducing overinterpretation. Including the quotes directly from the participants makes it transparent from the interpretation context for the others reading it. Thus, confirms the trustworthiness of the study. To highlight the underlying meaning of codes and categories, themes were created in such a manner that it represents the correct information conveyed by the participants (Graneheim & Lundman, 2004). Each interview was variable in length, but rich data and information were obtained, emphasizing enriched descriptions delivered by the participant and less personal interpretation.

The following study has a few limitations. The author's educational background, age, and gender might have influenced the framing of the research questions, the development of the interview questions, the data collection process, and the analysis of the collected data. It might have had an impact on how the data was interpreted, reported, and discussed in the thesis. Most of the participants opted for the telephonic mode of interview. Thus, there was a lack of development of researcher-participant rapport to some extent as preached by the qualitative literature. Additionally, seventeen out of nineteen participants had their partners/ caregivers within proximity at the time of the interview. This calls for a lack of privacy and makes the participants uncomfortable to open up about certain sensitive topics. The data collection involved participants undergoing the surgery performed by the same surgeon from the same institution. This might influence the change in results when data is collected from a different center and surgery is performed by a different surgeon. Also, even though the author made conscious efforts to avoid any presumptions and beliefs, as with any other qualitative research, there might be researcher bias to a small extent affecting the results.

Conclusions

Patients struggled physically, were drained emotionally, and felt ill-prepared for their early recovery at home following TSA. Their experience was dependent on preparation and supports which was highly variable. The recovery was influenced by various demographic characteristics. Planning for reduced length of stay following TSA should include how to prepare patients, families, and home care supports for the downloaded burden.

Acknowledgments

The authors of the study would like to thank all the participants for the valuable time and experience shared with us. Special thanks to Katrina Munro for assisting with the ethical proceedings of the study.

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CHAPTER 3:



Title

A qualitative study exploring short-term challenges after a day shoulder arthroplasty and factors affecting recovery at home from a community dweller's perspective.

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ABSTRACT

Introduction: Since the number of outpatient shoulder surgeries is on the rise and ambulatory shoulder replacement is becoming more common, it is important to understand coping and adaptation in the early postoperative period.

Purpose: We wanted to explore the coping strategies, adaptations, and modifications made by patients after a day Total Shoulder Arthroplasty (TSA) to fulfill the needs in their everyday activities within the initial three weeks of discharge.

Study Design: Qualitative Interpretive Description

Methods: A purposive sample of nineteen participants who underwent same/single-day discharge Total Shoulder Arthroplasty were recruited. Semi-structured qualitative interviews were conducted and analyzed using thematic analysis.

Results: Availability of support had a great influence on the initial recovery phase. Those having internal social support made minimal efforts to get prepared prior to the surgery. The physical dependency upon the caregivers for meeting basic tasks was predominant among these participants. However, those who did not have social supports relied on paid caregivers. They were physically prepared, emotionally strong and made necessary modifications to their houses for a smoother recovery period. These participants had minimal coping strategies to deal with the situation emotionally, whereas numerous adjustments were made individually beforehand in terms of being physically prepared. Pre-operative readiness and patient & caregiver education had a vital role in patient satisfaction and experience. Additionally, certain surgery-associated factors were identified that influenced the initial recovery period including availability of support, surgical literacy, patient education, and caregiver information.

Conclusions: Adaptations encompassed physical, emotional, and home environment modifications approached during the initial discharge period, particularly among elderly patients who struggle with managing their daily routines independently. Certain surgery-related factors such as availability of support, surgical literacy, patient education, and caregiver information influenced

the recovery process at home. Patient dissatisfaction was observed regarding the information received for home care.

Keywords: Qualitative study, Total Shoulder Arthroplasty, Same day surgery, Adaptations, Modifications.

Introduction

Total shoulder arthroplasty (TSA) is a salvage surgical procedure used for end-stage shoulder damage, such as arthritis or irreparable humerus fractures (Longo et al., 2022; Kramer et al., 2020). The primary treatment goals of TSA are to improve the joint range of motion and alleviate pain through joint replacement and rotator cuff muscle repair (Kramer et al., 2020; Drake et al., 2010). Indications for shoulder arthroplasty include various conditions like shoulder joint arthritis, osteonecrosis, rotator cuff arthropathy, and rheumatoid arthritis (Kramer et al., 2020; Longo et al., 2022; Wilcox et al., 2005; Broolin et al., 2017).

The demand for ambulatory shoulder procedures has increased, allowing outpatient TSA for specific patient populations, leading to cost savings, shorter hospital stays, and higher patient satisfaction (Berman et al., 2019; Sher et al., 2017). Despite lower complication rates and comparable readmission rates to in-patient procedures, there is limited research on ambulatory shoulder surgery compared to hip or knee replacements (Antonacci et al., 2021; Broolin et al., 2017; Menendez et al., 2021; Sher et al., 2017). Surgeons generally have positive perspectives on outpatient shoulder surgery, and it is considered a safe option for older adults when patient selection is done carefully (Broolin et al., 2018; Antonacci et al., 2021).

While day shoulder surgery offers benefits such as minimal disruption to daily routines and proximity to families, post-operative supervision and support from trained staff are often lacking, placing additional responsibilities on patients and their families for after-discharge care (Boughton and Halliday, 2009; Kleinbeck, 2000). Patient expectations for an immediate return to routine activities may be delayed, including socializing activities (Mottram, 2011). More research is needed to examine the safety and efficiency of transitioning from in-patient to outpatient procedures, particularly in the context of ambulatory shoulder surgery (Kramer et al., 2020; Steinhaus et al., 2018). Understanding patients' perspectives and developing effective recovery management pathways are crucial for delivering patient-centered care (Mitchell, 2014; Menendez et al., 2019).

Despite the increasing number of day surgeries, there is still a gap in understanding post-discharge proceedings and available support for home recovery (Mitchell, 2006; Mottram, 2011).

The existing literature primarily focuses on descriptive information about the surgical procedure, emphasizing the need for patient-specific research to fill these gaps (Kramer et al., 2020; Berg et al., 2013). Conducting research that addresses patients' perspectives and experiences is crucial for enhancing the understanding of day surgery and implementing systematic schemes for quality care (Berg et al., 2013; Menendez et al., 2019). This research has the potential to benefit patients, clinicians, researchers, and policymakers by providing insights into the trade-offs between inpatient and ambulatory procedures (Steinhaus et al., 2018). The present research project aims to address these gaps and gain insights into the concept of day surgery from patients' perspectives and experiences.

Purpose of study

The study explored immediate adaptations experienced by community dwellers in various aspects of their everyday life following outpatient surgery. This included investigating preparedness for the surgery and examining the different coping strategies they employed. The study explored surgery-related factors that influenced the process of home recovery.

Methods

Study design and sample

To deepen the knowledge and have a clear understanding of what coping strategies, adaptations, and modifications occur in the initial recovery phase after a day shoulder surgery, a qualitative interpretive description methodology was approached. The utilization of the Interpretive Description approach in this study offered significant advantages. The methodology allowed nuanced comprehension of the clinical phenomenon by identifying interconnections, generating themes and patterns, and providing accuracy and precision in explaining deeper concepts (Teodoro et al., 2018). The process of participant recruitment was initiated in October 2022 and was completed within three months, in about January 2023. Participants were approached at Hand and Upper Limb Center St. Joseph's Health Centre, London, Ontario. Patients of age 18 years and above, who underwent the out-patient shoulder surgery and directly went to their homes after the discharge were included in the study after obtaining the informed consent.

Participants

The participant recruitment process was initiated in October 2022 at St. Joseph's Health Centre by purposeful sampling technique. Participants were approached in the waiting room of the Hand and Upper Limb Centre by the first author. The target population was informed about the goals and objectives of the study, the study conduction process, and confidentiality statements alongside providing the letter of information. Interested individuals were given the consent form for their signatures. There were arrangements available if they required more time to make the decision. All the participants were informed of the option to withdraw at any time point during the study. A total of nineteen participants [n=19] gave informed consent to participate between October 2022 and January 2023. Participants of varying age groups, sex and gender, marital status, occupation, and reasons for the surgery were recruited to obtain wider perspectives and rich knowledge about the effects of the surgery on the community population. Each participant's demography can be seen in Table 1.

Data collection and ethics

The study protocol was approved by the Western University Research Ethics Board (REB) in London, Ontario, Canada, and LAWSON Health Research Institute, London, Ontario, Canada. The semi-structured interview guide was developed collaboratively by the first author and senior author, incorporating relevant questions from previous literature on hip and knee day surgeries. The first author familiarized herself with relevant articles and enhanced her interviewing skills through reading and practice with a co-investigator. Seventeen participants opted for telephone interviews, while two preferred in-person interviews. All interviews were audio recorded by the first author. Another co-author was present during the initial interviews to ensure the approach and flow of interviews conducted by the first author. The average duration of interviews was 34 minutes and 24 seconds, ranging from 11 to 50 minutes. Telephonic interviews were conducted from participants' homes, while in-person interviews took place in a private room at Hand and Upper Limb Center, St. Joseph's Health Centre, after their follow-up appointments. The interview questions covered topics such as post-discharge experiences and personal hygiene management. To reinforce their replies and obtain further information, questions like, "Would you like to talk more", and "Can you tell me more about it" were asked. The first author transcribed each interview verbatim.

Table 1: Demographic Data

DEMOGRAPHIC CHARACTERISTICS			
Sex	Marital status	Occupation	Extremity involved
Women (n=12)	Married (n=8)	Retired (n=12)	Dominant (n=13)
Men (n=7)	Common-law married (n=2)	Working (n=7)	Non-dominant (n=6)
	Divorced (n=1)		
	Single (n=3)		
	Separated (n=1)		
	Widowed (n=4)		

Data analysis

For analysis, the recorded interviews were transcribed verbatim and analyzed using an interpretive descriptive approach, as outlined by Thorne (Thorne, 2017). A manual coding technique was employed to categorize the sentences, involving a process of repetitive reading of the interview transcripts and identification of emerging themes from the data. We adopted an open coding process. The responsibility of coding was shared between the first author and the co-author. Intercoder reliability was assessed to ensure the trustworthiness of the coding process, following the approach outlined by O'Connor and Joffe (O'Connor and Joffe, 2020). This involved multiple coders, which enhances objectivity and reduces potential bias. A constant comparative technique was utilized, whereby codes were continuously compared both across and within each participant's data by both coders. The coders reached a consensus on the final codes, which were then organized into categories. Themes were derived from these categories, reflecting the underlying patterns and meanings present in the data. The coding and analysis process adhered to Braun and Clarke's six-stage thematic analysis framework (Braun & Clarke, 2006). Firstly, the researchers familiarized themselves with the data to gain a comprehensive understanding, followed by line-by-line coding

to identify meaningful units within the raw data. These codes were then merged to form initial themes. The themes were reviewed and the relationships between them were considered to refine and consolidate the analysis. Finally, the researchers generated the final themes and proceeded to write up the report. By conducting semi-structured interviews, employing rigorous coding techniques, and following established analytical frameworks, the researchers aimed to ensure the reliability and validity of the findings.

The data collection, analysis, and interpretation process was performed by the first author, who was a young internationally trained physiotherapist having a little bit of experience working with shoulder arthroplasty patients in the home country. The senior author and the other co-author of the research team who guided the first author were also physiotherapists with backgrounds in treating upper extremity patients.

Results

Participants

A total of nineteen individuals participated in this study. Out of which, twelve were women (n=12) and seven were men (n=7). The average age of the participants in the study was 70.23 years. Most participants (n=13) had their dominant extremity involved, while six individuals had their non-dominant extremity involved (n=6). In terms of employment status, twelve participants were retired (n=12), and the remaining seven were employed (n=7). There were eight married participants (n=8), four widowed (n=4), three single participants (n=3), two in common law relationships (n=2), one divorced participant (n=1), and one participant categorized as "other" (n=1). Eight lived alone (n=8), while eleven lived with their partners or family members (n=11).

Categories and Identified Themes

Each participant had a different living environment pre-operatively. Some lived with their spouses and others lived independently. However, post-operatively those living independently shifted to living with paid caregivers or planned to have their children move in temporarily. To understand the unique coping techniques and adaptations pertaining to each living environment, we broadly classified the participants as 1. Living with support from unpaid care partners; 2. Living with support from paid caregivers; 3. Living with accommodations.

Unique themes were identified under each category of classification.

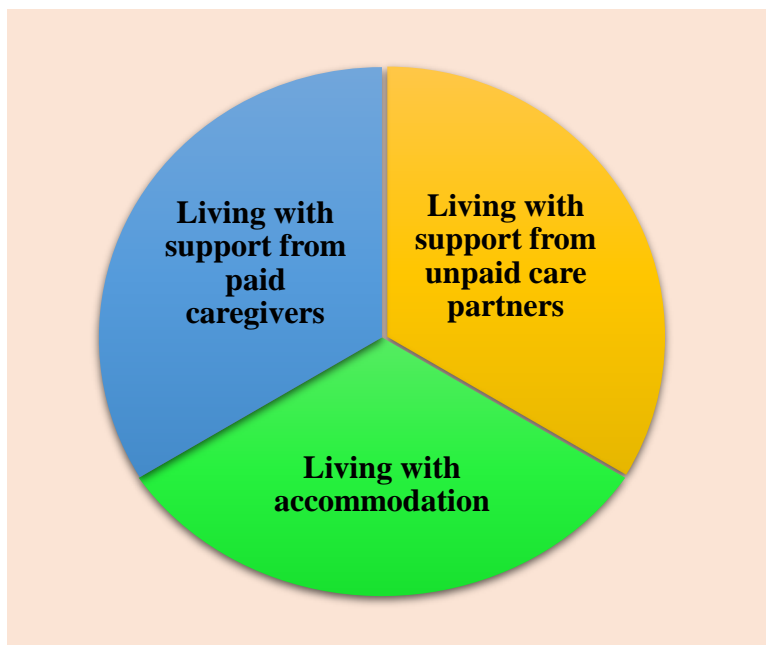


Figure 3: Living arrangements opted by community dwellers for the initial recovery period after a day shoulder surgery.

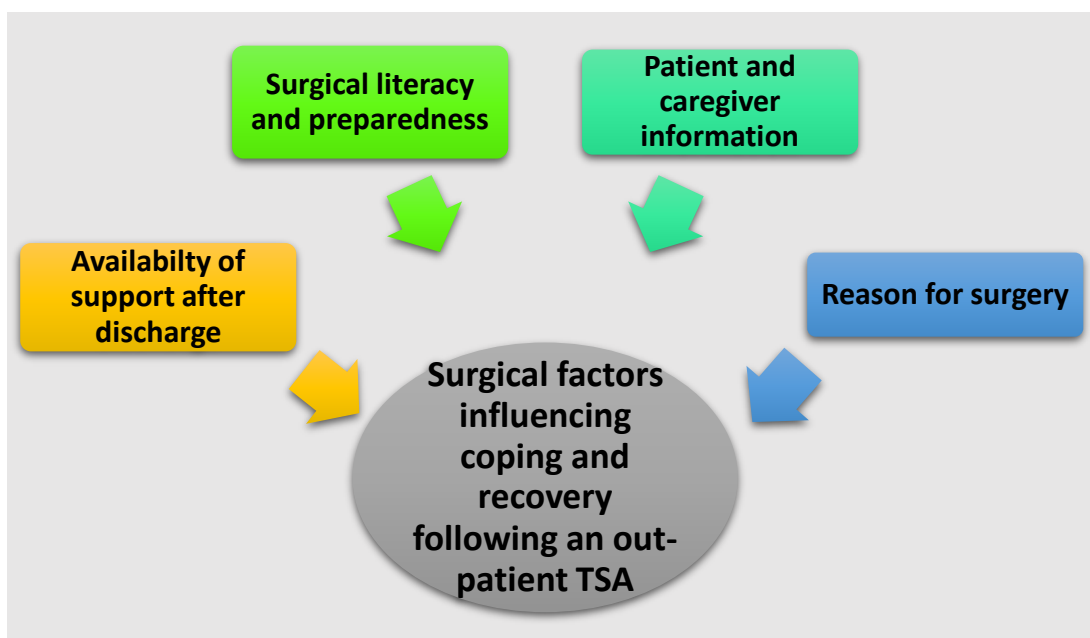


Figure 4: Summary of factors influencing coping and recovery following a same/single-day shoulder surgery

❖ Living with unpaid care partners

Seventy percent of the total participants were living with their partners, who took care of them during the recovery period. Hence, they acted as unpaid caregivers for the individuals. Important themes were brought to light when discussed regarding their after-discharge adaptations.

- Managing self-care required a partner's helping hands

Those living with their partners did not hire external support or seek community help. Almost every participant confessed to being dependent on their partners for everyday tasks. The care partners aided with most personal hygiene and ADL. Partners took care of other instrumental ADLs, household maintenance, and follow-up appointments by driving them to the hospital or physio clinic for shoulder rehabilitation.

“...because my right arm was completely immobilized, she (care partner) would do laundry. She would change the beds. She would do the meal prep and, would come empty, the dishwasher and all those things. So, she basically, did everything and then also physically supported me getting, on occasion, getting dressed like I couldn't get a coat, but she alone would do all the driving because I couldn't drive. I was very dependent on her.” (Rec19)

“...because my wife and I work together at the same company and she's the one that does the driving...that was our daily routine after the surgery” (Rec7)

- Self-reliant mechanisms and adaptive devices made tasks easier

The majority of the participants attempted to be as independent as possible. Many of them tried performing tasks with a single hand, whereas others developed a self-sufficient mechanism suitable for themselves to be less dependent. Many participants used adaptive devices such as a backscratcher or a reaching stick to make the tasks easier for themselves.

“...vacuuming I can do with one hand...I shave with my left hand I have adapted, and just go slow but try to at least...Doing some cooking and cleaning and I just try to do what I can with the, the right hand and I can use a little bit of the right hand to hold things, I try...” (Rec13)

“I have a little system that I have that works (for the sling). That's where my little back scratcher comes into play. The strap that goes around my waist. I have a blanket on my bed. It's a Mexican blanket. So, I stick it to that and then I turn around and I grab it.” (Rec4)

“I used an extra pillow for under my head and then a pillow on each side of me...I used one of those reach things to pick things up and I used a back scratcher to scratch my back...I used special clothing post-surgery t-shirts that had snaps down the sides and the arms. So, I can get a shirt on.” (Rec19)

- A healthy diet and rest aids emotional coping.

All twelve participants had an overwhelming experience in the initial weeks. Having been to the hospital and adjusting to the new routine brought in a lot of emotions. The low energy levels and being isolated brought in boredom many times. There were occasions when individuals would bring it out on their care partners or family members. Participants reported having a nutritious diet and enough rest throughout the day to cope emotionally.

“...it was exhausting initially... because like you're isolated and didn't have the energy... So, I was trying to keep my energy levels as high as by eating well enough” (Rec17)

“Well, I would probably call my mother and fight with her. Something to do. I try to find little things. I'll just have a nap just to kill time or I just try to find things to break the boredom.” (Rec10)

- Excessive dependence for everyday activities caused care partner burn-out

Not only the patients but, the post-operative phase was overwhelming for the care-partners too. Care partners were overwhelmed with multiple tasks to meet personal demands as well as those needed by the partners.

*“She (care partner) did all the activities and so she looked a hundred percent after the house, and she cooked for me. She was basically equivalent to a 24*7, taxi service and Personal support worker.” (REC19)*

There were discussions where participants revealed that their partners were burned out or overburdened and that was demonstrated in their behavior while offering help. The recovery period demanded strategies and adaptations to maintain a healthy relationship.

“She (care partner) gets a little frustrated with me. But I do try to be as independent as I can...”
(Rec7)

“...now I have to rely on her (care partner) and its adjustment for both of us. Now the tables have turned...” (REC10)

Participants expressed guilt for being a burden for their partners.

“...probably she (care partner) does a little bit more than I would...I'm a little more dependent upon her. I do feel a little guilty in that, uh, she's had to, you know, assume these extra responsibilities. A little guilty about that. But I mean, she's very good...but I do feel a little guilty and, I do know it's extra work for her.” (Rec7)

- Patient and caregiver information is necessary for post-operative care.

Patients had a satisfactory experience with the hospital staff during the admission and into the post-operative room. However, participants mentioned that not much information regarding self-management at home was provided. A generalized overview provided was insufficient to clear queries and concerns.

“I think probably there should be more detail that you can go over with somebody because there's a lot of uncertainty about how much can I move my arm. When do I need to keep the sling on? So, I think the more information, the better, and I think that's always good if the caregiver/ provider you have at home is there to listen... I think there is huge value in that if you can have the caregiver that's going to be at home to be there.” (Rec7)

Additionally, many participants said that much information was given to them when they were still under the effect of the anesthetic. This made it difficult to understand or remember

what was being told. Lastly, 50% of the patients recommended that a prepared list or booklet with every instruction to be followed at home might be convenient.

“Well, I was a little dopey. I think I had pain medication or something and it was affecting me, untoward... I wasn't really capable of completely understanding everything he said... So, he had to repeat things a few times.” (Rec9)

“I would think so because people see, hear it, right the one day...I think a booklet would be very beneficial. Because then you have it with you.” (Rec10)

❖ Living with paid caregivers

Five participants of the sample group were living independently pre-operatively and sought paid caregivers during the early recovery period. Interestingly all were retired women, and all of them had their dominant arms operated on.

- Unavailability of social support mandated external help

Participants who were widowed, single or divorced, and did not have their children around, managed their postoperative period with support from community help or private services. A few of the many external services approached by the participants included a PSW, a wound nurse, food services, cab services, and lastly a housemaid to take care of the household chores.

“I had a PSW at a place once a day. The external agency has been useful. I couldn't get washed for certainly just using my left hand. I couldn't dress myself just using my left hand and my daughter lives an hour away, so for her to come and prepare meals...she has her job and husband and house.” (Rec12)

“...and when it came to doing that dressing every other day...Dressing with my left hand...I went to Paramed for dressing...” (Rec9)

“I had a cleaning lady in. She changes my bed and actually my healthcare worker has done the bed before when my cleaning lady wasn't here.”(Rec15)

“...I also buy food from a company called Home to Hut or something (did not remember the name of the food delivery company), so I buy some meals from them...” (Rec11)

- Physical adaptations began prior to the surgery.

Interestingly, 90% of the participants under this category prepared themselves for the surgery beforehand. They made sure to have their meals prepared, arrange for support for their discharge as well as bought comfortable clothing before getting admitted to the hospital. A few of them even practiced using their non-dominant arm and doing tasks to make themselves comfortable and accustomed.

“...I practiced using my left hand. I would take a scarf and put my right arm in my sling and ever since I knew I was going to be operated on, not just those two days but ever since I knew I was going to have the surgery. I practiced. That's how you are better prepared...I prepared some meals. I went out and bought big clothing...”(Rec11)

“I make all my meals. Even after I got discharged, I had prepared my meals before I went into the hospital, and I had put them in the freezer... I have been prepared for a long time and finally had it... for my surgery, it was going to be a good thing this is what I've been waiting for...” (Rec15)

- A positive mindset aided emotional coping before and after surgery.

Emotional strength and decisiveness were common qualities displayed by all the participants in this category. Participants reported talking to loved ones, spirituality, and accepting the fact as the key to resilience.

“...I just had it in my mindset. I have my prayers that I pray...I don't go in with blind eyes...Ask your questions ahead of time, be prepared for it, and go in upbeat. There's no use being sad” (Rec15)

“I don't usually have to worry about things like that. I am positive. I try to be positive in almost everything. I have my days like everybody else. Overall, I think I try to look towards when things are going to be better. I have a lot of friends that I call them and they call me.” (Rec11)

- At-home modifications initiated before the surgery

The majority of the participants were aware of the needs and required home modifications necessary to make their recovery easier. Right from arranging a recliner chair to having tapes in the bathroom to cover the incision, participants took care of every necessary detail.

“... the first thing you have to do is get your shower so have a chair in the tub and on the chair put a blanket or a towel so that you don't slip... like I put a plastic bag over my incision with tape. I get those things available; I have a tall toilet and, I bought a wedge for the surgery and I have lots of grabbers in my shower, I have recliner chairs and my bed is a recliner, I use a body pillow and hand reacher thing that's the one thing you need...” (Rec11)

“...I have all things, I have a bathroom seat if I need it, I have to grab bars to hold onto...I've got a pillow I kind of cuddle up to that...” (Rec9)

- Hospital care and experience were satisfactory

Participants expressed satisfaction with the care and the interactions with staff. No complaints regarding lack of communication or post-discharge proceedings were noted.

“I underwent the surgery at [name of the hospital] and the care was exceptional everything went as planned. I was also transferred back” (Rec12)

“...the time I was admitted to the time that I hit the post-op room everything went quite smoothly. The staff was pleasant, and they were professional, and they were fun, they were easy to talk to and sharing and caring...” (Rec9)

❖ Living with accommodations

Two participants, a man and a woman, who lived independently before the surgery made special arrangements in their living conditions after getting operated on. They relied on paid as well as unpaid caregivers. Participants under this category had their children move in temporarily (at least 3 weeks) to help them recover better. Additionally, they also relied on certain external supports for their help.

- Special accommodation post-surgery was necessary

The situation demanded to have special arrangements after the discharge. Both participants tried to seek assistance via community institutions. However, because they did not meet the eligibility criteria or the institutions were short-staffed, participants were mandated to arrange for assistance from within the family.

“Well, now we tried to get in, tried to get help, but there is none available. They just don't have anybody to send.” (Rec1)

“...go home to an empty house and nothing is set up is unacceptable and I wasn't eligible because I had the help (children) around...” (Rec14)

- Children contributed towards ADLs

Both the participants were dependent on internal support (children) for routine tasks including aids for personal hygiene to outdoor visits (groceries or follow-ups). No private external help was hired for these tasks.

“...I need help to put on my pants. I couldn't make a decent meal without them (children). They are doing the cooking; they are doing the preparation for the meal and, they're looking after getting my clothes washed, getting the rest, helping me with the shower, to get clean, practically everything...” (Rec14)

“I had my daughter here; she stays with me in the evening, and she shared to help me make...She makes my meals for me and everything. She does everything right now I am just not doing anything so it's really just her help...” (Rec1)

- Lack of transportation mandated home-care agencies

Alongside one's children, participants also hired a few private support aids. One of them was a home physiotherapist to help with shoulder rehabilitation. Driving restrictions were reported as a reason to hire a home physio-care.

“I have a physiotherapist come to my home. She's been here twice, and she will be back here in the first two weeks and will be back in four weeks. I am fine with that because I don't have any transportation to go anywhere...” (Rec1)

“It's not being able to drive is, not comforting. I would like to be able to drive, but I realize that I'm not supposed to, so that (home care) works, and so I'm comfortable with that” (Rec14)

- Having children around boosts mental well-being

This arrangement allowed for better coping emotionally and buffered the impacts on mental well-being. Both the participants reported positive socialization since their children moved in. Instead, participants expressed gratefulness for having kids around during this phase.

“...I think I've got appreciated more the quality of the time that I am spending with my children now. I think when you're at the age I am you see less of your children... You begin to realize how valuable and how wonderful it is to have them...” (Rec14)

“Yes...I had my daughter here. She stays with me, I'm very lucky.” (Rec1)

- Patient education and caregiver information influenced post-operative satisfaction

Participants were satisfied with the facilities in and around the hospital admission and after-surgery supervision. However, patients and their caregivers were quite disappointed with the minimal information provided regarding after-discharge care and recovery.

“I was terribly frustrated, but you know what, in the back of my mind, you think if it's (sling) going to be here for six weeks or eight weeks or more. We have got to go through this for eight weeks. What is it there for? ... But, when our physiotherapist (home physio) explained a lot of the stuff became resigned to the fact that I was going to have to be there for time...” (Rec14)

A lot of inputs were given by the caregivers however, direct quotes given by the caregivers are not mentioned here because our ethics approval did not cover the use of direct quotes from the caregivers.

To give a brief idea regarding the topics of great emphasis, caregivers felt that the hospital management could have done a better job by communicating about getting community help/supports, a list of private services and their contacts in a list format, and precautions to avoid post-operative complications. They also recommended conducting pre-operative classes in person instead of virtually as they realized their parents (patients) were not competent in using virtual applications like Zoom/ Webex. Furthermore, those that had attended sessions recognized that information about the surgery was important, but stated that they did not understand any of the information about the surgery because of the use of medical language. Interestingly, there were expecting directions regarding the after-discharge process and guidance to care for their parent effectively and lastly, under what situations they need to bring them to the hospital. A brief pre-operative guide to be prepared beforehand was suggested by most of the caregivers.

Discussion

Patients reported a variety of coping strategies and adaptations to meet their ends in the early postoperative period, which were highly influenced by their current living situation and associated social support. At-home recovery demanded adaptations in physical, emotional, and environmental aspects. Being slow-paced and less energetic, most participants found themselves dependent upon their caregivers for basic everyday tasks. Certain surgical factors such as the side of the extremity operated, reason of surgery, surgical literacy, patient, and caregiver education played a vital role in influencing the initial recovery and need for supports. It was obvious that pre-operative preparedness highly influenced the level of patient satisfaction after surgery, and that preparedness was often driven more by feelings of not having support than by healthcare system preoperative education.

Participants made their decisions about seeking community help based on the availability of social support from their families. Surprisingly, marital status had a significant impact on this decision. Married and common-law partners rarely sought external support, while single, divorced, or widowed individuals relied solely on external help. Those who were ineligible for community assistance had to make special arrangements, such as having their children temporarily move in with them. This finding highlights the resourcefulness and adaptive strategies employed by participants who faced limitations in accessing formal community assistance. It also illustrates one mechanism by which socioeconomic status can influence recovery. By relying on their children

and private services, when necessary, these individuals demonstrated their ability to find alternative solutions to meet their support requirements. This unique finding sheds light on the importance of familial support networks and the role they play in filling gaps in formal community assistance for individuals in need. Fortunately, some of the participants in our study had their children living in the same city. However, the situation was more challenging for those whose children lived in a different city, province, or country. Similarly, patients who were still married but had their partners residing in a nursing facility and their children not in close proximity would face similar difficulties.

Following surgery, there was a common need for assistance and modifications in daily tasks. Almost every participant experienced limitations and adapted their approach to dressing, bathing, and hygiene tasks to comply with surgical precautions and postoperative symptoms (Horrall Stith et al., 2020). They performed tasks slowly which required more time and energy, which challenged their independence at home and limited engagement in tasks outside. The care partners played a crucial role in assisting with daily routines, taking on multiple responsibilities such as support worker, cook, driver, and cleaner (Horrall Stith et al., 2020). Interestingly, participants who had care partners or lived with their children made fewer preparations before the surgery compared to those without internal support. The latter group took steps to prepare themselves physically and emotionally, including training to use their non-dominant extremity, making arrangements for meals and clothing, modifying their homes, and contacting paid support in advance. This highlights the proactive and self-reliant nature of participants without internal support, as they took extra measures to ensure a smoother recovery process. This raises questions about the influence of marital status on one's inclination toward self-reliance and lack of expectations.

The majority of the participants adopted a variety of emotional coping strategies including talking to loved ones, seeking spirituality, a healthy diet, and having enough rest. Those living with spouses felt that the care partner's attitude towards them while offering assistance had a great influence on their psychological well-being and healthy relationship. The level of mental distress among these participants was comparatively higher than the participants with other living arrangements. Conversely, those who lived with paid caregivers reported a higher amount of physical and environmental modification prior to the surgery to prepare for the early post-operative phase. Those who lived with children reported less need for preparations or emotional adaptations

since the side benefit was that they enjoyed the extra company of their children. Overall, this finding underscores the impact of living arrangements and the associated emotional dynamics in influencing participants' mental and emotional experiences during the recovery process. It suggests that different living arrangements require varying degrees of psychological and environmental adaptations, with spousal relationships playing a crucial role in the emotional well-being and coping of patients after TSA. While caregiver well-being was not a focus of the study the patients who relied heavily on spouses noted that it did take toll and affect their relationship in the short-term, and better preparation might have lessened their stress.

Participants without family support were accustomed to dealing with situations independently and were mentally resilient. They made several pre-arrangements to support the recovery before the surgery. Since they had low expectations of support, undergoing surgery made them feel better, as it helped them return to normalcy and regain greater independence. Thus, the short-term struggles were seen in light of greater independence in the longer term. These patients reported high satisfaction with the surgery and post-operative experience, without any complaints. This highlights the importance of pre-operative readiness and expectations in shaping post-operative recovery, patient satisfaction, and early return to normal activities. In contrast, those who felt that had family support, expressed lower satisfaction with the information provided for at-home recovery. They felt that there was a lack of clear communication and specific instructions about post-operative precautions to be followed at home (Jaensson et al., 2019). This underscores the need for patient education and caregiver information to enhance recovery and patient satisfaction. Similar findings were underscored by Berkman and the team stating that limited health-related information and literacy were associated with overall poorer health status, and poorer postoperative recovery (Berkman et al., 2011).

The study also revealed that the timing of discharge and residual effects of anesthesia affected the information given to patients. Patients were provided critical information while they were still drowsy, which made it difficult for them to fully comprehend and retain the provided information. This is exacerbated by providing information during a high-stress context. Consequently, the information given did not adequately support their recovery at home, leading to feelings of insecurity and burden on their caregivers. These findings align with previous research highlighting the uncertainty experienced by patients and their families due to a lack of discharge planning. Since general anesthesia is commonly used in day surgery, impairing patients'

understanding of postoperative information, their ability to manage their recovery at home is compromised and needs to be addressed (Berg et al., 2013). Patient education and information tailored to address postsurgical needs and self-care are crucial for effective decision-making at home. A well-designed discharge plan can directly influence patient satisfaction, as supported by previous studies (Berg et al., 2013).

In summary, besides demographic characteristics like marital status, several key factors associated with surgery directly influence patient satisfaction and the pace of home recovery. These factors include the availability of support and living arrangements post-surgery, preparedness for the surgery, awareness of the pros and cons of the procedure, the reason for undergoing surgery, and patient education and caregiver information. The study insights provide essential pointers to the clinicians, especially the physiotherapist and occupational therapist that can be useful while preparing their patients for the surgery priorly. Study findings should motivate healthcare providers to deliver better preoperative surgery-related information, including possible complications, preparations for hospitalization and the recovery period, and the precautions to follow. Involving the caregivers in the design of preoperative education could help ensure diversity of information needs is addressed during design. Virtual or in-person preoperative education should also consider health literacy as current information sharing is not well understood by patients. Future research should explore the inclusion of caregivers in preoperative education or providing dedicated caregiver education to improve recovery outcomes.

Methodological Considerations and Trustworthiness

We employed an interpretive descriptive methodology to deeply explore and understand the experiences of patients living in the community following shoulder surgery (Thorne, 2017). Each interview varied in length, but rich data and information were obtained, emphasizing the participant's enriched descriptions and minimizing personal interpretation. Thematic analysis was used to gain insight into individual participant experiences, ensuring the trustworthiness of the results by maintaining credibility, confirmability, and dependability (Berg, 2012). Purposeful sampling enhanced credibility, while continuous checking and interpretation validation by the author assured confirmability. To enhance transparency, participant quotes were included directly, confirming the trustworthiness of the study. Themes were developed to capture the underlying

meaning of codes and categories, reflecting participants' conveyed information accurately (Graneheim & Lundman, 2004).

The study holds some limitations. The author's educational background, age, and gender could have influenced various aspects of the research, including the formulation of research questions, the development of interview questions, the process of data collection, and the analysis of the collected data. Furthermore, these factors might have influenced the interpretation, reporting, and discussion of the data in the thesis. Like any other qualitative research, there is a possibility of researcher bias despite the author making conscious efforts to avoid personal beliefs and opinions throughout the study. Next, the deep connection and bond between the researcher and the participant was not developed to the extent prescribed by the literature as most of the interviews were over the telephone. Additionally, as the interviews were virtual, most of the participants were at home when being interviewed. Thus, participants did not get a private escape to open up as they should have. The data collected was from the patients of a single surgeon from the same institute. Thus, there is a possibility that participants shared a similar experience because everyone experienced the same problem at the center (with the staff), and similarly, as every surgeon has a typical way of performing the procedure if data was collected from a participant who underwent the surgery from another surgeon, there is a chance of reporting a different experience to a small extent. Lastly, more information could have been delivered in terms of patient education, however, due to the limitation in the scope of the study, the caregiver's opinion could not be delivered as we did not have consent from their end.

Conclusion

This study identified the adaptations and self-management strategies used by patients during the initial discharge period, particularly among elderly patients who struggle with managing their daily routines independently. Adaptations encompassed physical, emotional, and home environment modifications. The primary driver of patient preparedness was their perceived existing social supports. Demographic factors, surgical-related factors, health literacy, prior patient education, and caregiver involvement also were essential to coping with recovery. Patient dissatisfaction was observed regarding the information received about their surgery precautions and how to receive home care.

Acknowledgments

The authors gratefully acknowledge the participants for their valuable time and shared experiences during the study. Special thanks are extended to Katrina Munro for her assistance in handling the ethical proceedings of the research.

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CHAPTER 4:
Grand Discussion



Our study aimed to inform patients and their caregivers about the challenges they may encounter after undergoing day surgery. While previous studies have focused on physical restrictions, our research aimed to shed light on difficulties in various aspects of everyday life, including personal, physical, emotional, occupational, economical, and environmental impacts. Additionally, we identified coping strategies that can influence recovery outcomes based on our literature review. Moreover, we identified factors that influence recovery at home, suggesting the need for further investigations to understand the impact of these factors on recovery. Lastly, this study emphasized patient-centered care by educating healthcare professionals on meeting the diverse needs of individuals after day surgery.

The primary objective of this thesis was to explore the firsthand experiences of patients who underwent day shoulder surgery and understand how they managed their daily roles and responsibilities during the initial recovery period. We also aimed to identify coping strategies employed during the early recovery phase and examine the influence of personal, demographic, and surgery-related factors on their recovery process. To achieve this, we conducted interviews with individuals who had undergone day shoulder surgery.

Manuscript 1 presented an interpretive descriptive study that focused on patients' experiences and difficulties encountered during the first three weeks after day shoulder arthroplasty. We identified specific themes to address our research objectives, primarily examining the short-term impacts of surgery on everyday life. Furthermore, we aimed to identify personal influences that hindered the recovery process. The results highlighted the biopsychosocial impacts of day surgery, including changes in personal relationships, professional life, and the financial burden associated with the procedure. These post-operative changes and challenges were significantly influenced by demographic factors such as age, sex/gender, occupation, and marital status.

Manuscript 2 also presented an interpretive descriptive study that explored patients' approaches, adaptations, and modifications to manage difficulties experienced during the initial three weeks after surgery. We categorized our sample population into three groups based on the amount of internal or external support they relied on during the post-operative period, aiming to provide a comprehensive understanding of the topic. We developed specific themes to address our research question, focusing on the adaptations employed to manage the initial recovery phase and identifying surgery-related influences that hindered the process. The results indicated that living

conditions played a significant role in coping during the post-operative period. Moreover, surgery-associated factors such as the type of surgery, the side of the operated extremity, the reason for surgery, surgical literacy, and patient and caregiver information influenced the post-operative changes and modifications.

In conclusion, our study has several key implications: 1) it sheds light on the challenges faced by patients and caregivers in performing family activities; 2) it explores the roles of internal and external networks in providing support for these challenges; 3) it highlights multiple coping strategies that individuals can employ to enhance recovery outcomes; 4) it emphasizes the importance of patient-centered care; and 5) it emphasizes the influence of personal and surgical factors on the recovery process. These findings can guide clinical practice by adapting care to individuals' needs, providing practical coping strategies, and raising awareness of diverse needs within the population. It is evident that each injury requires specific recovery services to promote overall health. In our study, the role of social support in optimizing recovery was highlighted. Therefore, qualitative research plays a crucial role in providing an in-depth understanding of the required services based on individuals' unique health experiences.

Implications of findings

To advance comprehension of patients' experiences, future research should encompass a wide range of surgeons, protocols, and facilities. The qualitative inquiries aiming the timeframe when patients typically regain independence in ADLs post-operatively could ameliorate patients' frustration and anxiety during rehabilitation by furnishing supplementary knowledge about the typical progression of recovery.

Clinical implications

It is a no surprise that caregiver support at home significantly influences discharge after hip and knee total joint arthroplasty, being integral to home transition (Halawi et al., 2015). The current study portrayed the participants' reliance on support from friends and family, expressing unwavering gratitude for such assistance. However, the extent of support required after arthroplasty, particularly in the context of a day surgery, remains a relatively under-researched area especially from a day shoulder surgery perspective.

Future qualitative investigations, including caregiver interviews, hold the potential to provide more accurate insights into the recovery process of individuals reliant on assistance during initial rehabilitation stages, thereby shedding light on caregiver burden. Other researchers have emphasized the significance of caregivers having a support network post-surgery (Churchill et al., 2018). Notably, a study by Zadzilka and team revealed a substantial improvement in caregiver burden one-month post-knee arthroplasty compared to one year (Zadzilka et al.2018). Incorporating the caregiver's viewpoint, alongside that of the patient, can offer a comprehensive understanding of the patient's genuine needs, while also validating the participants' statements regarding required assistance. However, there is a paucity of research on the caregiver's perspective following shoulder arthroplasty.

Also, healthcare professionals in the study were expected to provide informational support for persons about self-care and the trajectory of recovery. Therefore, it might be practical for clinicians, patients, and their care partners/ caregivers to ensure that adequate information is provided to alleviate the burdens of a day surgery. This could include strategies for how partners can support persons or how persons can approach self-care during the recovery.

Physical therapist and occupational therapists, in particular, would benefit significantly from research on modifications and adaptations in roles, habits, and behaviors that promote quality participation and facilitate occupational engagement. The majority of reviewed studies in this field focus on long-term results, with follow-ups conducted at one year or beyond. Therefore, undertaking additional research on recovery and acute progress is imperative to provide therapists, patients, and caregivers with appropriate education and guidance. The patient and caregiver experiences throughout the recovery process remain predominantly unexplored. This knowledge gap necessitates further investigation in numerous areas.

Education of health professionals

Although our main focus in this study was on exploring short-term challenges and coping mechanisms related to activities following ambulatory orthopedic surgery, it became evident that patients emphasized the crucial role of health professionals in providing information and resources for self-care and recovery. Participants expressed a desire for improved communication with healthcare providers and valued receiving relevant information and guidance to enhance self-care

and minimize stress during the recovery process after the surgery. However, in order for this transfer of information to become a routine part of post-surgical care, it is necessary to disseminate these findings to healthcare professionals through professional and continuing education. There is a significant potential to promote the learning of patient-centered practice, shared decision-making, and how to support self-care among healthcare professionals. The active involvement of patients in their own care can enhance clinical skills and contribute to the education of healthcare professionals (Towle et al, 2010). This patient engagement in healthcare professional education has already been utilized in fields such as nursing, social work (Repper and Breeze, 2007), physiotherapy (Ottewill et al., 2006)), and pharmacy (Shah et al., 2005). There is an opportunity to leverage patient-engaged strategies, such as the co-design of educational materials for patients and their families, to facilitate better communication regarding acute support needs following ambulatory surgery and support the implementation of these improved practices.

Future research

There is a lack of research about providing social support after a day orthopedic surgery with a focus on the patient's and caregiver's perspectives. Previous studies demonstrated various difficulties that persons might experience after a fracture and compensatory strategies they might apply (Bialocerkowski, 2002). However, the role of immediate family including partner, family, friends, and significant others has not been explored. Our study advanced knowledge by stressing the role of patient's living condition in providing social support in particular for personal as well as other role responsibilities through the patient's perspectives. Moving forward, it is also important to explore and consider the perspectives of care partners and caregivers as their views and priorities may differ from patients' standpoints (Koren et al., 2018; Mackie et al., 2018)). Moreover, caregivers' and care partners' contributions to patient care may result in minimizing negative emotions and increasing the feeling of being helpful. In addition, their involvement can provide health professionals with information to better understand patients' needs. In addition, there is a need to explore regarding the other required support for people living alone than those described in the current study, especially from a male's perspective since we only had female participants who lived alone and relied on certain specific external supports. Lastly, our study highlighted that caregiver burden indirectly impacted the nature of support they provide to the

patients. More studies on ways to reduce caregiver burnout after an orthopedic surgery is suggested.

Lastly, our study identified challenges regarding relational equations between the couples, occupational impacts and the level of financial constraints experienced by the comparatively younger participants of the population. These topics remain as a vital research area for further exploration and investigations following the day surgery. No or scarce published literature addresses these disruptions after surgery especially after a day shoulder surgery.

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Appendices

This section has the demographic form and the interview guide

Appendix A: Demographic details form

1. What is your age (in years)?	_____
2. What sex were you assigned at birth?	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Option not listed, please specify _____ <input type="checkbox"/> Would not like to answer
3. With which gender do you identify?	<input type="checkbox"/> Man <input type="checkbox"/> Woman <input type="checkbox"/> Option not listed, please specify _____ <input type="checkbox"/> Would not like to answer
4. What is your marital status?	<input type="checkbox"/> Single <input type="checkbox"/> Common-law married <input type="checkbox"/> Married <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed <input type="checkbox"/> Other _____
5. What is your occupation?	_____
6. What was the reason for undergoing the TSA surgery? (IF Osteoarthritis, ask Q. 7,8)	_____
7. How long had you been diagnosed with arthritis?	_____
8. What was the type of your arthritis?	_____
9. Are you currently employed or retired?	_____

10. How many people living in your house currently, including you?	_____
11. Who performs tasks/ caring for your home and family? (Before surgery and after surgery)	<input type="checkbox"/> Myself <input type="checkbox"/> My spouse/partner <input type="checkbox"/> My children <input type="checkbox"/> Friends <input type="checkbox"/> Other family members who also live in my home <input type="checkbox"/> Other family members who live outside of my home <input type="checkbox"/> Paid staff (like babysitters or cleaners) <input type="checkbox"/> Support workers (like healthcare workers) <input type="checkbox"/> Other _____
12. Which of the following describes you best?	<input type="checkbox"/> No enough money to afford daily needs <input type="checkbox"/> Can afford daily needs but no extra expenses <input type="checkbox"/> Can afford daily needs but spend limited on extra expenses <input type="checkbox"/> Can afford daily needs and spend on extra expenses
13. Which is your dominant upper extremity?	<input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Ambidextrous
14. On which side, did you undergo the TSA surgery?	<input type="checkbox"/> Right <input type="checkbox"/> Left
15. Do you have a pet? If yes, what kind?	<input type="checkbox"/> Yes <input type="checkbox"/> No _____

Appendix B: Semi-structured Interview Guide

Semi-structured interview for the investigation to identify what were the main difficulties community dwellers experienced immediately (within the initial three weeks), what were their perceived needs, how they adapted in their daily lives to tackle the hurdles, and finally what modifications/ variations they brought about that made the process easier following discharge from hospital post their Total Shoulder Arthroplasty (TSA) surgery. The interview questions revolve around the Activities of daily living (ADL), household chores, family responsibilities, occupational responsibilities, and lastly the barriers and needs for assistance in exercising/ rehabilitation/ physical therapy sessions.

Length: 30-60 minutes

Goal: To better understand community dwellers' challenges as well as what, how, and which changes/ modifications take place following the same/ single-day discharge shoulder arthroplasty in their lives.

Format: Semi-structured interview questions (marked with numbers) with probing questions (alphabetically) to elicit responses that are most relevant to the participant.

In-person interview- In the D0 139 of Hand and Upper Limb Centre- Clinical Research Lab (HULC CRL). The interview will audio- recorded using Olympus DS 3500 encrypted voice recorder. The participant will also be informed that they have the choice to not answer any questions as well as stop the interview at any time point during the session.

Telephone interview- Through the telephone in the Hand and Upper Limb Centre- Clinical Research Lab (HULC CRL). The interview will be scheduled at the participant's time convenience. The interview will audio- recorded using Olympus DS 3500 encrypted voice recorder. Participants will be informed about the start of the audio recording before pressing the voice recorder ON. Additionally, the participant will also be informed that they have the choice to not answer any questions as well as stop the interview at any time point during the session.

WebEx- The interview will be scheduled at the participant's time convenience. The invitation link for the scheduled interview will be sent using the e-mail address. Participant has the flexibility to keep the video camera on/off as per their choice. Only audio recordings will be conducted throughout the session. Participants will be informed about the start of the audio recording. Additionally, the participant will also be informed that they have the choice to not answer any questions as well as stop the interview at any time point during the session.

Interview guide for recruited participants' interview session

Preamble: Hello, thanks for accepting to participate in this research study. My name is Bansari Patel, a master's student in the Health and Rehabilitation Sciences (Physical Therapy) program at Western University. In this study, I am trying to understand how community dwellers are affected by the same/ single-day discharge Total Shoulder Arthroplasty (TSA) surgery. This is part of my master's thesis. I am interested in knowing about what challenges you went through

after the same/ single-day discharge TSA, what perceived needs for assistance post-discharge did you experience, and what adaptations you brought within your lives in the initial period post-surgery? I will be asking questions about all these things but there are no right or wrong answers. Everyone has different experiences. We will collect and share themes to help the team to understand how we can improve the situation for future patients.

“For participation in this study, I will be asking you a few questions and then recording the answers as the consent form mentioned, do I have your permission to start recording the interview?”

Wait till you have permission to begin

“So now I will begin to ask questions. If at any point you wish to not answer a question and move on to the next one, you may. Also, if at any time you want to stop the interview, please let me know.

Do you have any questions before we start?”

*Answer any questions they may have, and then inform them you are pressing play and will begin to record.

If you don't mind, we are going to start by talking about your experience following your TSA surgery to understand how it has affected you.

1) Could you tell me about your experience with same/ single-day discharge shoulder arthroplasty surgery?

2) and How did this surgical procedure affect you?

Household chores

1) Could you tell me about household chores in your family?

A. How do you and your family members usually divide up these tasks?

(probes: what things do you do more or less than your family members?

could you tell me more about that?

what about cleaning the house? Doing the dishes? Home decorating? Home repairs?

Gardening? Laundry? Mow lawn? cooking?

B. Tell me what things you have to do differently now after the discharge from the hospital post-surgery?

C. Are there certain things you put off doing because of the surgery?

(Probes around specific tasks like laundry, house cleaning, outdoor cleaning, taking the garbage out, house repairs, gardening, preparing meals, shopping)

D. Have you asked anyone to help you besides yourself with the household chores since the injury? (Any other helps from friends/ family/ external agencies?)

Personal care:

- 2) Do you usually require any help with personal care? If so, has there been any modification in the manner of carrying it out or a change in the level of assistance needed after the surgery?

E. Can you tell me more about the nature of aid needed and in what activities for the personal activities after your discharge from the hospital?

F. Can you tell me more about the tasks that you completely put off doing yourself after your surgery? How did you manage to get those tasks done?

G. Have you received any other help with your care besides your partner/ family member? If so, can you tell me more about who helps and what they do?

Family roles related to children (Skip it if no children)

- 3) Is there anyone who needs your help that you are responsible for providing regular help? Tell me about that.

G. What are the situation and your role in the family around caring for or supervising children?

H. How do you and your partner usually divide these caregiving tasks?

I. Has this changed after your discharge? If yes, can you tell me how?

(probes around: difficulty level, the pace of doing the task, need of assistance, modifications or adaptations in the normal usual manner of yours to perform these tasks)

J. What specific things have you taken overdoing concerning your children since your surgery?

K. Are there certain things related to the children that you stop doing after your discharge? (probes around: helping children with homework, supervising children, caring for children when sick)

L. Can you tell me more about managing the children-related responsibilities? Did you take any external help for these tasks?

Family roles related to caring for a partner or other members living together (skip it if no partner/ other family members accompanying)

- 4) Can you tell me about your role in caring for your partner/ family members living together? How do you usually carry out these responsibilities?

M. Has this changed following your discharge after the surgery? If yes, can you tell me how?

N. Are there any specific things have you put off doing concerning caregiving for your partner/ family members since your surgery?

(Probes around specific tasks like taking the partner to appointments, paying bills, doing errands, or caring for elderly parents.)

O. Are there certain things related to the caregiving for your partner/ family member, for which you took external help?

Occupational responsibilities (Skip if retired or does not work):

5) As your surgery is pretty recent, how are you managing work-related responsibilities?

P. Can you tell me more about the changes/ compensations you made in your occupation-related tasks following the surgery? Did you apply for sick leave or able to continue doing it?

Q. Are there any tasks related to your work for which you seek extra help or assistance in doing it following your discharge?

R. Tell me more about any limitations which you experienced related to your profession after the surgery (probes: the pace of working, more time to meet the deadlines, more than usual help).

S. Are there any tasks that you completely put off following your surgery?

Physical Therapy/ Occupational Therapy/ Rehabilitation and exercises:

6) Did you exercise before your shoulder arthroplasty surgery? If so, are there any changes/ adaptations which you acquired to carry on with your daily workout after the discharge following the surgery?

T. Can you tell me about managing your exercises post-surgery? Do you go to a physiotherapy clinic or prefer home-based physiotherapy visits?

U. Tell me more about your experience following the prescribed exercise protocol. Did you feel any specific type of limitation/ difficulty in performing your exercises other than the usual symptoms felt during exercises (mild pain/ stretching) and how did you overcome it?

V. Did you take any external help or assistance to keep up with your exercise routine? If so, who's help do you seek? Tell me about any external aids/devices you used while exercising and how does it help you.

Thanks for sharing all of those pieces. Now, I want to ask a few things about other ways you might be supporting yourself during recovery.

Other Supports:

1. What things could the healthcare system have done to make this situation easier for you and your family?

2. Apart from the above-mentioned categories, is there anything major which completely changed after the surgery? If you were to decide from the above-mentioned categories, which one of those was majorly impacted? And were the adaptations you approached made it any better?

3. Tell me about the mental health-related challenges that you experienced post-surgery.

Finally, what advice would you like to give to future patients to be better prepared for the surgery and what to expect immediately after discharge?

Appendix C: Letter of Information and Consent form

Project Title: Short-term challenges in independent living for community dwellers after same or single-day discharge shoulder arthroplasty.

Investigators

Dr. Joy MacDermid, PT Ph.D. (Principal Investigator)

Department of Physical Therapy, Western University

Patel Bansari Daxeshkumar, MSc. Student (Student investigator)

Department of Physical Therapy, Western University

Dr. Ken Faber, MD, (Co-investigator)

HULC, St. Joseph's Health Center

Ms. Katrina Munro, MPT Ph.D. (Research Co-ordinator)

HULC, St. Joseph's Hospital

What is the purpose of this study?

The following study is a graduate student project studying at Western University. The purpose of this study is to understand about what are the immediate barriers that the community dwellers face shortly after the same/single-day discharge Total Shoulder Arthroplasty (TSA) as well as what are their perceived needs for assistance and adaptations that are acquired in their daily lives as a result of the surgery. This knowledge is potentially expected to benefit future patients, clinicians as well as hospital authorities in getting better prepared for the forthcoming same/ single-day discharge TSA surgeries. You are being invited to participate in this study because you are a patient at the Hand and Upper Limb Centre of St. Joseph's Hospital and this interview may help us gain insights into the immediate hurdles and adaptations that you came across and what helped you overcome or deal with it. The interview will be semi-structured, meaning we have a guide we will follow but certain questions and prompts may come up that are not anticipated.

Recruitment

Approximately 20 community-dwelling individuals, who undergo same/ single-day discharge TSA at the St. Joseph Hospital, can speak, read/write in English, and have given informed consent will be recruited from the Hand and Upper Limb Centre (HULC).

Study Procedures

This study is an interview. You have been approached by your treating surgeon introducing the study to you, and followed up by research support staff, Katrina Munro, asking whether you are interested in participating in this interview. Please read through this letter of information and if you have any questions, you may ask the research support staff. If you are willing to participate

you will be asked to sign a consent form and provide your contact information (contact number and E-mail address) if you feel comfortable. You will then be contacted by phone or in person to set up a date and time for the interview, and at this point, you can ask any additional questions you might have about the participation. The interview will take place at St. Joseph's Hospital in the Hand and Upper Limb Clinical Research Lab (D0 139). However, there is also an availability of a virtual interview through WebEx or a telephone interview. Your e-mail addresses and telephone numbers would be collected if you opt for the virtual interview session. When you arrive, we will ask if you are still willing to participate in this study. We will then get you to fill out some limited information about you and the TSA surgery you underwent, and lastly, conduct your interview. You will be asked to respond to the interview questions honestly. The interview should take approximately 30 to 60 minutes. Furthermore, if you opt for a virtual interview session on WebEx, you will have the flexibility of keeping the camera on/off as per your wish and choice. You will be informed about this at the beginning of the virtual interview session as well as at the start of the recording (audio-recording). Any information regarding your name or demographics will be kept separate from the interview and accessed only by members of the research team. The interview will be recorded using an encrypted recording device and stored on a password-protected computer in an encrypted file. The in-person and telephone interviews will be audio-recorded using Olympus DS-3500 Encrypted voice recorder. Furthermore, the interviews will be transcribed by the student investigator, Bansari Patel.

Participation in the Study:

Participating in this study is voluntary. You will receive a copy of the letter of information and consent form for your records. You do not waive any of your legal rights by signing the consent form. You may refuse to participate, refuse to answer any questions, or withdraw from the study at any time with no effect on your future care. You will continue to receive standard care, i.e., routine checkups with your doctor. If you DO decide to stop your participation in our study, we will ask you how you would like us to handle the data collected up to that point. You have the right to withdraw all data collected for the study. If you have concerns or would like to withdraw you can contact the principal investigator, Dr. Joy MacDermid, or research assistant, Katrina Munro.

What are the benefits of this study?

There are no direct benefits to you associated with your participation in this study. But your study participation will have societal benefits. The study is expected to benefit the clinicians (physiotherapists and occupational therapists) in developing an impactful pre-operative protocol/training session, which will better prepare the patients for the surgery and make their lives easier post-surgery. The hospital facility will be benefitted by preparing a list of all the available help (devices/ agencies) which could help their patients. This will aid hospital management to accumulate and keep all the patient-needed resources handy, thus making the patient's life easier and delivery of the best patient care in a short time duration. Future patients will be guided on what to expect just after their surgery, thus, helping them to be better prepared beforehand.

Lastly, as the literature lacks a qualitative aspect on the topic of single-day discharge TSA surgery, the study will also contribute to the literature and accelerate the process of more studies being conducted on the topic. Thus, the study will surely benefit future patients in tackling and

coping well alongside the already mentioned advantages to clinicians, hospital staff, and academicians.

Are there any risks or discomfort associated with this study?

There is a potential for a privacy breach, as identifying information is being collected. However, identifying information will be kept separate from the data. Instead, the data will be de-identified.

How many people are in this study?

There will be approximately 20 people in this study, however, for qualitative research, data collection will stop when we reach theoretical saturation, meaning we are not learning any new information from the participants.

Is there any compensation if I participate?

There is no monetary reimbursement for participation in this study.

Will my results be kept confidential?

Your results will be held in strict confidence. No person, other than the study team and treating clinician will have access to the study data.

Upon study recruitment, participants will be given a unique numerical identifier (Participant ID) that will be entered on all data collection forms containing personal information in lieu of their name. This identifier will be randomly generated and will not include any personally identifying information (such as name or hospital ID). The study investigators will keep a master copy of the unique identifier assigned to each participant. This list will be stored on the SJHC secure G drive. Participants' contact information and consent forms will also be collected and stored separately from the master list of unique identifiers. All paper files will be stored in a locked file cabinet in the HULC clinical research lab and all electronic files will be stored on a password-protected computer on the secure hospital network. A summary of this study might be put on our lab website for public viewing, however, this would not identify you in any way, however, direct quotes may be used in a publication and the media, but again no identifiers will be linked to the quotes. Representatives of the University of Western Ontario Health Sciences Research Ethics Board and Lawson Quality Assurance and Education Program may contact you or require access to your study-related records to monitor the conduct of research and to ensure that proper policies and guidelines are being followed. Under the Lawson Ethics Board policy, the study investigators will retain your information and study data for 15 years.

Publication

If the results of the study are published, your name will not be used. There may be direct quotes, but they will not be associated with your name. If you would like to receive a copy of any potential study results, please provide your name and contact number on a piece of paper separate from the Consent Form.

Whom you may contact to find out more about this study?

You will be given a copy of this letter. If you have questions about taking part in this study, you can directly contact:

Dr. Joy MacDermid, Principle Investigator
Katrina Munro, Study Research Assistant
Patel Bansari Daxeshkumar, Student Investigator

If you have any other questions about your rights as a research participant or about the conduct of the study, you may contact: St Joseph's Health Care London Patient Relations Consultant.

Consent to Participate In: Short-term challenges in independent living for community dwellers after same or single-day discharge shoulder arthroplasty.

Investigators:

Dr. Joy MacDermid, PT Ph.D. (Principal Investigator)

Department of Physical Therapy, Western University

Ms. Patel Bansari Daxeshkumar, MSc. student (Student investigator)

Department of Physical Therapy, Western University

Dr. Ken Faber, MD, (Co-investigator)

HULC, St. Joseph's Health Center

Ms. Katrina Munro, MPT Ph.D. (Research Co-ordinator)

HULC, St. Joseph's Hospital

- I have read the letter of the information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Signature of Participant	Print Name of Participant	Date

- My signature means that I have explained the study to the participant named above and answered all the questions.

Signature of the person obtaining consent	Print name of person obtaining consent	Date

Appendix D: Patient Handouts



GETTING READY FOR A SHOULDER REPLACEMENT SURGERY

Your shoulder surgery is a big day and we have some tips to help you get ready. Other patients helped us with this advice based on their experience.





UNDERSTAND YOUR SURGERY...



Surgery is a big event in your health care. It is usual to have concerns and questions. Below are a few recommendations that can help you.

- Don't be afraid to ask your surgeon questions. You can write them down to make sure you do not forget to ask. Here are some common ones:
 - What changes in pain and function can I expect?
 - How long will I have pain after surgery? What is my pain management plan?
 - Are there any risks of complications?
 - Do I have to take time off work or other activities? How Long?
- Patients often find it helpful to talk to other people especially if they had a similar operation. But remember, everyone has a different experience with surgery.
- It helps to read and discuss the "patient journey guide" or other information about shoulder replacement surgery.
- You can attend the pre-operative information class conducted by the hospital that has more information. Your therapist/ doctor can direct you about accessing those sessions.





GET READY PHYSICALLY...



You will not be able to use your arm in the first few weeks after surgery. Here are a few suggestions that can help you prepare for that.

- Practice doing essential daily activities without using the arm that will be operated on. This will be harder if it is your dominant arm that is being operated on. Focus on tasks you have to do like brushing your teeth, eating, and dressing.
- If you are a side sleeper, it would be helpful if you practice sleeping on your back a few weeks before the surgery. You may wish to find supportive pillows that will help you with comfortable positioning after surgery.
- Buy or prepare individual meals and store them for easy use after surgery. Make sure you focus on healthy foods as nutrition is important for healing.
- Stock up on groceries, medications, and other essentials right before surgery.
- Organize a set of loose-fitting clothes, pull-up pants, or comfortable trousers as using buttons, zip, or belts will be difficult with only one hand.
- Do errands like banking, bill payments, and arranging services before surgery.
- Prepare for transportation without driving. This may include taxi information, other car services, or arranging with family. You should not drive unless and until advised by your doctor.
- Talk to family and friends about what things you might need help with after surgery and make a plan to share the load.
- You need rest after surgery. Avoid planning important meetings/commitments right after the surgery.





GET YOUR HOME READY...



These are some ideas about getting your home ready.

- Clear spaces and remove clutter to make rooms you need to use safe and easily accessible.
- Install gripping bars, anti-slip mats, shower chairs, and raised toilet seats to avoid falls/ injuries in your bathroom
- Make sure you have a light that is bright enough in the hallways and basement. Lights that come on with motion can be helpful at night.
- Using a dishwasher with one hand will be easier than hand-washing dishes.
- Make a sleep plan. Sleeping in your recliner chair might be more comfortable in the early days. Or you may use a foam wedge in your bed. Have enough cushions ready to support your arm. You may need a special cushion to support the neck. If that is an option, you may want to use a bedroom that avoids stairs.
- Buy or borrow simple aids you think you will need such as backscratchers and reaching sticks. Organize your aids so they are accessible.
- Practice walking using a cane in your non-operative hand, in case your balance is off after the surgery.
- A medicine dispenser might be easier to open after surgery. It can help you take your pills at the right time.
- Have cold packs in your freezer since they can help with pain relief after surgery.
- Have pillows set up in your usual chair to help with supporting your arm while sitting.
- Put plastic bags or water-proof bandages in your bathroom to avoid getting your incision wet. If you have a detachable showerhead this will make it easier.





MENTAL WELL-BEING AND MANAGING YOUR EMOTIONS...

Surgery can cause stress. Here are some ideas to protect your mental health.

- Get enough rest and sleep before and after surgery.
- Eat a healthy diet before and after surgery
- Exercise normally before surgery. After surgery, you can do light exercise that does not stress your surgical arm or short walks. Make sure you are in a safe position when exercising after surgery as your balance can be a bit off.
- Write down positive thoughts and focus on what you are thankful for.
- Practice breathing exercises, meditation, and relaxation techniques to manage or avoid stress. Ask your therapist about ways to do it.
- Talk to your friends and loved ones about how you are feeling and how they can help.
- If you belong to a religious or social organization make sure they know the timing of your surgery, and what social visits are welcome.
- Do activities that make you feel happy like reading a book or listening to soothing music to keep yourself calm and reduce anxiety.





PLANNING FOR SUPPORT...



You should think about the social supports in your life like family and friends, and the community services that might help you. You should try to plan that help before surgery. You may wish to discuss this with your surgeon or family health team. Some options are listed below

- A personal support worker might help take care of your personal hygiene, dressing, and grooming.
- A wound nurse might care for the incision site if you need to change the bandages periodically.
- A cab service (e.g., uber, checker) might help you get to your follow-up visits, grocery shopping, or other appointments.
- A meal service (e.g., meals on wheels) might help in case you are unable to cook food.
- A housekeeper might help with your housework and maintenance.
- A home physiotherapist might help with your shoulder rehabilitation.



Curriculum Vitae

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