

**Exploring the perceptions of chiropractors in the eThekweni
municipality on the role of chiropractic care in the management of
post-surgical lumbar pain**

By

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**I, Johan Carel Fourie, do hereby declare that this dissertation is representative
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DEDICATION

I dedicate this work to my Lord and saviour Jesus Christ, for nothing I can do can measure up to the love that was first bestowed on me by You who has redeemed me to the Father and all my efforts are in vain if not done in worship to You.

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ABSTRACT

BACKGROUND

Lumbar pain is the leading cause of disability worldwide with an increasing prevalence. There are several interventions for lumbar pain, with surgery usually considered as the last resort. Chiropractic treatment is an intervention associated with management of spine pain; therefore, it stands to reason that chiropractors would encounter patients suffering from post-surgical lumbar pain in practice. The perceptions of chiropractors on the role of chiropractic management in post-surgical lumbar pain (PSLP) can therefore assist further development in this field.

AIM

This study aimed to explore the perceptions chiropractors in the eThekweni municipality have about their role in the management of patients who suffer from post-surgical lumbar pain.

METHODOLOGY

A qualitative, exploratory and descriptive design, utilising the linear snowball sampling technique, was used. Individual, semi-structured interviews were conducted with 12 qualified chiropractors in the eThekweni municipality of KwaZulu-Natal in South Africa. The interviews were recorded, transcribed and then analysed.

RESULTS

Four main themes were extracted: informed and competent understanding of PSLP, shared recognition of the chiropractor's role and utilisation in post-surgical lumbar spine care, shared perceptions of the therapeutic value of chiropractic treatment for managing PSLP, and uniform practice patterns and challenges in post-surgical lumbar spine management.

CONCLUSION

Chiropractors believe that, chiropractic care plays a role in restoring movement, improving function and reducing pain in the management of PSLP through the application of various modalities available to them within their wide scope of practice.

KEY WORDS: Chiropractic, Post-surgical lumbar pain, Chiropractic management.

LIST OF ABBREVIATIONS

AHPCSA	-	Allied Health Profession Council of South Africa
AI	-	Artificial Intelligence
ALL	-	Anterior Longitudinal Ligament
Bios	-	Biokineticists
BPS	-	Biopsychosocial
CASA	-	Chiropractic Association of South Africa
CPSP	-	Chronic Post-Surgical Pain
DUT	-	Durban University of Technology
FBSS	-	Failed Back Surgery Syndrome
GP	-	General Practitioner
HCP	-	Health Care Provider
HVLA	-	High-Velocity-Low-Amplitude
IASP	-	International Association for the Study of Pain
IC	-	Integrated Care
ICD-11	-	International Classification of Diseases and Related Health Problems, 11 th revision
IFC	-	Interferential Current
IREC	-	Institutional Research Ethics Committee
IVD	-	Intervertebral Disc
KZN	-	KwaZulu-Natal
LP	-	Lumbar Pain
NRS	-	Numerical Rating Scale
NSAIDS	-	Non-Steroidal Anti-Inflammatory Drugs
OEFs	-	Occupational and ergonomic factors
op	-	Operation
Orthopod	-	Orthopaedic surgeon
PCC	-	Patient-centred care
Physio	-	Physiotherapies
PLL	-	Posterior Longitudinal Ligament
POPI	-	Protection of Personal Information

PSLP	-	Post-surgical Lumbar Pain
QL	-	Quadratus Lumborum
Rehab	-	Rehabilitation
SA	-	South Africa
SCS	-	Spinal Cord Stimulation
SM	-	Spinal Mobilisation
SMT	-	Spinal Manipulation Technique
TENS	-	Transcutaneous Electrical Nerve Stimulation
UK	-	United Kingdom
UN	-	United Nations
USA	-	United States of America
WFC	-	World Federation of Chiropractic
WHO	-	World Health Organisation
YLDs	-	Years Lived with Disabilities

KEY DEFINITIONS

Chiropractic: A health profession concerned with the diagnosis, treatment and prevention of mechanical disorders of the musculoskeletal system and the effects of these disorders on the function of the nervous system and general health (World Federation of Chiropractic 2025: para. 1 line 1).

Chiropractic management: A biopsychosocial model of care that considers the patient's needs, beliefs and preferences when treating their patients with a shared emphasis on patient education and advice, promotion of self-efficacy, rehabilitation and manual techniques (World Federation of Chiropractic 2025: para. 7 line 1).

Lumbar pain: A symptom that typically refers to pain, stiffness or muscle tightness experienced in the lower back region with or without associated leg pain (Mattiuzzi, Lippi and Bovo 2020: 1).

Post-surgical lumbar pain: Persistent back and leg pain suffered by patients who have previously undergone lumbar spine surgery (Schug *et al.* 2019: 48).

LIST OF TABLES

Table 4.1	Exemplar of Interview Guides Used in Qualitative Studies	27
Table 5.1	Demographic Data	35
Table 5.2	Themes and Sub-Themes	36
Table 5.3	Summary of Treatment Tools Utilised in Chiropractic Management of Post-Surgical Lumbar Pain	46

LIST OF FIGURES

Figure 2.1	Lumbar vertebrae (Netter 2017: 164)	7
Figure 2.2	Vertebral ligaments: lumbosacral region (Netter 2017: 167) ..	8
Figure 2.3	Posterior Lumbar Muscles: Intermediate Layer (Netter 2017: 181)	9
Figure 2.4	Posterior Lumbar Muscles: Deep Layer (Netter 2017: 182) ...	9
Figure 3.1	Summary of Biopsychosocial Model. Adapted from Adams and Turk (2018: 5); Gileedt <i>et al.</i> (2017: 2); and Taukeni (2020: 1)	19
Figure 3.2	Summary of Theory of Planned Behaviour. Adapted from Asare (2015: 44) and Brookes (2023: para. 4 line 1)	21

LIST OF APPENDICES

Appendix A:	Ethics Clearance Certificate	80
Appendix B:	Permission from Allied Health Profession Council of South Africa	81
Appendix C:	Letter of Information and Informed Consent	82
Appendix D:	Interview Guide	85
Appendix E:	Advertisement	86
Appendix F:	Letter of Information and Informed Consent – Pilot Study	87
Appendix G:	Exemplar Transcript	90
Appendix H:	Editor’s Certificate	92
Appendix I:	Plagiarism Check	93

TABLE OF CONTENTS

DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
LIST OF ABBREVIATIONS	v
KEY DEFINITIONS	vii
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF APPENDICES	x
CHAPTER ONE INTRODUCTION	1
1.1 INTRODUCTION	1
1.2 RESEARCH PROBLEM	2
1.3 RESEARCH AIMS	3
1.4 OBJECTIVES	3
1.5 RESEARCH QUESTIONS	3
1.6 RATIONALE OF THE STUDY	3
1.7 OUTLINE OF THESIS	5
1.8 SUMMARY OF THE CHAPTER	5
CHAPTER TWO LITERATURE REVIEW	6
2.1 INTRODUCTION	6
2.2 ANATOMY OF THE LUMBAR SPINE	6
2.3 LUMBAR PAIN	10
2.4 LUMBAR SPINE SURGERY	10
2.5 POST-SURGICAL LUMBAR PAIN	11
2.6 TREATMENT AND MANAGEMENT OF POST-SURGICAL LUMBAR PAIN	12
2.7 CHIROPRACTIC AND POST-SURGICAL LUMBAR PAIN	13
2.8 PRACTITIONER VIEWS ON THE MANAGEMENT OF POST-SURGICAL LUMBAR PAIN	15
2.9 THE ROLE OF INTERDISCIPLINARY CARE FOR POST-SURGICAL LUMBAR PAIN	16
2.10 GAP IN LITERATURE	16
2.11 SUMMARY OF THE CHAPTER	17

CHAPTER THREE THEORETICAL FRAMEWORK	18
3.1 INTRODUCTION	18
3.2 DEFINING A THEORETICAL FRAMEWORK	18
3.3 THEORETICAL FRAMEWORK UNDERPINNING THIS STUDY	18
3.3.1 Biopsychosocial Model	19
3.3.2 Integrated Care Model	20
3.3.3 Theory of Planned Behaviour	20
3.3.4 Role Theory	21
3.4 SUMMARY OF THE CHAPTER	22
CHAPTER FOUR METHODOLOGY	23
4.1 INTRODUCTION	23
4.2 STUDY DESIGN	23
4.3 SETTING	24
4.4 POPULATION	24
4.4.1 Sample Population	24
4.4.2 Sample Size	24
4.4.3 Sampling Strategy	24
4.4.4 Sample Recruitment	25
4.4.5 Sample Criteria	26
4.5 DATA COLLECTION TOOL	26
4.5.1 Piloting of Data Collection Tool	27
4.6 DATA COLLECTION PROCESS	28
4.7 DATA ANALYSIS	28
4.7.1 Data Transcription	29
4.7.2 Data Interpretation	29
4.7.3 Data Storage	30
4.8 ETHICAL APPROVALS	30
4.9 ETHICAL CONSIDERATIONS	31
4.9.1 Autonomy	31
4.9.2 Non-Maleficence	31
4.9.3 Beneficence	31
4.9.4 Justice	32
4.10 TRUSTWORTHINESS AND RIGOUR	32

4.10.1	Credibility	32
4.10.2	Dependability	33
4.10.3	Confirmability	33
4.10.4	Transferability	33
4.10.5	Authenticity	33
4.11	RESEARCHER POSITIONING	34
4.12	SUMMARY OF THE CHAPTER	34
	CHAPTER FIVE RESULTS	35
5.1	INTRODUCTION	35
5.2	THEMES AND SUB-THEMES	36
5.3	THEME ONE: INFORMED AND COMPETENT UNDERSTANDING OF PSLP	37
5.4	THEME TWO: SHARED RECOGNITION OF THE CHIROPRACTOR'S ROLE AND UTILISATION IN POST-SURGICAL LUMBAR SPINE CARE	38
5.4.1	Sub-theme 1: Frequency in Treatment	39
5.4.2	Sub-theme 2: Monitoring Patient Progress	40
5.4.3	Sub-theme 3: Understanding Time Frames Before Treatment	41
5.5	THEME THREE: SHARED PERCEPTIONS OF THE THERAPEUTIC VALUE OF CHIROPRACTIC TREATMENT FOR MANAGING PSLP	42
5.6	THEME FOUR: UNIFORM PRACTICE PATTERNS AND CHALLENGES IN POST-SURGICAL LUMBAR SPINE MANAGEMENT	44
5.6.1	Sub-theme 1: Treatment and Management Selection	45
5.6.2	Sub-theme 2: Multidisciplinary Approach to PSLP	47
5.6.3	Sub-theme 3: Challenges and Barriers in Chiropractic Management of PSLP	48
5.7	SUMMARY OF THE CHAPTER	50
	CHAPTER SIX DISCUSSION	51
6.1	INTRODUCTION	51
6.2	OVERVIEW OF THE RESEARCH DISCUSSION	51
6.3	THEME ONE: INFORMED AND COMPETENT UNDERSTANDING OF PSLP	52

6.4	THEME TWO: SHARED RECOGNITION OF THE CHIROPRACTOR'S ROLE AND UTILISATION IN POST-SURGICAL LUMBAR SPINE CARE	53
6.4.1	Sub-theme 1: Frequency in Treatment	54
6.4.2	Sub-theme 2: Monitoring Patient Progress	54
6.4.3	Sub-theme 3: Understanding Time Frames Before Treatment	55
6.5	THEME THREE: SHARED PERCEPTIONS OF THE THERAPEUTIC VALUE OF CHIROPRACTIC TREATMENT FOR MANAGING PSLP	55
6.6	THEME FOUR: UNIFORM PRACTICE PATTERNS AND CHALLENGES IN POST-SURGICAL LUMBAR SPINE MANAGEMENT	56
6.6.1	Sub-theme 1: Treatment and Management Selection	57
6.6.2	Sub-theme 2: Multidisciplinary Approach to PSLP	57
6.6.3	Sub-theme 3: Challenges and Barriers in Chiropractic Management of PSLP	58
6.7	SUMMARY OF THE CHAPTER	59
	CHAPTER SEVEN CONCLUSION	60
7.1	INTRODUCTION	60
7.2	SUMMARY OF THE CHAPTER	60
7.2.1	Research Question One: What are chiropractors' understanding of post-surgical lumbar pain?	60
7.2.2	Research Question Two: What are chiropractors' perceptions on the role of chiropractic care in the management of post-surgical lumbar pain?	61
7.2.3	Research Question Three: What are chiropractors' perceptions on the effectiveness of the chiropractic management protocols in the management of post-surgical lumbar pain?	61
7.2.4	Research Question Four: What practices do chiropractors utilise in the management of post-surgical lumbar pain?	61
7.3	STRENGTHS OF THE STUDY	62
7.4	LIMITATIONS OF THE STUDY	62
7.5	RECOMMENDATIONS	63

7.6	CONCLUSION	63
7.7	DISCLAIMER ON ARTIFICIAL INTELLIGENCE TOOLS	63
	REFERENCES	65
	APPENDICES	80

CHAPTER ONE

INTRODUCTION

1.1 INTRODUCTION

Post-surgical lumbar pain (PSLP) has been defined by the International Association for the Study of Pain (IASP) as “pain in the lumbar spine of an unknown origin either persisting after surgical intervention or appearing after surgical intervention that was conducted for spine pain in the same region” (Baber and Erdek 2016: 979). Patients who suffer from PSLP usually present with symptoms such as muscle spasms, local tenderness, chronic back and/or leg pain and heaviness, numbness and/or weakness in the legs (Wu *et al.* 2023: 148). As a condition, PSLP is quite prevalent and affects approximately 20-40% of patients (Christelis *et al.* 2021: 808; Weir *et al.* 2017: 7). This is because PSLP has a complex pathophysiology that involves both structural factors, such as damage and scar tissue development to the local anatomical structures, and non-structural factors such as psychological factors, inflammation in and around the surgical site and irritation to local nerve cells (Wu *et al.* 2023: 148).

In South Africa management of PSLP has not been directly investigated. However, in terms of spinal cord injuries, patients are often not satisfied with current practices as they feel pharmacological management is ineffective and alternative management options are not being presented to them (Williams *et al.* 2022: 88). Globally patients seem to lack clarity in terms of management after having undergone lumbar surgery. Concerns include possible complications or difficulties they may have upon their return home, as well as a need for someone to contact regarding rehabilitation assistance (Damsgaard *et al.* 2017: 38; Ferrari *et al.* 2022: 4048; Van der Horst *et al.* 2019: 5).

Although patients find navigating post-surgical lumbar pain management difficult, there does seem to be sufficient literature suggesting that patients suffering from post-surgical lumbar pain end up seeking out conservative means of intervention to reduce their pain. According to Rosenberger and Pogatzki-Zahn (2022: 195), multidisciplinary concepts that target the biopsychosocial aspects of chronic pain are promising but warrant further assessment. Chiropractors in South Africa utilize a holistic preventative care model, which aligns itself to the biopsychosocial model of care and

interdisciplinary care, to treat neuro-musculoskeletal pain disorders through a wide scope of therapies (South Africa, Department of Health 2023: 23-24; World Federation of Chiropractic, 2025: para. 2 line 4). Favourable outcomes from multimodal chiropractic management have been shown in the treatment of PSLP, according to Chu and Trager (2022: 12). However, chiropractic management for PSLP has not been investigated enough and is an important topic for further research (Hébert *et al.* 2020: E1428).

Current literature from a chiropractic point of view on this type of pain globally seems to be limited to case reports. There is a paucity of literature on how chiropractors in South Africa manage this type of pain in the context of their scope of practice. The perspectives of current practicing chiropractors on the role of chiropractic management in PSLP were explored in this study.

1.2 RESEARCH PROBLEM

Lumbar pain is the most common condition managed by chiropractors, according to Beliveau *et al.* (2017: 3) and research has shown sufficient evidence for its role in the successful management of lumbar pain. However, studies investigating chiropractic care for lumbar pain have generally excluded patients suffering from PSLP and this has created a “gap” in the literature in this regard (Daniels *et al.* 2016: 259). A common protocol currently in place is the short-term prescription of opioid analgesics for the management of acute PSLP, according to Robertson *et al.* (2023: 1346). Raymaekers *et al.* (2024: 3565) highlights that a third of patients who are prescribed opioids after lumbar surgery may end up using opioids for prolonged periods which causes different long-term risks altogether. There is thus a need to provide insights on what chiropractic care can offer with regards to rehabilitation, alternative pain management and potential collaboration with other healthcare professions in the management of PSLP.

1.3 RESEARCH AIMS

The aim of the study was to explore the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain.

1.4 OBJECTIVES

1. To explore chiropractors' understanding of post-surgical lumbar pain.
2. To explore the perceptions of chiropractors on the role of chiropractic care in the management of post-surgical lumbar pain.
3. To explore chiropractors' perceptions on the effectiveness of chiropractic management protocols in the management of post-surgical lumbar pain.
4. To explore the practices chiropractors utilise in the management of post-surgical lumbar pain.

1.5 RESEARCH QUESTIONS

1. What are chiropractors' understanding of post-surgical lumbar pain?
2. What are chiropractors' perceptions on the role of chiropractic care in the management of post-surgical lumbar pain?
3. What are chiropractors' perceptions on the effectiveness of the chiropractic management protocols in the management of post-surgical lumbar pain?
4. What practices do chiropractors utilise in the management of post-surgical lumbar pain?

1.6 RATIONALE OF THE STUDY

Lumbar pain (LP) is a very common occurrence and approximately 40% to 80% of the global population will experience LP at least once in their lifetime (Abubakar and Mohammad 2018: 47). Lumbar surgery is one of the most prevalent and fastest growing medical interventions for LP according to Asher *et al.* (2020: 848), however persistent or recurring pain and other symptoms after spinal surgery, post the acute rehabilitation phase, are common. It affects approximately between 20% and 40% of patients who have undergone spinal surgery (Christelis *et al.* 2021: 808). Increased lumbar spine surgery rates and the associated risk of developing persistent pain post-operatively, may see more patients searching for various alternative therapeutic options. This may lead more patients to seek out chiropractic care as chiropractors are often associated with the treatment and management of lumbar pain in general.

LP is among the most common complaints that patients present with to chiropractors, according to Beliveau *et al.* (2017: 3) and there is substantial evidence from studies on the safety and efficacy of chiropractic care in the management of LP. However, these studies have invariably excluded investigating chiropractic care for patients who have undergone previous spinal surgery (Daniels *et al.* 2016: 259). Most of the data existing about chiropractic management of post-operative lumbar pain are from case reports from registered chiropractic practitioners and not from higher quality studies. Therefore, more advanced studies are needed to develop evidence-based guidelines for the management of post-surgical lumbar pain (Coulis and Lisi 2013: 168, Daniels *et al.* 2016: 259). Post-operative spine pain has also been highlighted as a research priority for manual therapies in an agenda to advance non-pharmacological management of chronic musculoskeletal pain (Becker *et al.* 2018: S13).

The results of this study will provide a useful platform for future studies that further explore chiropractic management of PSLP. It will also provide insights into how chiropractors collaborate with other healthcare professions when treating these types of patients. This is in alignment with current evidence that suggests a multidisciplinary approach is the best way to manage PSLP (Gatzinsky *et al.* 2019: 8; Miekisiak 2023: 1266).

In 2015 the United Nations (UN) adopted 17 sustainable development goals (SDGs) as a “universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity”. The third SDG (SDG3) is the goal of “good health and well-being”. One of the aims of SDG3 is to improve the capacity in developing countries for early warning, risk reduction and management of national and global health risks. By contributing to the knowledge in the management of one of the leading causes of disability worldwide, this study aligns itself with SDG3 and contributes towards the progress of what the UN set out to do.

1.7 OUTLINE OF THESIS

Chapter one consists of a basic summarised introduction of the entire dissertation. This content includes the research context, problem statement, aim, objectives and questions, and a projected structure of the dissertation.

Chapter two elaborates on the relevant and current literature reviewed, related to this study.

Chapter three focuses on the theoretical frameworks underpinning this study.

Chapter four illustrates the methodology implemented in this dissertation. This includes the research design, setting, population, participant recruitment, sample criteria, sample size, data collection and analysis. Ethical considerations and trustworthiness are elaborated on.

Chapter five provides the results collected and interpretation of themes.

Chapter six delves into the research discussion, providing analysis of the recognised themes and how they relate to the research question.

Chapter seven addresses the conclusion of the dissertation by incorporating limitations, recommendations and the final research conclusion.

1.8 SUMMARY OF THE CHAPTER

The chapter exemplifies a basic introduction and lays the foundation of the dissertation by illustrating the research context, aims, objectives and questions, in addition to the dissertation outline.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The intention of this chapter is to explore the current knowledge available in literature relevant to the topic at hand. It will aim to enhance the understanding of lumbar spine pain as it relates to anatomy, surgical intervention, management options and chiropractic specific management.

2.2 ANATOMY OF THE LUMBAR SPINE

The lumbar spine is part of the spinal column between the twelfth thoracic vertebra (T12) and the sacrum. Five robust and mobile vertebrae (L1-L5) provide protection for the distal end of the spinal cord, while allowing for the distribution of axial load. The spinal cord runs through an opening in the centre of the vertebral column known as the vertebral foramen and ends in the conus medullaris between the L1-L2 vertebrae. At the conus medullaris a bundle of spinal nerve roots known as the “cauda equina” begins and runs down through the rest of the canal (Sassack and Carrier 2023: para.1 line1). The lumbar spine is made up of bone, cartilage, ligaments, nerves and muscles and all these structures play a fundamental part in the functionality of the lumbar spine (Sassack and Carrier 2023: para.1 line 8).

The bony anatomy of the lumbar spine is the L1-L5 vertebrae, which have different components to allow for the distinct functions they need to perform. According to Betts *et al.* (2022: 265), a vertebra typically consists of a body, a vertebral arch, and seven processes. The cartilaginous anatomy of the lumbar spine are the intervertebral discs (IVD's) which are the cushion-like structures found in-between two vertebral bodies. These discs are made up of an outer layer known as the annulus fibrosis and a softer interior called the nucleus pulposus. The IVD's help to distribute the load of the vertebral column, provide shock absorption and allow for multidirectional flexibility and mobility in the spine. (Betts *et al.* 2022: 272; Waxenbaum *et al.* 2023: para 1 line 6).

Figure 2.1 depicts the bony and cartilaginous anatomy of the lumbar vertebrae.

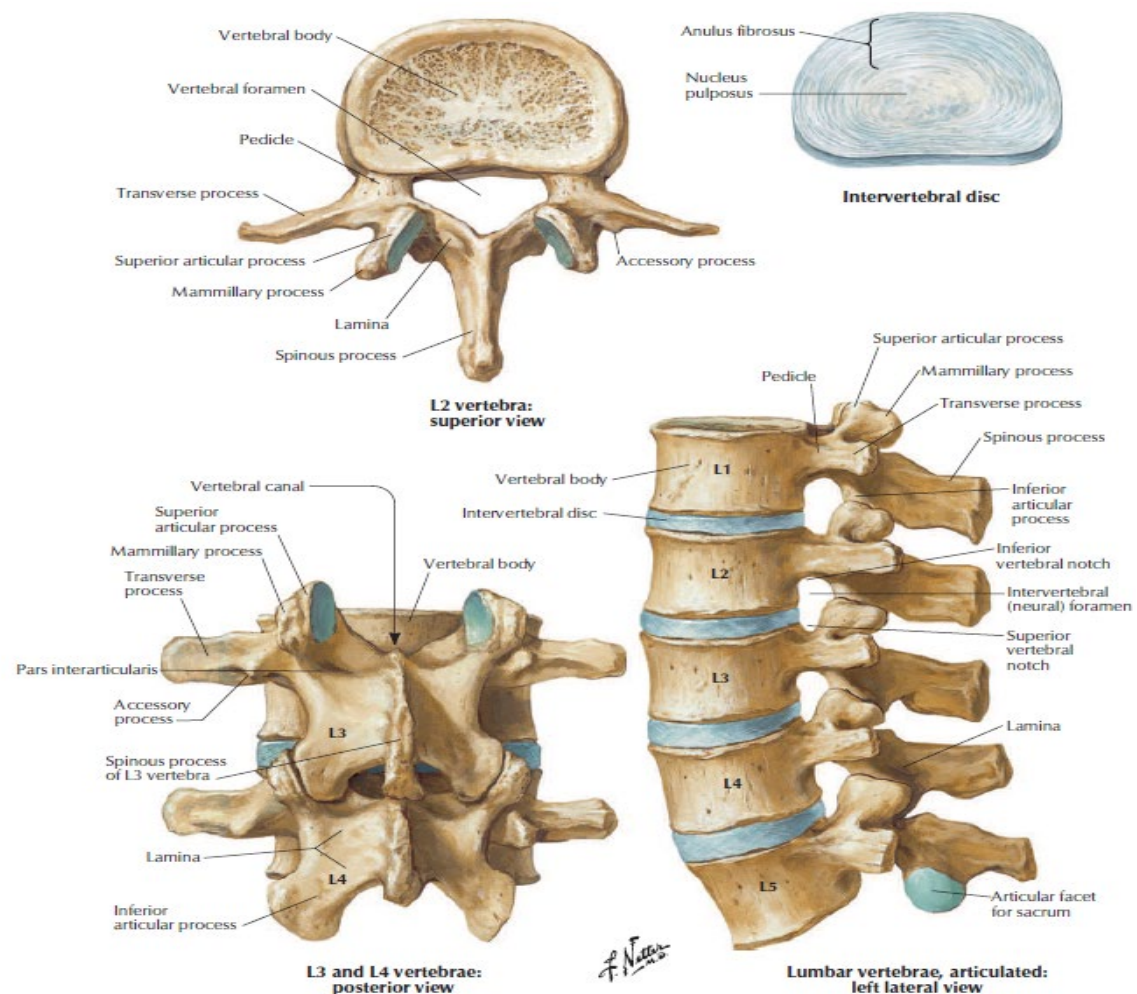


Figure 2.1: Lumbar vertebrae (Netter 2017: 164)

Figure 2.2 depicts the ligaments that attach to the lumbar spine. Two major ligamentous structures, the anterior longitudinal ligament (ALL) and posterior longitudinal ligament (PLL), along with the supraspinous ligament, inter-transverse ligament and iliolumbar ligaments make up the ligamentous anatomy. The role of ligaments throughout the body are to attach bony structures to other bony structures and to provide static stabilization to joints. In the spine the ALL resists extension of the spinal column and the PLL along with the supraspinous ligament resists flexion of the spinal column (Betts *et al.* 2022: 273).

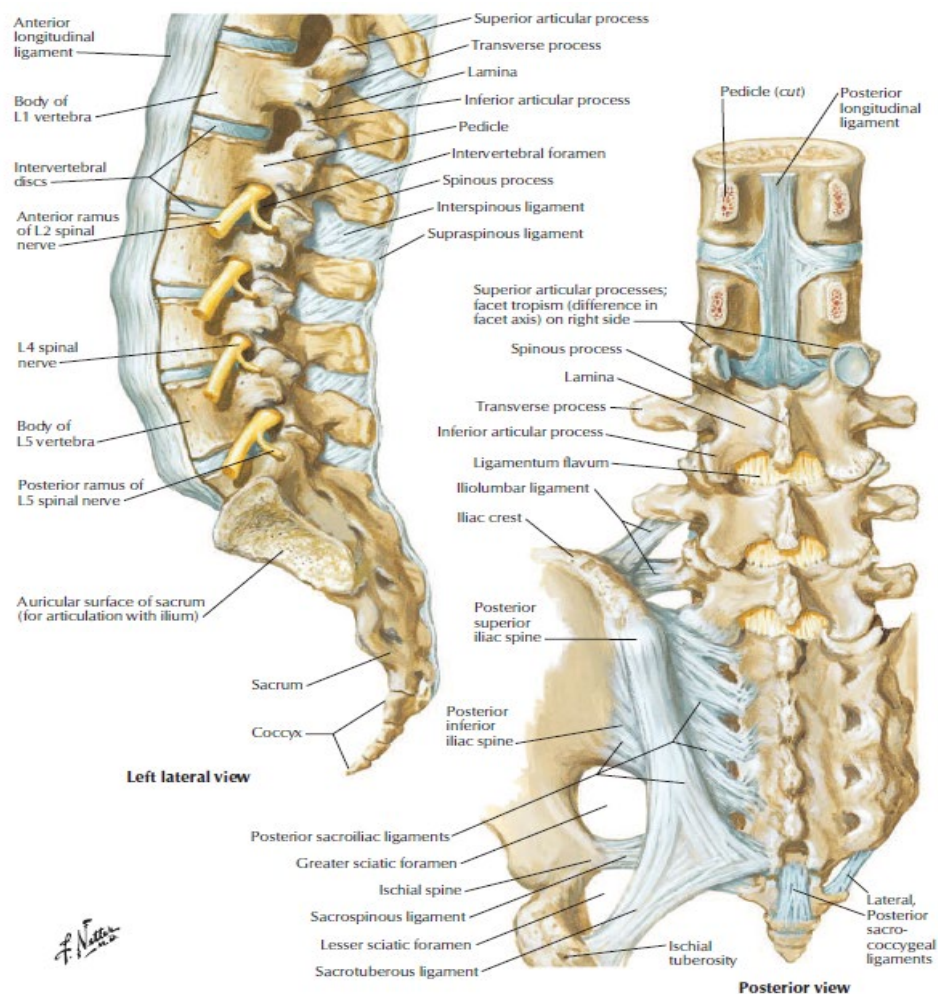


Figure 2.2: Vertebral ligaments: lumbosacral region (Netter 2017: 167)

Muscles associated with the lumbar spine are found anteriorly as well as posteriorly. The primary anterior muscles are the psoas major and psoas minor muscles which connects the anterior lower limb to the lumbar spine. The main muscles found posterior to the lumbar spine, as can be seen in **Figure 2.3** and **Figure 2.4**, are the erector spinae group, the multifidus and the quadratus lumborum (Sassack and Carrier 2023: para. 15 line 5). The erector spinae group consists of the longissimus, iliocostalis and spinalis muscles and are primarily responsible for extension of the lumbar spine (Moore, Dalley and Agur 2018: 354). The multifidus is a muscle found deeper to the erector spinae muscles, and it aids in spinal extension and stabilization (Moore, Dalley and Agur 2018: 356). The quadratus lumborum attaches to the vertebrae of the lumbar spine and the iliac crest and aids in extension of the lumbar spine as well as lateral flexion (Moore, Dalley and Agur 2018: 1265).

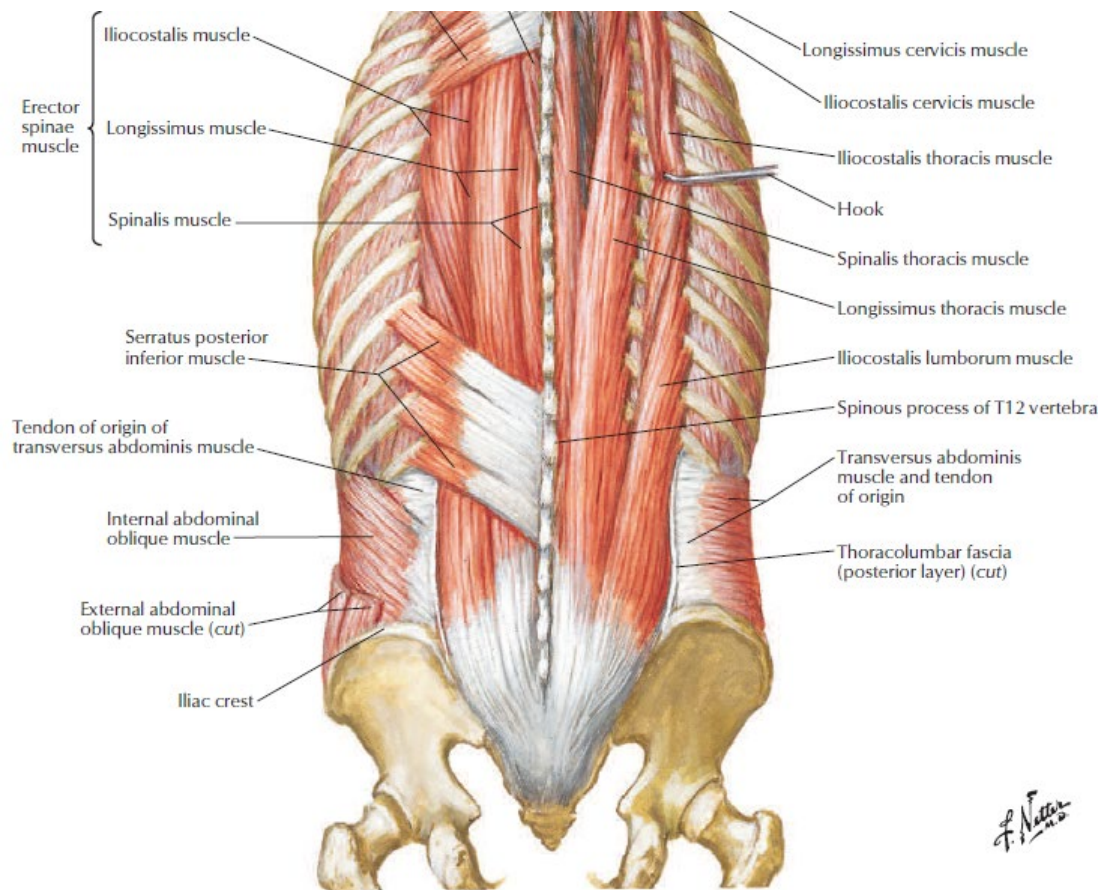


Figure 2.3: Posterior Lumbar Muscles: Intermediate Layer (Netter 2017: 181)

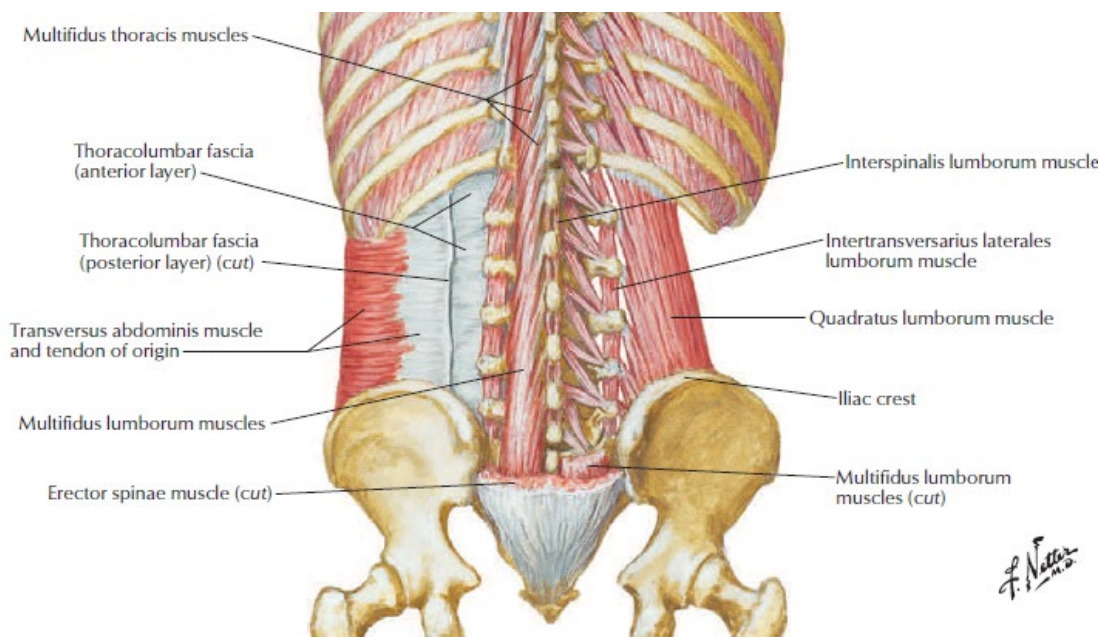


Figure 2.4: Posterior Lumbar Muscles: Deep Layer (Netter 2017: 182)

2.3 LUMBAR PAIN

Lumbar pain (LP) is a symptom that typically refers to pain, stiffness or muscle tightness experienced in the lower back region with or without associated leg pain (Mattiuzzi, Lippi and Bovo 2020: 1). LP is a very commonly experienced condition globally and it is estimated that 40-80% of people will have lumbar pain at some point in their life (Abubakar and Mohammad 2018: 47; Alshammari *et al.* 2023: 1).

Older age, obesity, smoking and occupational ergonomic factors have been identified as the leading risk factors for the development of LP worldwide (GBD 2021 Low Back Pain Collaborators 2023: e323). There has been a consistent trend in the increasing prevalence and incidence rates of LP with increased age. This may be due to degenerative changes associated with older age as well as the decrease in musculoskeletal function observed with ageing (Chen *et al.* 2022: 56). Smoking and obesity have been shown to have a great correlation to LP, however there is still uncertainty on how they specifically contribute to the development of LP (GBD 2021 Low Back Pain Collaborators 2023: e323). Occupational and ergonomic factors (OEFs), like performing day to day tasks, contribute to nearly 25% of years lived with disabilities (YLDs) (GBD 2021 Low Back Pain Collaborators 2023: e323). These are factors people face in performing everyday tasks such as awkward bending, heavy lifting, prolonged sitting or standing, and vibration forces such as operating heavy machinery (Hilmi *et al.* 2024: 106). These OEFs cause mechanical stress on the anatomical structures associated with the lumbar spine such as the facet joints, sacroiliac joints (SIJ), IVDs and muscles which lead to the degeneration of these structures and then produces pain (Li *et al.* 2021: 1484).

2.4 LUMBAR SPINE SURGERY

Lumbar spine surgeries, particularly elective surgeries for degenerative pathologies, have been on the rise globally in the last few decades, especially in developed countries (Mann *et al.* 2023: 3015). The most common lumbar surgeries that generally causes patients to seek out care for persistent spinal pain after surgery are laminectomy, fusion and discectomy procedures (Trager *et al.* 2023: 15). Studies from various countries such as the United States of America (USA), Finland and Italy have

shown an increase in surgeries performed by up to four times in less than two decades (Asher *et al.* 2020: 848; Ponkilainen *et al.* 2020: 203; Torre *et al.* 2025: 261). In South Africa similar trends were observed in the country's private health sector over a 10-year period (Mann *et al.* 2023: 3017).

These findings are mainly attributed to technological advancement and significant improvements in surgical techniques which has considerably broadened the scope of spinal surgery indications, according to Mann *et al.* (2023: 3015). However, in contrast with the increased prevalence of spinal surgeries, evidence which supports surgical intervention as a superior treatment for LP absent of nerve compression, infection, tumours or gross instability, is quite low (Evans *et al.* 2023: 41).

Spinal surgery, like any other surgery, also has associated risks such as accidental dural tearing, infection, deep vein thrombosis (DVT), post-operative pain, radiculopathy or muscle weakness (Hohenberger *et al.* 2022: 2). Patients with a high body-mass-index and other comorbidities such as cardiovascular disease and cancer are at higher risk for intra- and post-surgical complications (Lange *et al.* 2022: 9).

2.5 POST-SURGICAL LUMBAR PAIN

PSLP refers to persistent back and leg pain suffered by patients who have previously undergone lumbar spine surgery (Schug *et al.* 2019: 48). An exact mechanism of how PSLP develops has not yet been identified, according to Papalia *et al.* (2023: 1154). However, it is believed to be linked to several different causes and risk factors associated with surgery. These include recurrent disc herniation, post-operative compression of a spinal nerve, altered joint mobility and stability, scar tissue formation, post-operative myofascial pain development, spinal muscle atrophy and contributing psychological factors like preoperative anxiety, depression and pain catastrophising (Bokov *et al.* 2011: 545; Papalia *et al.* 2023: 1154; Theunissen *et al.* 2012: 838 and Weir *et al.* 2017: 2).

PSLP affects between 10%-40% of patients who have undergone lumbar spine surgery, according to Schug *et al.* (2019: 48). It has frequently been reported as severely painful, with patients often seeking out various forms of drug therapy and

physical treatments. Poor quality of life has also been associated with PSLP, and most sufferers reportedly end up unable to work (Christelis *et al.* 2021: 808)

2.6 TREATMENT AND MANAGEMENT OF POST-SURGICAL LUMBAR PAIN

Current protocols for the management of low back pain are usually divided into three broad groups: pharmacological intervention, conservative management, and surgical procedures. In a recent systematic review on current management protocols for the treatment of PSLP, Gallego *et al.* (2024: 152) emphasised the need for conservative management before considering more aggressive or invasive interventions. Revision surgery should be a last resort after all other treatment and management options have failed, provided that there are no clear or emergent indications for surgery. This sentiment is echoed by Orhuru, Chu and Gill (2023: para. 14 line 3).

Pharmaceutical intervention has traditionally been limited to non-steroidal anti-inflammatory drugs (NSAIDs) and research has shown that these drugs do have an advantage over placebo (Prabhakar *et al.* 2022: 4538). Opioid use is common practice for post-surgical lumbar pain and has been shown to be effective in the management of moderate-to-severe pain. However, prolonged opioid use has been associated with many risks and complications (Podder *et al.* 2025: 5).

PSLP has also been treated in the form of injections such as nerve blocks and epidural steroid injections, according to Abubakar and Mohammad (2018: 50). However, Solmaz *et al.* (2019: 1614) noted that these interventions lacked substantial evidence to show efficacy in the management of PSLP.

Neuromodulatory therapies, like spinal cord stimulation (SCS), are minimally invasive surgical procedures that involve implanting a stimulation device into the epidural space of the patient in the region associated with their pain. There is compelling evidence from large RCTs in support of their use in PSLP management (Miekisiak 2023: 1265). SCS does have some down sides. Firstly, it has high upfront costs and cost-benefit is only favourable in the long term. Secondly, it is still not very reliable in the long term as 40% of patients report no dependable long-term pain relief after permanent implantation (Orhuru, Chu and Gill 2023: para. 18 line 6).

Revision surgery is an option for patients that have exhausted all conservative options and minimally invasive interventions presented to them after the initial unsuccessful surgery. However, there have been poor outcomes documented for reoperation after initial surgery had failed. Best practice for reoperation is only really warranted if a pathology that will clearly benefit from reoperation has been identified. These include impaired bowel or bladder function, severe motor weakness or progressive neural deficiencies, persistent severe pain after adequate bed rest, a gradual worsening of symptoms, present spinal instability or if complications associated with surgical implants arise (Abubakar and Mohammad 2018: 50).

Conservative management for PSLP consists of physical therapy (PT) which includes manual therapy and exercise therapy, usually prescribed along with pharmacological therapy in the early post-operative stages. (Gallego *et al.* 2024: 152). PT can be done at home with a prescribed exercise program or under direct supervision with guidance from a qualified professional (Sakaguchi *et al.* 2024: 2). PT for PSLP aims to increase muscle strength and restore mobility in the lower back, according to Miekisiak (2023: 1263). PT is considered to have short to medium term benefits in reducing PSLP and improving functionality. The most effective results are seen if therapy is implemented as early as four to six weeks post-operatively (Amirdelfan *et al.* 2017: S49; Manni *et al.* 2023: 8).

A big challenge that PT faces in PSLP management is lack of consensus on appropriate and adequate implementation after surgery in terms of timing, duration and intensity. These variations do not indicate the inefficiency of PT but rather the lack of a standardized protocol for PSLP (Yu *et al.* 2025: 410).

2.7 CHIROPRACTIC AND POST-SURGICAL LUMBAR PAIN

Chiropractic management as a healthcare profession is mostly known for the use of spinal manipulation technique (SMT) or manual manipulation which refers to the use of low-amplitude, high-velocity joint manipulation applied to the spine, as well as other joints in the body, to restore and sustain movement and general health in said joints as well as structures surrounding the joint (Wong *et al.* 2023: 1). On a global scale chiropractic has a shared emphasis on patient education and advice, promotion of

self-efficacy, rehabilitation and manual techniques, including spinal manipulation/adjustment (World Federation of Chiropractic 2025: para. 7 line 1). In South Africa chiropractic scope of practice includes - but is not limited to - high-velocity-low-amplitude (HVLA) joint manipulation, joint mobilization, dry needle therapy, electrotherapy, temperature therapy, chiropractic soft-tissue manipulation therapy, therapeutic exercises and immobilization therapy (South Africa, Department of Health 2023: 23-24). Patients seek out chiropractic management for various musculoskeletal conditions. Joint pain or joint sprain, muscle pain and muscle strain, headaches, inflammatory arthritic conditions such as rheumatoid arthritis or osteoarthritis are among the popular conditions which chiropractic care is known to treat (Wong *et al.* 2023: 2).

Among the most-frequently treated conditions in chiropractic management is LP, with close to 50% of global chiropractic patients presenting to chiropractors with lumbar pain (Beliveau *et al.* 2017: 3). The most common and best researched interventions of chiropractic management, according to Globe *et al.* (2016: 7), are SMT and spinal mobilization (SM). These treatments are administered to almost 80% of patients who present to chiropractors (Beliveau *et al.* 2017: 5). SMT as an intervention for lumbar pain is considered effective for pain relief and improvement of function in patients suffering from chronic lumbar pain (Coulter *et al.* 2018: 876; Wong *et al.* 2023: 5). These are generally the recommended treatments if no contra-indications are observed during the patient assessment (Globe *et al.* 2016: 7; Whalen *et al.* 2022: 560). Chiropractors also implement exercise therapy, for which there is moderate levels of evidence in favour of its use for the relief of LP, according to Hayden *et al.* (2021: 252). Literature shows that other modalities such as soft-tissue therapy, dry needle therapy, electromodalities and patient education as part of management protocols for LP are mostly effective in conjunction with manual therapy, as opposed to sole-interventions (Chys *et al.* 2023: 14; George *et al.* 2021: CPG20; Whalen *et al.* 2022: 560; Wolfe, Rosenstein and Fortin 2023: 4692).

Regarding chiropractic management of PSLP, not many studies have been conducted to establish a clear role for chiropractic management in post-surgical lumbar pain. According to Daniels *et al.* (2021: 16), current literature on manipulative and manual therapies in the management of post-surgical lumbar pain is mainly limited to low level studies. There is a need for higher quality studies to gain further knowledge on how

effective and safe these therapies are in treating post-surgical lumbar pain. These studies also seem to be limited to retrospective charts and case reports (Chu and Trager 2022: 1; Gudavalli *et al.* 2016: 121; Kruse and Cambron 2011: 408).

A cross-sectional survey by Daniels *et al.* (2020: 29) investigated the attitudes, beliefs and practices of Veterans Affairs (VA) chiropractors in the United States of America (USA) on the management of patients with prior lumbar fusion surgery. No clear consensus on treatment plans was identified, with most practitioners employing some combination of chronic pain education, HVLA manipulation to thoracic and pelvic regions, “non-thrust” manual therapy for the lumbar region and/or rehabilitation exercise therapy (Daniels *et al.* 2020: 36). In a systematic review and meta-analysis of clinician approaches to spinal manipulation for persistent spinal pain after lumbar surgery, Trager *et al.* (2023: 10) investigated the likelihood of chiropractors and other manual therapists administering SMT to patients who had undergone lumbar surgeries. The conclusion was that practitioners tended to opt for gentler non-thrust SMT techniques in patients who have persistent spine pain after lumbar surgery. They also concluded that chiropractors were more likely to use manual thrust SMT of the lumbar spine relative to other manual therapists (Trager *et al.* 2023: 24). These studies, however, did not elaborate much on the effectiveness of chiropractic management for patients who suffer persistent spinal pain after lumbar surgery.

In a narrative review of lumbar fusion surgery and how it relates to chiropractic practice, Daniels *et al.* (2016: 266) examined the available literature at that time on the safety and effectiveness of chiropractic treatment on postoperative pain following spinal fusions. The information was limited exclusively to case reports. These reports, while very limited, did report successful treatment of patients utilizing various methods such as flexion-distraction manipulation, HVLA joint manipulation and physical modalities without any adverse effects. Therapies utilized by chiropractors such as myofascial release, rehabilitative therapy and acupuncture were also reported as beneficial in post-surgical management following lumbar fusion (Daniels *et al.* 2016: 266).

2.8 PRACTITIONER VIEWS ON THE MANAGEMENT OF POST-SURGICAL LUMBAR PAIN

The literature on practitioner perspectives about PSLP is extremely scarce. One qualitative study that investigated health care practitioners' (HCPs) experiences of PSLP by Angelini *et al.* (2020: 1670) expressed the importance of patient centred care (PCC) and clear communication between different HCPs in the management of PSLP. These views seem relevant when looking at findings from another qualitative study done by Thys *et al.* (2024: 6) exploring the views of patients and HCPs on rehab practices after lumbar fusion surgery (LFS). It noted interdisciplinary disagreements about best practices for post-LFS rehabilitation, specifically between physical therapists and surgeons.

2.9 THE ROLE OF INTERDISCIPLINARY CARE FOR POST-SURGICAL LUMBAR PAIN

Current literature suggests a multidisciplinary approach as best practice for the management of PSLP as detailed in a proposal to optimize the management and outcomes of PSLP, published by Gatzinsky *et al.* (2019: 8). This proposal was published after an international panel of physicians collectively reviewed and discussed relevant literature before reaching consensus that PSLP should be managed by a multidisciplinary team of practitioners. In a narrative review of PSLP Miekisiak (2023: 12) also highlighted that multidisciplinary approaches were often most effective for the management of PSLP due to the complex nature and wide range of root causes of this condition.

2.10 GAP IN LITERATURE

There is a dearth of literature when it comes to the management of post-surgical spine pain in general, and more specifically, the use of manual therapies (Becker *et al.* 2018: S13). Current literature mentioning manipulative and manual therapies in the management of PSLP has been limited to case reports and retrospective charts (Daniels *et al.* 2021: 16). Furthermore, there is paucity of literature studies from a practitioner point of view on PSLP management (Angelini *et al.* 2020: 1662; Thys *et al.* 2024: 1).

2.11 SUMMARY OF THE CHAPTER

This chapter gave a comprehensive review of the current body of knowledge relating to the topic that is being studied. This chapter serves as a guide to help the reader better understand post-surgical lumbar pain, the implementations of different management options for post-surgical lumbar pain and how it can relate to the chiropractic profession, the current practitioner views on PSLP and the role of interdisciplinary care for PSLP.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 INTRODUCTION

The theoretical framework serves as a guide on which to build and support the study. It also provides the basis for defining the approach and process of the study in all aspects; from formulating research questions to collecting, analysing and interpreting data (Grant and Osanloo 2014: 13).

3.2 DEFINING A THEORETICAL FRAMEWORK

A theoretical framework is a structured set of concepts and assumptions which can be derived from one or more established theories and then rationally connected to serve as the outline for a research study (Grant and Osanloo 2014: 12). The theoretical framework serves as the foundation and guide for all aspects of the research by articulating the lens through which the researcher is conducting the study as well as conceptual relationships that inform the data interpretation. It is essential for ensuring coherence, theoretical alignment and scholarly rigor (Varpio *et al.* 2020: 990).

According to Collins and Stockton (2018: 2), the researcher should work through established knowledge about complex phenomena, their own epistemological dispositions and use a meticulously investigative approach for the selected theory or theories to be of benefit for the consistency and depth of the study.

3.3 THEORETICAL FRAMEWORK UNDERPINNING THIS STUDY

The theoretical framework of this study was guided by the following models and theories: the Biopsychosocial (BSP) model, the Integrated Care (IC) model, the Theory of Planned Behaviour, and Role Theory.

3.3.1 Biopsychosocial Model

The modern approach towards patient care in healthcare is strongly influenced by George Engel's development of the BPS model (Card 2022: 387; Dowling 2005: 2039). Engel explained how an individual's care regarding their health is not solely reliant on biological interventions, instead the addition of social and psychological support is required to ensure balanced support for an individual's treatment journey (Borrell-Carrió, Suchman and Epstein 2004: 576). The use of the BPS model by HCPs ensure that the patient is receiving a holistic route of treatment. Bolton and Gillet (2019: 117) explain how pain and distress are subjective concepts expressed by an individual, and thus the approach may differ between individuals. Chiropractic care as a holistic form of healthcare provision is foundationally rooted in the biopsychosocial model of patient care. The BPS model guided the researcher to explore chiropractors' understanding of PSLP as having a comprehensive knowledge and understanding of a condition better equips HCPs to treat their patients in a holistic manner.

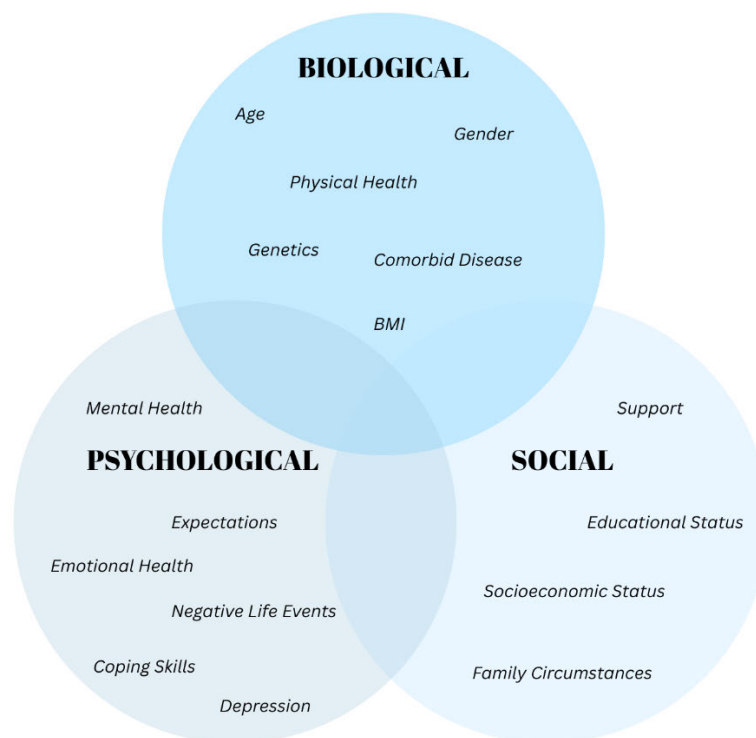


Figure 3.1: Summary of Biopsychosocial Model. Adapted from Adams and Turk (2018: 5); Giletdt *et al.* (2017: 2); and Taukeni (2020: 1)

3.3.2 Integrated Care Model

The integrated care (IC) model is the effective combination of various evidence-based approaches to provide care for the person as a whole (Jonas and Rosenbaum 2021: 6) and focuses on the coordination between HCPs to ensure their patients receive the best total care that they may require (Minkman *et al.* 2025: 2). In recent literature it has been noted that integrating chiropractors into teams that provide care for musculoskeletal (MSK) conditions is a reasonable goal, sought after by both patients and HCPs (Kopenskey-Giles *et al.* 2024: S61). The IC model guided the researcher in the exploration of practices utilised by chiropractors in the management of PSLP by guiding the researcher in adding relevant probing questions relating to how chiropractors view multidisciplinary care for patients suffering from PSLP.

3.3.3 Theory of Planned Behaviour

In 1985, a social psychologist, known as Icek Ajzen, developed a cognitive theory called the theory of planned behaviour (Boslaugh 2022: para. 3 line 1; Brookes 2023: para. 1 line 1). The theory explains how human behaviour is affected by our intentions which have three key influencing factors: attitudes toward the behaviour, subjective norms, and perceived behavioural control (Bosnjak, Ajzen and Schmidt 2020: 353).

The theory of planned behaviour was useful as a theoretical framework because it guided the researcher into exploring how chiropractors viewed PSLP as a condition. By utilising the three influencing factors mentioned above, the researcher could investigate chiropractors' understanding of PSLP, what the perceptions are on the role of chiropractic care in the management of PSLP and what their perceptions are on the effectiveness of chiropractic management protocols in the management of PSLP.

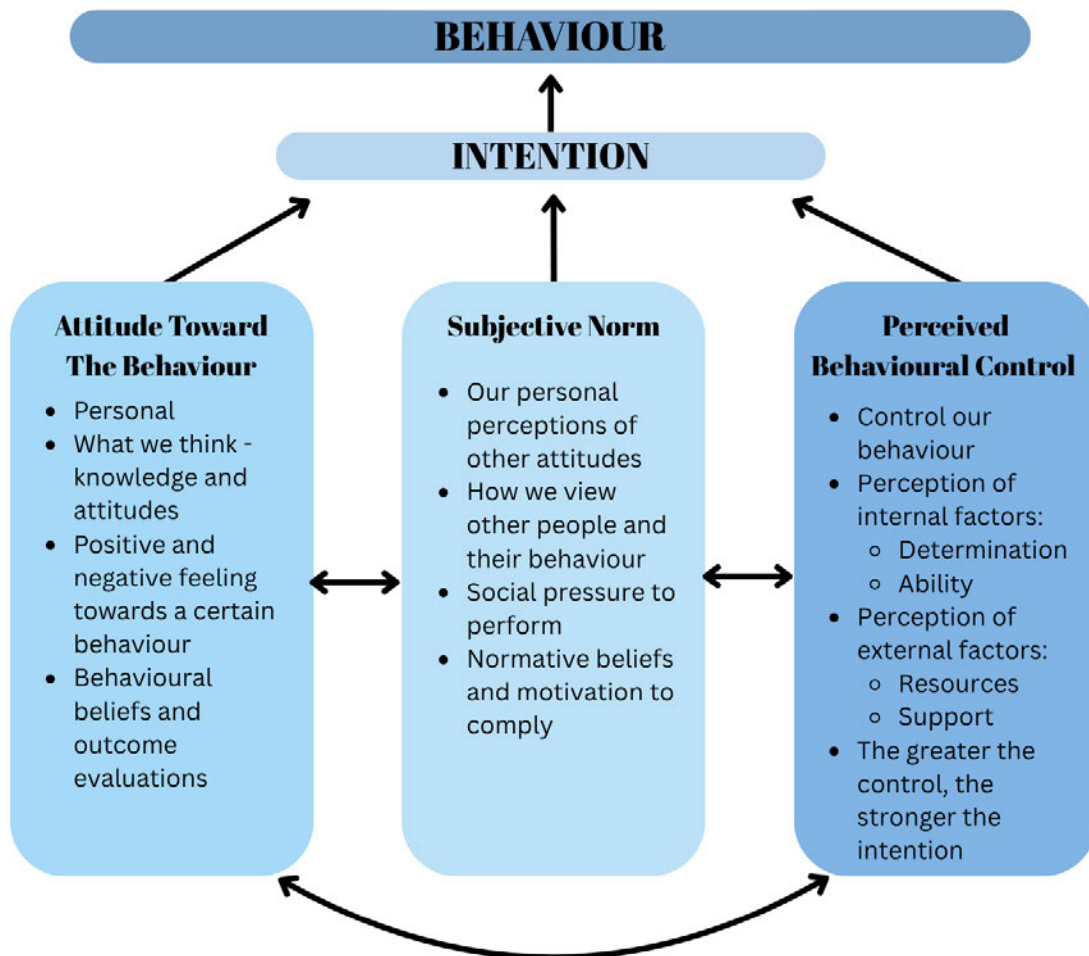


Figure 3.2: Summary of Theory of Planned Behaviour. Adapted from Asare (2015: 44) and Brookes (2023: para. 4 line 1)

3.3.4 Role Theory

Role Theory was solidified by Bruce Biddle as a critical framework in understanding social behaviour. In his book *Role Theory: Expectations, Identities, and Behaviors*, Biddle emphasized the idea that an individual's role in its given context is accompanied by expectations which then guide the individual's behaviour and influence social interactions with others (Biddle 1979: 4). Role theory can be used to explain how individuals behave, interact and perceive themselves based on the expectations that are associated with their position, either socially or professionally (Anglin *et al.* 2022: 1470).

Haruta *et al.* (2021: 223) explains how role conception and role expectation influences relationships between healthcare professionals from different fields, as well as stating the importance for healthcare professionals to understand their specific role in the biopsychosocial model of care where total patient well-being is the focus and priority for practitioners. In this regard, role theory guided the researcher to investigate what practices chiropractors utilise in the management of PSLP as this would dictate what their perceptions are on the role of chiropractic care in the management of PSLP.

3.4 SUMMARY OF THE CHAPTER

This chapter explained the purpose of a theoretical framework in qualitative research and elaborated on the different frameworks underpinning this study and how each guided the researcher in conducting the study.

CHAPTER FOUR

METHODOLOGY

4.1 INTRODUCTION

This chapter gives a detailed breakdown on the methodology utilised throughout this dissertation. The study design, methods employed, and ethical considerations will be discussed.

4.2 STUDY DESIGN

This study used a qualitative, exploratory and descriptive approach to explore the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of PSLP.

Qualitative research is a form of inquiry that involves an interpretive and naturalistic approach to its subject matter. This means qualitative researchers study their objects in their natural settings whilst attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin and Lincoln 2011: 3). According to Berkwits and Inui (1998: 195) this approach enables us to capture expressive information not conveyed in quantitative data about beliefs, values, feelings and motivations that underlie behaviours.

Exploratory, descriptive qualitative research is the combination of exploratory qualitative research and descriptive qualitative research (Hunter, McCallum and Howes 2019: 3). An exploratory design allows the researcher to investigate a topic with limited exposure and allows participants to contribute to the development of new knowledge in that specific area (Reid-Searl and Happell 2012: 2000) A descriptive design allows the researcher to document and describe the new knowledge in the area of interest (Hunter, McCallum and Howes 2019: 3). Qualitative research was suitable for this study. As chiropractors shared their perceptions, their contribution to the development of new knowledge in the realm of PSLP management and chiropractic became clear. The researcher was then able to elaborate on that information.

4.3 SETTING

The research setting is the location in which the study is conducted (Menon *et al.* 2023: 388). The interviews for this study were conducted in-person at venues most convenient for the participants. All the participants chose their private practices as the most convenient setting.

4.4 POPULATION

4.4.1 Sample Population

The research population is a targeted group of participants, specifically considered for a study to which direct conclusions can be applied (Kazerooni 2001: 993). The sample population group for this study was registered qualified chiropractors in the eThekweni municipality of Durban, South Africa.

4.4.2 Sample Size

The sample size is the number of participants taking part in a study (Kadam and Bhalerao 2010: 55). The target sample size for this study was 12 participants. Data saturation was achieved at nine interviews; however, an additional three interviews were conducted to confirm saturation. Data saturation in qualitative research refers to the point in data collection where collecting more data reveals no new insights to the explored topic. Qualitative research that explores narrow topics usually reaches saturation between nine and 17 participants (Hennink and Kaiser 2022: 1).

4.4.3 Sampling Strategy

Purposive sampling was implemented in participant recruitment. Purposive sampling is employed to increase the depth of understanding of a specific topic. It requires the researcher to carefully select participants based on their discretion as to who will be most likely to provide appropriate and useful information about the topic under investigation (Campbell *et al.* 2020: 654; Stratton 2024: 212). This strategy was

applicable to this study as it required a sample population with very specific characteristics.

Purposive sampling can take the form of multiple different strategies. One such strategy is the linear snowball sampling technique, which requires a researcher to start with one participant that is allocated randomly to him/her and thereafter each participant will refer the researcher onto the next participant (Etikan *et al.* 2016: 6). According to Ting *et al.* (2025: 38) this method of sampling is useful in qualitative research when studying geographically dispersed populations. This sample strategy was appropriate due to the specificity of post-surgical lumbar pain and finding chiropractors with some experience in the field.

4.4.4 Sample Recruitment

An advertisement (Appendix E) was distributed via the Chiropractors Association of South Africa (CASA) KwaZulu-Natal (KZN) branch's WhatsApp group as part of the recruitment process. Potential participants could volunteer to be part of the study. CASA is a professional association and membership of the organisation is optional and at the discretion of practitioners. It was chosen as the preferred organisation to distribute the advertisement to potential participants as the organisation plays a very active role in communicating relevant information in the chiropractic domain. With over 200 members on the WhatsApp group, the researcher utilised this avenue as an efficient means of distributing the advertisement to as many potential participants at once.

Once a participant contacted the researcher, a letter of information and a letter of informed consent (Appendix C) were sent to that participant. Interviews were set up at the availability and convenience of the participant. After each interview, the participant was asked to nominate other chiropractors who they believed would fit the inclusion criteria. These nominated potential participants were contacted through their contact details available to the public on domains such as Google, their professional websites, the CASA official website or social media platforms and asked to participate in the study if available. This was done in accordance with the snowball sampling technique explained previously.

4.4.5 Sample Criteria

Only participants who met the inclusion criteria were granted permission to participate in the study.

Inclusion Criteria:

- Participant must be a registered chiropractor with the Allied Health Professions Council of South Africa (AHPCSA).
- Participant needs to be practicing currently in the eThekweni municipality.
- Participant must have a minimum of five years of experience as a practicing chiropractor.
- Participant must have some experience in treating post-surgical lumbar pain.

Exclusion Criteria:

- Participants who are not registered with the AHPCSA.
- Participants who are not currently practicing in eThekweni municipality.
- Participants who participated in the pilot study.

4.5 DATA COLLECTION TOOL

The data collection tool is the instrument or method designed to gather information required by the researcher from the research participants (Dhlakama and Murairwa 2024: 1078). A semi-structured interview guide with research questions as well as additional probing questions (Appendix D) were used to collect the data for this study. Due to the nonavailability of pre-existing validated tools specific to chiropractic management on PSLP, the study's interview guide was derived from similar qualitative studies which viewed other HCPs' approaches and perceptions on treatment methods of various conditions. These questions were adapted by the researcher to best fit the aims and objectives for this study. The tool was piloted to assess if it would be appropriate for the study. The development of the tool was additionally guided by literature and the theoretical framework underpinning the study. **Table 4.1** illustrates the studies that guided the tool development.

Table 4.1: Exemplar of Interview Guides Used in Qualitative Studies

Reference	Title	Interview Question it Guided
Allison <i>et al.</i> 2019: 611	In theory, yes; in practice, uncertain: a qualitative study exploring physical therapists' attitudes toward their role in weight management for people with knee osteoarthritis	Question 2
Dupont <i>et al.</i> 2025: 14	Exploring physician and patient perspectives on expectations and role models towards chronic pain treatment in general practice	Question 4
Kornder <i>et al.</i> 2025: 2	General practitioners' decision-making strategies in the pharmacological treatment of musculoskeletal pain: A qualitative interview study	Question 1 & Question 4
MacKay, Hawker and Jaglal 2018: 2	Qualitative study exploring the factors influencing physical therapy management of early knee osteoarthritis in Canada	Question 1
Nguyen <i>et al.</i> 2025: 13	Voices from the clinic: a qualitative analysis of physiotherapy strategies in musculoskeletal care for knee osteoarthritis patients	Question 3

4.5.1 Piloting of Data Collection Tool

A pilot study is a smaller-scale study designed to test multiple facets of a larger investigation. It is done to prevent researchers from starting a large-scale study without adequate knowledge of their proposed methods (Lowe 2019: 117).

The course of the pilot study conducted was as follow:

- Provisional ethical clearance was granted by the Institutional Research Ethics Committee (IREC), subject to piloting of the data collection tool.
- Two qualified chiropractors in the eThekweni municipality who met the inclusion criteria were recruited to take part in the pilot study.

- A letter of information and informed consent (Appendix F) was signed by both participants.
- The participants were interviewed and asked to provide constructive feedback about the interviewing process.
- All feedback received was then correlated and utilised to adapt the interview guide accordingly.
- Changes made during the piloting process were adapted by the researcher into the final data collection tool (Appendix D).

4.6 DATA COLLECTION PROCESS

Once full ethical clearance was attained (Appendix A) and participants had responded to the advertisement placed on the CASA KZN WhatsApp group (Appendix E), participants were screened for eligibility according to the inclusion criteria of the study. Once recruited, appointments were scheduled at the convenience of the participants and these took place at the participants' private practices. Participants had signed the consent forms (Appendix C) before the interviews took place. Questions were not sent prior to the interviews taking place in order for authentic responses to be given. Interviews were audio recorded and guided by a semi-structured interview guide (Appendix D). The interview duration varied between 30 and 45 minutes and took place during the months of June and July 2025.

4.7 DATA ANALYSIS

The way data is analysed in qualitative research is referred to as thematic analysis whereby the researcher reads the transcribed data across the sample and then identifies recurrent patterns that emerge (Liamputtong 2009: 135). This study had two main phases of data analysis. The first is data transcription - converting the voice recorded answers into typed responses for better data exploration. The second is data interpretation - how codes from the transcription form themes and categories based on thematic analysis.

4.7.1 Data Transcription

Once an interview recording had been saved on the Dictaphone, the researcher transcribed the interview verbatim on a separate document to be used for thematic analysis. Each recording was transcribed word for word. The transcribed data was rechecked in correlation to the audio data to ensure precision and attention to detail.

4.7.2 Data Interpretation

For data interpretation, Tesch's thematic analysis was used to construct themes and categories. According to Theron (2015: 7), there are eight steps to follow in this method. These steps were followed and repeated as necessary until the major themes emerged.

These eight steps are as follow:

Step One:

The researcher cautiously read all the transcribed interviews multiple times to become familiar with important background information.

Step Two:

The researcher then started identifying topics detected in each document. This was done by highlighting key phrases with distinct colours in each document, one document at a time.

Step Three:

Once step two had been applied to all documents, the researcher grouped all highlighted phrases together according to the colours they were assigned. The researcher then compiled a list of all identified topics.

Step Four:

The researcher assigned codes to each topic and wrote these codes next to appropriate segments of the text.

Step Five:

The most descriptive words for the topics were selected, which then began to form categories. All related categories were grouped together.

Step Six:

Each category was finalised, and the codes were abbreviated, ensuring that duplication did not occur.

Step Seven:

Data linked to each category was grouped together. Preliminary conclusions were drawn from the data, one category at a time.

Step Eight:

If deemed necessary, the researcher recoded the existing data for it to be grouped appropriately.

4.7.3 Data Storage

All electronic data, including interview recordings and transcriptions, were stored on a password protected portable storage device (USB) and only the researcher had access to this information. All hard copies of participant information, including demographic information and signed consent forms, were kept by the researcher until data collection was completed. Hard copies will remain at the DUT chiropractic department in a secure environment for a duration of 5 years, after which it will be shredded. Electronic data will be kept on the above-mentioned password protected USB, which will be locked away along with the hardcopies at DUT for a duration of 5 years before it will be permanently deleted.

4.8 ETHICAL APPROVALS

Permission to conduct the study was obtained from the DUT IREC (Clearance number: IREC 326/24) (Appendix A). Gatekeeper's permission (Appendix B) to approach qualified chiropractors in the eThekweni municipality was obtained from the registrar of the Allied Health Professions Council of South Africa (AHPSCSA) who facilitates all correspondence to, and communication with, the AHPSCSA. Informed consent (Appendix C) was obtained from each participant, granting permission to be interviewed.

4.9 ETHICAL CONSIDERATIONS

The following principles were followed throughout the research process to remain committed to ethical practice.

4.9.1 Autonomy

Autonomy in ethics is the principle of respect for an individual's right to self-determination or to make their own informed choices (Varkey 2021: 19). Autonomy was maintained by making participation in this study voluntary and participants were allowed to withdraw at any time. If a participant was not comfortable answering any given question at any point they were not obligated to do so. The participant was also given an information letter that explained the study so they could make an informed decision before participating. At the same time, they received an informed consent form (Appendix C) which had to be signed before participation to give them all the autonomy of willing participation.

4.9.2 Non-maleficence

The principle of "do no harm" (Paul and Bandyopadhyay 2019: 45) ensures that the researcher does not put the participant in any state of potential non-wellbeing, physically or mentally, no matter the potential gain that may be yielded (Varkey 2021: 18). Research was conducted at the convenience of each participant in terms of availability and setting. The nature of this particular study posed no threat to the participants' wellbeing in any way.

4.9.3 Beneficence

Beneficence is the principle of putting the best interest of the participant, the scientific community and society first and to maximise benefit without putting anyone at risk of harm. It consists of not acting against the participants' best interests or wellbeing (Paul and Bandyopadhyay 2019: 45; Varkey 2021: 18). This was maintained by the researcher in this study by keeping all personal information of participants anonymous

through assigning pseudonyms to each participant where demographic data was shared. All personal information of participants were stored in a secure manner.

4.9.4 Justice

Justice relates to the concept of fairness. The researcher's actions towards the participants should be fair and every participant should be treated in the same manner and with the respect and professionalism they deserve (Varkey 2021: 20). No bias was shown to the participants and their answers to the interview questions. All interviews were recorded, transcribed and analysed in the same way to maintain the integrity of the answers to the interview question.

4.10 TRUSTWORTHINESS AND RIGOUR

Trustworthiness in qualitative research is the degree of confidence in the data, interpretation and methods of the study. This determines the quality of the study conducted and is necessary in qualitative research to thoroughly explain the chosen methods and their effectiveness to readers of the research reports (Kalu 2017: 51). Trustworthiness in qualitative research is maintained by utilising the criteria outlined by Lincoln and Guba (1985: 289) of credibility, dependability, confirmability and transferability, as well as that of authenticity which was later added in 1994 (Connelly 2016: 435).

4.10.1 Credibility

Credibility is the confidence in the truth of the particular study (Connelly 2016: 435). Credibility in qualitative research has several influencing factors: prolonged engagement, persistent observation and triangulation, peer debriefing, member checking and reflection (Ahmed 2024: 2; Lincoln and Guba 1985: 301). Credibility in this study was maintained by verbatim transcription of all audio recorded semi-structured interviews, awareness of self-bias and several reviews of audio transcripts and data analysis to ensure truthfulness, as well as selecting participants who met all selection criteria. The researcher spent 45 minutes with each participant to ensure

adequate engagement. The researcher's supervisor also verified themes extracted from the collected data to ensure correct thematic analysis was performed.

4.10.2 Dependability

Dependability refers to how stable the data of the study is over time and under the conditions of the study (Connelly 2016: 435). To achieve dependability, the research process should be logical, traceable and clearly documented (Nowell *et al.* 2017: 3). This was maintained by asking each participant the same questions and accurately transcribing the recordings of each interview.

4.10.3 Confirmability

Confirmability refers to the neutrality of the study and whether the degree of the findings is consistent throughout the study (Nowell *et al.* 2017: 3). The researcher ensured this by recording all interviews on a Dictaphone and storing the recordings in a secure file, which could be audited and validated by others.

4.10.4 Transferability

Transferability refers to a form of external validity and speaks to how the findings from the study should be applicable to other populations, situations, contexts and times (Connelly 2016: 435). This was ensured by detailed descriptions of the study procedures and demographics of the participants.

4.10.5 Authenticity

Authenticity is the extent to which the researcher shows a range of different realities completely and fairly to convey the participants' lives in a realistic manner (Connelly 2016: 436). This was ensured by selecting participants that fit inclusion/exclusion criteria for the study sample and allowing them to express their views on the phenomena in detailed descriptions.

4.11 RESEARCHER POSITIONING

Research positioning is the researcher's subjective viewpoint based in their own experience and knowledge as it pertains to the topic at hand and how it influences them while conducting research (Goundar 2025: 2). As a master's level chiropractic student, the researcher had foundational knowledge of lumbar pain, chiropractic management and risks associated with surgical interventions. This knowledge and experience formed the lens through which the researcher undertook the formulation of this research project, the development of the research questions as well as communicating clearly with the research participants who were qualified chiropractors. The researcher did not have any elements of bias as he has not practiced and dealt with post-surgical lumbar pain patients directly.

4.12 SUMMARY OF THE CHAPTER

This chapter explained the methodology that was used for this study. It expanded on details by which participants were recruited, sample size, research setting and procedure that was followed for information to be collected. This chapter also elaborated on the ethical considerations followed and how trustworthiness was maintained.

CHAPTER FIVE

RESULTS

5.1 INTRODUCTION

The chapter presents the analysed data collected from 12 semi-structured interviews ($n = 12$) from Chiropractic practitioners in the eThekweni Municipality. The study participants' sex, age, and number of years in practice are depicted in **Table 5.1**. Although the sex ratio among participants was nearly equal, the majority were males ($n = 7$; 58%). The mean age of participants was 47.8 years, with a range of 38-56 years. Most of the participants had over 20 years of experience in practice ($n = 9$; 75%), followed by more than 10 years of experience in practice ($n = 2$; 16%), and the last with more than five years of experience ($n = 1$; 8%).

Table 5.1: Demographic data

Participant	Sex	Age	Number of years in practice
1	Male	47	22
2	Male	47	23
3	Female	50	6
4	Male	55	31
5	Female	50	25
6	Male	43	17
7	Female	56	30
8	Male	46	21
9	Male	51	25
10	Male	45	20
11	Female	38	15
12	Female	46	20

5.2 THEMES AND SUB-THEMES

The analysed participant interviews provided an exploration into the perceptions of chiropractors in the eThekweni municipality on their role in the management of patients who suffer from post-surgical lumbar pain. Using the Tesch method to analyse the transcribed interviews, the main themes and sub-themes are summarised in **Table 5.2**. The four main themes extracted were: informed and competent understanding of PSLP, shared recognition of the chiropractor's role and utilisation in post-surgical lumbar spine care, shared perceptions of the therapeutic value of chiropractic treatment for managing PSLP, and uniform practice patterns and challenges in post-surgical lumbar spine management.

Table 5.2 Themes and Sub-themes

Themes and Sub-themes
Theme 1: Informed and Competent Understanding of PSLP
Theme 2: Shared Recognition of the Chiropractor's Role and Utilisation in Post-surgical Lumbar Spine Care
<i>Sub-theme 1: Frequency in Treatment</i>
<i>Sub-theme 2: Monitoring Patient Progress</i>
<i>Sub-theme 3: Understanding Time Frames Before Treatment</i>
Theme 3: Shared Perceptions of the Therapeutic Value of Chiropractic Treatment for Managing PSLP
Theme 4: Uniform Practice Patterns and Challenges in Post-surgical Lumbar Spine Management
<i>Sub-theme 1: Treatment and Management Selection</i>
<i>Sub-theme 2: Multidisciplinary Approach to PSLP</i>
<i>Sub-theme 3: Challenges and Barriers in Chiropractic Management of PSLP</i>

5.3 THEME ONE: INFORMED AND COMPETENT UNDERSTANDING OF PSLP

To explore the participants' understanding of PSLP the fundamental question of "can you describe your understanding of post-surgical lumbar pain?" was asked. The results showed that participants had sound knowledge, awareness and understanding of PSLP.

The following excerpts from the data depict this:

"So post-surgical lumbar pain can vary from different things, from immediately having the pain of the operation, residual pain from the previous condition and possible infection in the area as well and can also, can be confused with pain from other regions as well, like joints above, joints below or organic pain as well." (Participant 2)

"So pain after any sort of low back operation and that can be varied according to the type of operation or of course the type of pain. Also not only limited to the lumbar spine, it could be referral into the low limbs and nerve effects and loss of dermatomes, myotomes, reflexes" (Participant 9)

"To my understanding post-surgical lumbar pain could be numerous factors. Could be the mechanism itself that's been introduced into the spine. Can be a lot of psychological pain, which I think makes up a huge component of these cases. Yeah, to be honest, I think a lot of it is a, is a mix of each of the, of the above, some wear and tear, some major structural changes that have happened." (Participant 10)

"Post-surgical lumbar pain. Well, this is obviously lumbar pain that exists following surgery. That is either the same as they had before the surgery or as a result of healing from the surgery." (Participant 12)

Following on the principle of understanding PSLP, participants also provided adequate descriptions and were able to discuss the several types of surgeries linked and related to PSLP that they had been exposed to.

The following extracts describe this:

“So a lot have had like laminectomies a lot of laminectomies. A lot of like when I first started practising, I'd say a lot of discectomies, but obviously the way they do that, the procedures for those kind of conditions have changed quite a lot, like more recently so you know, but when they have bulges and try, then the surgeons try and sort that out, those yeah, so main I would say those are the two most common.” (Participant 1)

“So a lot of old fusions, so some full, from L1 to L5 fusions, a few discectomies and then a lot of people who had rhizotomies, but yeah, I'd say, yeah, between those three it's, it's about equal measures of full fusions, discectomies and laminectomies then rhizotomies.” (Participant 5)

“The one with the most complications is spinal fusion. Discectomies, even minimally invasive surgeries, either tend to be not as effective as advertised.” (Participant 9)

“Fusion of the two that I'm dealing with at present, discectomies, laminectomies. I've had patients that have had laminectomies that have come back with low back pain post-surgically. Yeah, I think those are the main, the big ones yeah” (Participant 11)

5.4 THEME TWO: SHARED RECOGNITION OF THE CHIROPRACTOR'S ROLE AND UTILISATION IN POST-SURGICAL LUMBAR SPINE CARE

To explore the perceptions of chiropractors on the role of chiropractic care in the management of PSLP the question “can you discuss and describe your views on the role of chiropractic care in patients suffering from post-surgical lumbar pain?” was posed. From the results it could be ascertained that participants held a shared view that chiropractic care plays a role in restoring function, improving mobility and pain relief.

This can be seen in the following excerpts:

“Restore mechanics as best as you can, I would say that's when you have the most dramatic positive effect.” (Participant 1)

“Firstly, to recognise whether it is related to the surgery or not. I think we're quite equipped to do that in conjunction with the surgeon. Rehabilitation, I've done quite a few of that, those patients as well and that means, trying to get patients' mobility back, strength back and pain relief as well.” (Participant 2)

“So I guess initially it will always be just to help them with that pain and reduce the pain and then from there it's more, in terms of a corrective approach to the posture and having to improve the, the overall functioning of the spine.” (Participant 6)

“That's a loaded question because our job is to prevent the surgery in the first place, but inevitably, if they've had the surgery, it's in maintaining mobility and just standard of life. Getting the patient to be able to just complete normal everyday things with a decreased amount of pain.” (Participant 9)

Along with the general views that emerged as seen above, several sub-themes emerged which provided further insights into chiropractor's role and utilisation in post-surgical lumbar spine care. These sub-themes were frequency in treatment, monitoring patient progress, and understanding time frames before treatment.

5.4.1 Sub-theme 1: Frequency in Treatment

Chiropractic practitioners were questioned on how frequently they encountered patients with PSLP seeking treatment. Some participants indicated that they did encounter this type of patient often while others reported that patients with PSLP made up a very small percentage of patients in their care.

The following extracts depict this dichotomy:

“Ok, so at least one a month. Yeah.” (Participant 4)

“Pretty frequently in this practise” (Participant 5)

“Fairly often” (Participant 7)

“It's probably once or twice a year” (Participant 1)

“OK, so ‘shoh’, that's a difficult one because they don't all come to see me after the surgery, but I would say, from, from the ones that do come back to see me, maybe 30%” (Participant 2)

“Not too frequently, not yeah, not too frequent. I'm trying to think, like if I can give you an estimate. I don't know, a handful of cases a year. Yeah” (Participant 12)

5.4.2 Sub-theme 2: Monitoring Patient Progress

In discussing how practitioners would assess patient progress in the management of PSLP, participants mentioned that pain and ability to perform daily functions were the main indicators used to monitor progress in patients with PSLP.

The following excerpts expresses this:

“Yeah. So obviously pain levels, so it's, it's subjective, from the patient's perspective, purely in, in pain, but function, of course, because pain, range of motion and function. How do they function on a daily basis? Are they able to now get out of their cars, in and out of their cars easier? Can they get up and down, navigate stairs? How far can they walk without pain? Can they sleep better at night? So it's all pain related, but pain spills into their daily, daily functioning.” (Participant 3)

“So I normally ask them to do like the NRS, the pain scale, that would be pretty standard and then a lot on function. So how they walk, what they can do, whether they can get out of a chair out of a bed out of a car and then we try and tailor make their progress according to that.” (Participant 4)

“So typically I just go with daily functions, things like that, what they're able to do, what they're not able to do. I have played with visual analogue scales and things like that in the past, but I don't really use those anymore. I just go basically how patient feels” (Participant 10)

“I don't specifically have like a, what's the word I'm looking for, like goniometers and those sorts of things. And for me it's, it's, I'm able, it's, it's a small one. So

“I can pick my, my shoe up off the floor, I'm able to go for a walk for 2K's, which I couldn't do three weeks ago. My pain has gone from a” so like an NRS thing, pain's gone from a 10 out of 10, right down to a one out of 10 for argument sake. Those sort of metrics, it's not necessarily research based metrics to say that like it's that specific protocol or scale, but for me it's the non-scale victories I guess, if you could say it that way that I can measure based on what the patient's feedback is.” (Participant 11)

While discussing patient progress the participants were asked the probing question “are these [assessment] protocols [for PSLP] different than in other conditions?” It was revealed that they assessed progress of PSLP in the same way they would any other condition.

This can be seen from the following excerpts:

“So I'd say it's similar protocols. Yeah similar.” (Participant 2)

“No it'd probably be the same, same protocols” (Participant 6)

“Pretty much the same yeah, pretty much the same.” (Participant 10)

“Not really. Actually it's much the same really. Those are the metrics that I use to determine if the patients improved and again like your basics of motion palpation you know, the things that you feel in your objective findings, your subjective stuff it is, ‘oh I can walk further’ as a stupid example, but I'd say I use those as my metrics really, yeah.” (Participant 11)

5.4.3 Sub-theme 3: Understanding Time Frames Before Treatment

In discussing how soon/long after surgery patients should seek out chiropractic care for PSLP, participants gave varying time frames based on factors such as type of surgery, wound healing time, selection of treatment and familiarity of the patient's history.

The following excerpts depict this:

“Well, I would say immediately after surgery and I've seen patients as early as two weeks post-op. Manipulation, chiropractic manipulation probably done

some as early as six weeks and most of them six months, depending on area of surgery so and type of surgery as well.” (Participant 2)

“So preoperatively, I guess that's our best position, before any of the surgery happens. But then if it has, now, if they've had surgery, I reckon chiropractic care can be very soon implemented, when all, you know when, if the wounds are stitched and I mean they here, they, they, it's basically closed up wounds” (Participant 5)

“So once again depends on what surgery they've had. A month, a month after.” (Participant 9)

“Micro-discectomies you could treat them literally a couple of days later if you if you know what you're doing and quite gentle. Obviously with fusions and things like that, I would be very cautious to start manipulating the spine post-fusion, especially a very fragile back, I'd maybe to wait at least six to eight weeks, maybe longer to do any manipulation, you can do some soft tissue work and needling” (Participant 10)

5.5 THEME THREE: SHARED PERCEPTIONS OF THE THERAPEUTIC VALUE OF CHIROPRACTIC TREATMENT FOR MANAGING PSLP

The question “describe the benefits and effect chiropractic management has on post-surgical lumbar pain” explored chiropractors’ perception of the effectiveness of chiropractic management protocols in the management of PSLP. Results showed that participants generally believed chiropractic management to be effective in treating PSLP.

This is depicted in the following extracts:

“Yeah, I think it can, we can be effective, yeah, and I think it's if you take it case by case, then you can see.” (Participant 4)

“I feel it is very effective.” (Participant 6)

“Very good, very effective. If done properly.” (Participant 8)

“I would say it's very effective. Yeah.” (Participant 12)

Although chiropractic management was generally seen as effective in reducing PSLP, two participants cautioned that the duration of this process may be extensive.

The following extracts elaborate on this:

"I think it's pretty good ... The actual rehab process and the pain management is quite effective ... 10% might have some residual pain and treatment can go on for longer and a small percentage don't respond well, and those are normally the ones who end up waiting for further surgery" (Participant 2)

"I think it does help, but where there's scar tissue and where there's mechanical stabilisation, the areas above and below definitely need help, and patients do find it effective. But it's, it's a chronic, ongoing battle." (Participant 7)

In addition to sharing their perceptions on the effectiveness of chiropractic management in PSLP, participants also shared what they had experienced in practice with regards to patient outcomes in the management of PSLP.

The following extracts describes this:

"I would say that I have definitely been able to help a lot of people." (Participant 1)

"As long as the patient's compliant of treatment ... I'd say 80% of patients respond well" (Participant 2)

"We see a lot of post-surgical and failed surgery patients and we, we get good results if the person, if the patient education is sufficient in the beginning of treatment and you and they can start to understand what's happening in their spine and they are then part of the process of the recovery we get good results." (Participant 5)

"So the patients that I've seen, I would say majority of them are improved with the chiropractic treatment post-surgery." (Participant 6)

"I've seen it be extremely effective and I've seen it be ineffective because of the surgery done. So because you can't do the treatment that you want to do, your hands are kind of tied." (Participant 9)

5.6 THEME FOUR: UNIFORM PRACTICE PATTERNS AND CHALLENGES IN POST-SURGICAL LUMBAR SPINE MANAGEMENT

To explore the practices chiropractors utilise in the management of PSLP, participants were asked “can you describe how you as a chiropractor approach the management of post-surgical lumbar pain?” The results point to a holistic and patient-centred care approach to improve overall quality of life for the patients.

The following excerpts from the data describe this:

“So yeah, starting from the case history assessment, making an assessment and then diagnosis and then management plan. But the management plan would definitely incorporate mobility, rehabilitating muscles, looking at the kinematic chain that's involved around the hip area, knee and ankle and seeing if we can correct those things as well to assist the patient. Advice with regards to things like when to use corsets, when not to use corsets, pain management from using electro modalities, maybe a bit of needling if needed and working around the upper kinematic chain all the way up to thoracic spines, cervical, trying to relieve pressure on the lumbar spine as well.” (Participant 2)

“So I'm trying to do whatever is going to help them heal faster. So a part of that would then be looking at the acute management in terms of wound care, second part would be mobilising, third part would be, then be, exercises as well to help them with core strength and rehab” (Participant 4)

“Assess the damage done so see where the patient's starting point is, and what the major complaint now is, and then tailor make your treatment to that.” (Participant 9)

“See, that's a difficult one because every single patient is different and I think every case needs to be treated in a completely unique way. So, I look at the holistic aspect, I mean, I know it's a buzzword within chiropractic, but it really is based on that individual's needs and the other health aspects that go with it.” (Participant 11)

While discussing approaches to management of PSLP, three sub-themes emerged from the data which further elaborated on the practice patterns and challenges in the management of PSLP.

5.6.1 Sub-theme 1: Treatment and Management Selection

In the discussion on how participants approach the treatment and management of PSLP they revealed that their treatment selection varied from patient to patient, according to the requirements of the individual patient.

These excerpts from the data depicts this:

“I think mainly because the types of surgery vary and the patient response to the surgery is variable as well, so depends on how much of mobility they have after the ‘op’, how much of pain they have after the ‘op’, and how far. So the treatment is progressive, so depending on which stage you catch them after the ‘op’ you can maybe progress them to stage 2, stage 3 quite quickly.”

(Participant 2)

“So the immediate treatment for in the relief stage is very much patient centred. So it's whatever is causing them the pain, whether it's inflammation, whether it's muscle spasm, whether it's whatever it is, so that will be different for every patient.” (Participant 5)

“Yeah, well it's all patient specific in terms of the presentation where the fixations are and where the tightness is. So yeah, I'd say it's patient specific and we do what we can, what we do as chiropractors and we look at them holistically from the foot up.” (Participant 7)

“Not every patient is treated the same. Some patients get manipulated. Some patients get spoken to for an hour. It depends on the patient that you're dealing with.” (Participant 10)

During the expression of the participants perspective on their management of post-surgical lumbar pain, a variety of different treatment options were presented as part of a management plan for these patients. This was based on their needs as seen in **Table 5.3**. Practitioners emphasised the utility of multiple treatment tools, rather than relying on one method of care.

Table 5.3: Summary of Treatment Tools Utilised in Chiropractic Management of Post-Surgical Lumbar Pain

Treatment tool	Extract
Adjustments / Mobilisations	<i>"If you're going to be adjusting or manipulating joints above and below is trying to localise that fixation properly during your setup for adjustment" (Participant 2)</i> <i>"I'll kind of mobilise sections above and below the segment that have had, that's had surgery on it. And then as they go through the stages of healing, then that mobilisation becomes a little bit more grade three, grade four, grade five mobilisation." (participant 4)</i> <i>"Adjust the levels above and below" (Participant 5)</i> <i>"Mobilisation levels above and below and some pain control." (Participant 7)</i> <i>"So in other words, I won't be happy manipulating somebody after spinal fusion where I will be happy manipulating somebody with an active disc, that doesn't faze me. But you have to tailor-make your treatment according to what procedures have been done. Sometimes it makes it more difficult because your hands are actually tied because you're more limited in what you can do." (Participant 9)</i> <i>"I by all means adjust various other levels, like I said, keeping in mind the time frame and what was being done with the patients of whether or not I adjust at that region but above, below, other joints which are stuck" (Participant 12)</i>
Electromodalities	<i>"From using electromodalities maybe" (participant 2)</i> <i>"Relieving the muscle tension offloading the motion segment that is involved as much as possible. And then there's electromodalities we use, the TENS or the IFC. But it really is, it's soft tissue focused." (Participant 3)</i> <i>"OK, so I have various soft tissue modalities, particularly transceiver machine, which is a very good machine for soft tissue, stimulating blood flow and lymphatic drainage and bringing, speeding up healing into the area, so definitely do those" (Participant 12)</i>
Dry Needling	<i>"A bit of needling if needed" (participant 2)</i> <i>"Needling you can do" (Participant 12)</i>

Soft tissue	<i>"I would focus on, on soft tissue stuff so because, especially when it's OK, we are talking lumbar. So I've I find, and I've, that the QL's, and the erector spinae as well, your paraspinals, the QL's and the multifidi muscles are so important and integral in presenting with pain, so as soon, as soon as the brain perceives something's not right in that area of the spine, it locks everything up" (Participant 3)</i> <i>"Probably helping people get sort of better functionality back working on any kind of muscle type issues" (Participant 6)</i> <i>"Massage just simple soft tissue massage also work quite well." (Participant 12)</i>
Traction	<i>"So we also have a traction bed here, we do have a hydraulic traction, which I use" (Participant 3)</i> <i>"We've also got a decompression table which is quite nice for just getting some gentle sort of movement into the spine post-surgical" (Participant 6)</i>

5.6.2 Sub-theme 2: Multidisciplinary Approach to PSLP

Participants were questioned on whether they work with other healthcare professionals when managing PSLP patients and it was clear that the participants generally utilise a multidisciplinary approach in the management of PSLP.

One type of HCP that the participants frequently collaborate with, is biokineticists, as seen in the following excerpts:

"Thing is, our practise here is a little bit different because we've got, so we're multidisciplinary, we've got biokineticists here. So the orthopod [orthopaedic surgeon] would often send them to the biokineticists first for post-surgical rehab and then the bio would send them to me if the pain persists"
(Participant 3)

"Yeah, I would say a biokinetist [biokineticist] for me is, is very beneficial, because they believe in the similar, similar philosophy to get back into motion, so it's, to, to reintroduce motion into the spine as soon as possible. So yes, I'd say biokinetist [biokineticist] is probably the person I'll refer to the most."
(Participant 5)

“Yes, I work very closely with biokineticists, who's been invaluable in maintaining movement and functionality.” (Participant 9)

“Yeah so obviously here we work in a multidisciplinary world, we work with doctors, we work with bios [biokineticists]. Predominantly I work with a bio, a good bio and exercise, I try and get the patient to move their spine and strengthen their spine.” (Participant 10)

Other HCPs mentioned included general practitioners (GPs), physiotherapists, orthopaedic surgeons and neurosurgeons, as can be seen in the following extracts:

“Yeah, closely with their GP and always feedback to the surgeon as well.” (Participant 2)

“Again, if we feel like we need to refer, we, we do. So probably things like physio [physiotherapist] and biokineticist would probably be the most we refer to.” (Participant 6)

“If it's deteriorating, I think there's something wrong, then yes, we'll either go back to the neurosurgeon or the orthopod, refer them back there if it's not working well” (Participant 8)

“At the, the baseline limit, my minimum thing with patients is that I have to be working at least with the biokineticist and the neurosurgeon that's on the team. So at least we have the, the rehab element, we've got the pain management elements and we've got the guy who did the surgery that we can communicate back and forth if we need to for, for that.” (Participant 11)

5.6.3 Sub-theme 3: Challenges and Barriers in Chiropractic Management of PSLP

In terms of their management approaches to PSLP, participants mentioned that patient compliance and psychological factors were challenges they generally encountered when managing patients.

The following excerpts illustrate this:

“And then yeah, getting them to comply with doing exercises, I think that's one of the biggest challenges.” (Participant 7)

“Other people, it is there for longer time. So I think it is just more that the recurrence might be there and psychologically people are a little bit more wary of their back.” (Participant 8)

“Again, patient dependant. So getting the buy-in from the patient. The patient that is sedentary, overweight, not looking after themselves like getting the buy-in from them to do their homework, do their biokinetics work, see the physiotherapist” (Participant 11)

“With the patient it’s actually, is they’re fearful of you doing anything wrong. They don’t want to mess up the fact that they had an operation” (Participant 12)

Participants also described how these challenges would often be potential barriers that needed to be overcome to ensure the patient’s progression.

This can be seen in the following extracts from the data:

“I think patient apprehension is a big challenge. Most of them are feel quite sensitive, so don’t want to come for treatment thereafter. But once you explain to them the benefits of it, they’re quite privy to, to come through” (Participant 2)

“I would say um, compliance from the patient’s point of view that they continue treatment even though the initial pain has, you know, if you’ve relieved the prey, the pain, but they’re not continuing with treatment. In other words, they then leave it and then another level of the spine starts getting involved. So I think that’s the biggest challenge, not so much relieving them because it’s, you know, there’s lots that you can do to relieve pain. It’s the patient’s compliance afterwards because they don’t understand or they fail to understand that a motion segment has now been compromised and therefore the other motion segments are overcompensating and there will be degenerative changes there” (Participant 5)

“The majority of the time is a patient’s disappointment, because they were promised a pain free existence after surgery, and now they’re coming in with the same problem, if not the same, worse. So managing expectations number one” (Participant 9)

5.7 SUMMARY OF THE CHAPTER

This chapter detailed the interpretation of all the analysed semi-structured interviews done with 12 chiropractic practitioners in the eThekweni Municipality. The main themes and sub-themes were extracted. Excerpts from participant responses illustrate how these themes and sub-themes were determined.

CHAPTER SIX

DISCUSSION

6.1 INTRODUCTION

This chapter will further discuss the results compiled in chapter 5. These results are compared to current literature relevant to these topics.

6.2 OVERVIEW OF THE RESEARCH DISCUSSION

The aim of this study was to explore the perceptions of chiropractors in the eThekweni municipality on their role in the management of patients who suffer from post-surgical lumbar pain.

Four main themes were recognised:

Theme 1: Informed and Competent Understanding of PSLP

Theme 2: Shared Recognition of the Chiropractor's Role and Utilisation in Post-Surgical Lumbar Spine Care

Theme 3: Shared Perceptions of the Therapeutic Value of Chiropractic Treatment for Managing PSLP

Theme 4: Uniform Practice Patterns and Challenges in Post-Surgical Lumbar Spine Management

The themes and several sub-themes, presented in Chapter 5, are further discussed below with authenticating relative literature.

6.3 THEME ONE: INFORMED AND COMPETENT UNDERSTANDING OF PSLP

The participants expressed a competent understanding of what PSLP is and adequately discussed common procedures patients generally undergo before they seek out chiropractic management.

There was general consensus from the participants that the true origin of PSLP is challenging to distinguish, highlighting all the major areas within the lumbar spine which could generate pain signals. They explained how the pain perceived by patients could originate from trauma from the operation itself, unsuccessful surgery, muscular response, or the healing process. This correlates with findings by Van de Minkelis *et al.* (2024: 919), who stated that the “origins of persistent pain following spinal surgery may be categorized into an inappropriate procedure (e.g. a lumbar fusion at an incorrect level or for sacroiliac joint [SIJ] pain); technical failure (e.g. operation at non-affected levels, retained disk fragment, pseudoarthrosis), biomechanical sequelae of surgery (e.g. adjacent segment disease or SIJ pain after a fusion to the sacrum, muscle wasting, spinal instability); and complications (e.g. battered root syndrome, excessive epidural fibrosis, and arachnoiditis), or undetermined”. The conclusion is that PSLP does not have a known single origin.

Christelis *et al.* (2021: 810) agree that the origin of spinal pain in general is complex, with mechanisms that include muscle and fascia, complication of surgery, psychosocial, nervous system, as well as vertebral column components. They go on to explain lumbar pain, post-surgically, to be a result of a multitude of factors, including biomechanical changes, scar tissue, myofascial dysfunction, and stenosis resulting in nerve compression (Christelis *et al.* 2021: 810).

Participants also consistently mentioned three main types of surgical interventions perceived to be linked to patients with PSLP. These are laminectomy, discectomy and lumbar fusion. This correlates with findings in a systematic review by Trager *et al.* (2023: 15), that found that the most common lumbar surgeries that led patients to seek out post-surgical care for persistent spinal pain were laminectomy, fusion and discectomy.

Some participants also mentioned that they had encountered patients with lumbar pain after having undergone rhizotomy and similar minimally invasive procedures. According to Yeung and Visintini (2018: 12) there is conflicting evidence on the effectiveness of rhizotomy for the treatment of lower back pain. Recurrent pain following a rhizotomy is common due to multiple factors such as nerve regeneration, progressive degeneration of structures surrounding the procedure site, inaccurate diagnosis or poor biomechanics of surrounding structures (Rimmalapudi and Kumar 2017: 4; Wetzel *et al.* 1997: 2289). These findings can explain why patients receiving these types of interventions end up seeking out physical and/or manual therapy for PSLP.

Current literature relating to the origins of PSLP, as well as the surgeries commonly linked with PSLP, support the participants' responses, indicating that chiropractors do have an informed and competent understanding of PSLP. It addresses the first research question of "what are chiropractors' understanding of PSLP?"

6.4 THEME TWO: SHARED RECOGNITION OF THE CHIROPRACTOR'S ROLE AND UTILISATION IN POST-SURGICAL LUMBAR SPINE CARE

Regarding their perceived role in managing patients who present with PSLP, the participants seemed focused on improving their patients' overall quality of life. This included specific attention to pain relief, as well as improved lumbar spine function and mobility. This aligns with principles outlined by Sakaguchi *et al.* (2024: 2929) in an extensive review on rehabilitation in adults after lumbar spine surgery which aimed to evaluate the ideal management goals for patients with PSLP. Frequency of treatment, monitoring patient progress and the understanding of time frames before treatment were identified as key factors in chiropractors' perceptions on the role of chiropractic care in the management of PSLP.

6.4.1 Sub-theme 1: Frequency in Treatment

An inconsistent pattern was observed regarding how often chiropractors encounter patients with PSLP. Seven of the participants indicated that they frequently encountered patients with post-surgical pain. Five participants reported that although they had experience in the management of PSLP their interaction with this group of patients was relatively rare when compared to other conditions they see.

A lack of epidemiological data that addresses the incidence of patients with PSLP that seek out chiropractic care makes it difficult to draw direct comparisons of the participants' experiences in the frequency of treating this condition to current literature. A study done by Daniels *et al.* (2020: 3) noted a relatively low rate of chiropractic interactions with patients who have undergone prior lumbar fusion. However, it should be noted that this study was focused on a very specific population group and its results most likely do not translate to the current study. There are also several case reports and case series that describe various chiropractic interventions that have been implemented for patients who suffer from PSLP, which suggests that patients do seek out chiropractic care (Chu and Trager 2022: 1643; Coulis and Lisi 2013: 168; Kruse and Cambron 2011: 408). However more studies are needed to explore current trends in practice.

6.4.2 Sub-theme 2: Monitoring Patient Progress

The participants stated that they generally implemented the same protocols to assess PSLP as those they would use to assess progress when managing other conditions, such as patient-reported outcome measurements (PROMs) of pain and performance in activities of daily living. This aligns with what is deemed standard for musculoskeletal disorders, according to The National Academies of Sciences, Engineering, and Medicine (2020: 237). It observed that patient-reported measures of pain and function are the main outcomes that are relevant to treatment success as pain and reduced function are the most common clinical features present in musculoskeletal conditions.

6.4.3 Sub-theme 3: Understanding Time Frames Before Treatment

The participants were asked how soon after lumbar surgery they believed patients could seek out chiropractic care. The general response ranged from as early as two weeks, to as late as six months post-treatment. However, the participants were more concerned about specific factors that influenced these time frames.

They mentioned wound healing time, type of procedures performed, and the appropriate selection of treatment modality as factors that influence treatment implementation. This is consistent with literature where recommendations for physical and manual therapy vary, based on surgery type. Barbosa *et al.* (2023: 635) and Ruffilli *et al.* (2024: 2567) found that physical therapy after discectomies could be implemented as early as two weeks post-surgery, but most optimally at four weeks. For lumbar fusions three to six weeks is the earliest time to safely start implementing physical therapy, however it is usually implemented around 12 weeks post-surgery. Buchanan *et al.* (2022: 1158) emphasizes the importance of avoiding early post-operative manual therapy over surgical sites. This is to allow for the healing of the skin, soft tissue and the surgical correction itself to take place. They also caution that the selection of management modalities should be carefully considered. The focus should initially be on patient education and performing daily activities with the correct biomechanics, and then – as healing takes place - evolve towards more physically demanding activities and treatment options.

6.5 THEME THREE: SHARED PERCEPTIONS OF THE THERAPEUTIC VALUE OF CHIROPRACTIC TREATMENT FOR MANAGING PSLP

Addressing the third research question of “what are chiropractors’ perceptions on the effectiveness of chiropractic management protocols in the management of PSLP?”, all participants perceived chiropractic management to be effective based on what they have experienced in treating such patients.

This correlates with current research which suggests that there is low to moderate evidence in favour of chiropractic care for the management of PSLP. However, these studies are limited to case reports and series (Daniels *et al.* 2021: 16).

When looking at literature that has investigated management protocols from other physical and/or manual therapists that overlap with chiropractic care, it was found that the effectiveness of physical therapy in PSLP is also severely limited, ultimately leaving a 'gap' in literature supporting the evidence of successful care towards this population group. A systematic review that analysed 25 randomised controlled trials, examined the effectiveness of rehabilitation in patients who were three months post-surgery (Yu *et al.* 2024: 9). It concluded that physical therapy could have potential benefit, however there is a vital need for further research to support these claims.

The participants indicated that, under their care, they had all seen improvement in patients suffering from PSLP. This means their perceived role performance aligns with their role perception of improving patients' quality of life. This seems to be consistent with the limited literature available. A published case report by Coulis and Lisi (2011: 174), where chiropractic care was administered to three patients with post-surgical spine pain (two with lumbar spine pain) had reported favourable results in all cases. Another case report published by Kruse and Cambron (2011: 411) reviewed 32 cases of patients that received chiropractic management for lumbar pain subsequent to lumbar surgery. They concluded that patients did improve with chiropractic care for their post-surgical lumbar pain. Literature in chiropractic specific management of PSLP is rare and thus further studies are required to have a more comprehensive view and understanding of its patient outcomes.

6.6 THEME FOUR: UNIFORM PRACTICE PATTERNS AND CHALLENGES IN POST-SURGICAL LUMBAR SPINE MANAGEMENT

When the participants were asked about their approach to the treatment and management of PSLP, their responses consistently emphasised that each patient was individualized. Their assessments were done with a holistic view focusing on the individual patient's specific needs, which leads to patient-centred management plans. This approach makes sense considering chiropractors' philosophy in implementing the biopsychosocial model of care in practice. It also aligns with current trends which suggest that a patient-centred approach to PSLP leads to better patient outcomes (Podder *et al.* 2025: 22).

It is clear that treatment and management selection - incorporating a multidisciplinary approach to PSLP management and facing and overcoming certain challenges when managing patients with PSLP - are the key practices used by chiropractors in managing PSLP.

6.6.1 Sub-theme 1: Treatment and Management Selection

Participants mentioned various treatment modalities and management plans they would consider implementing for their PSLP patients. They stressed that their treatment and management selection would be dictated by each patient's particular needs as well as contraindications that may be present for specific treatment modalities, as was set out in **Table 5.3** in the previous chapter.

The participants reported they would generally limit the application of spinal manipulation/mobilisation to segments adjacent to the levels that had been operated on, but not directly to the affected area. This correlates with what Daniels *et al.* (2020: 37) found in a cross-sectional survey that looked at management approaches of chiropractors treating patients who have had previous lumbar fusion surgery. Most practitioners who responded to the survey stated that they had implemented spinal manipulation to non-fused regions and very few said that they had applied spinal manipulation to the fused region.

Electromodalities, dry needling and soft tissue therapy seemed to be used as symptomatic treatment such as pain management and improving muscular function. This practice is consistent with findings from studies that have investigated these modalities and their best use as complimentary treatment options in a multimodal management approach (Chys *et al.* 2023: 14; George *et al.* 2021: CPG20; Niyonkuru *et al.* 2025: 130; Wolfe, Rosenstein and Fortin 2023: 4692).

6.6.2 Sub-theme 2: Multidisciplinary Approach to PSLP

When questioned about collaborating with other HCPs when encountering patients with PSLP, there was a clear indication that the participants considered a multidisciplinary approach more favourable than a non-multidisciplinary approach.

This seems to be echoed in the literature when it comes to PSLP as seen in an extensive systematic review by Gatzinsky *et al.* (2019: 8) which highlighted the necessity for a multidisciplinary approach to ensure improved patient outcomes for PSLP. This was also the finding of Miekisiak (2023: 1266).

It was also noted that the participants hold biokineticists specifically in high regard when it comes to multidiscipline care for this type of patient, pointing to role complementarity in terms of functional improvement for patients. This aligns with two studies that have looked at inter-relationships between the chiropractic and biokinetic professions in South Africa. Although these studies are of low quality, they suggested that there was a positive relationship between the two professions (Naidoo 2008: 145; Van der Vyver 2020: 65). It also suggests that the participants are aware of the effectiveness of supervised exercise therapy in managing PSLP, for which convincing evidence exists in the literature (Amirdelfan *et al.* 2017: S49; Manni *et al.* 2023: 11).

6.6.3 Sub-theme 3: Challenges and Barriers in Chiropractic Management of PSLP

Patient compliance and psychological factors were regularly identified as challenges typically faced while managing patients with PSLP.

Current literature highlights patient-compliance as being vital for effective post-surgical recovery, yet a high level of non-compliance among patients is also reported (Wang *et al.* 2025: 2).

According to Thummak, Uppor and Wannarit (2023: 423), patient compliance consists of three attributes: “1) self-care behaviour, 2) following health recommendations and 3) willing collaboration with health professionals.” These attributes provide a comprehensive understanding of patient compliance and why it is such a major component of patient recovery.

From a practitioner point of view, getting patients to adhere to their prescribed management protocols was identified as a regular challenge they needed to overcome when managing patients with PSLP. This issue is not surprising as non-compliance by patients has been noted as a major concern from a physical therapy point of view in

both general, as well as post-surgical, rehabilitation (Kattan *et al.* 2023: 1; Room *et al.* 2021: 109).

Another challenge that participants faced in treating patients with PSLP, was psychological factors. The psychological aspect of chronic pain has been well documented as having an impact on outcomes in post-surgical pain cases (Darnall 2016: 33).

Patients suffering from depression due to persistent pain after surgery, patients experiencing disappointment from unsuccessful outcomes after surgery and patients fearing that chiropractic intervention may aggravate their pain were psychological barriers the participants had to overcome to treat patients with PSLP successfully. This seems to be consistent with recent literature that point to depression and kinesiophobia as mental challenges faced by patients due to persistent pain after lumbar spine surgery (Aghajanian *et al.* 2024: 3248; Pan *et al.* 2025: 2).

6.7 SUMMARY OF THE CHAPTER

This chapter discussed the results from the data in more detail and related it to existing literature. From the discussion a conclusion can be drawn regarding the objectives and research questions set initially and this will be discussed in the next chapter.

CHAPTER SEVEN

SUMMARY, STRENGTHS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION OF THE STUDY

7.1 INTRODUCTION

This chapter will give a summarised account answering the research questions set out at the commencement of this study. The strengths, limitations, recommendations and conclusion will also be addressed in this chapter.

7.2 SUMMARY OF THE STUDY

This study aimed to explore the perceptions of chiropractors in the eThekweni municipality on their role in the management of patients who suffer from post-surgical lumbar pain. Four research questions were formulated to address this aim and are further elaborated on below.

7.2.1 Research Question One: What are chiropractors' understanding of post-surgical lumbar pain?

The participants were able to describe what PSLP is and how it typically presents. They showed a general awareness that the origin of PSLP is challenging to determine due to multiple contributing factors that need to be considered. The participants expressed their familiarity with surgical procedures that patients with PSLP typically undergo prior to the development of PSLP, thus indicating that chiropractors have a competent understanding of PSLP.

7.2.2 Research Question Two: What are chiropractors' perceptions on the role of chiropractic care in the management of post-surgical lumbar pain?

The participants hold a shared view that the role of chiropractic care in the management of PSLP is to improve the overall quality of life for their patients. They believe that this is achieved by increasing patients' mobility, restoring function to the point where patients can easily perform activities of daily living and by reducing the patients' pain.

7.2.3 Research Question Three: What are chiropractors' perceptions on the effectiveness of the chiropractic management protocols in the management of post-surgical lumbar pain?

The participants all agreed that chiropractic management could be effective for PSLP management and improving patients' overall quality of life. All practitioners were able to share experiences of improved patient outcomes in practice when managing PSLP.

7.2.4 Research Question Four: What practices do chiropractors utilise in the management of post-surgical lumbar pain?

Participants described multiple different treatment modalities that can be used to treat PSLP, however, they emphasised a holistic, patient-centred approach in their implementation in the management of PSLP. This was illustrated by describing how their treatment and management selections would be based on each patient's specific needs and would thus vary from patient to patient. They expressed their willingness in working with other HCPs in order for the patient to receive comprehensive care. Various challenges that they often need to overcome to achieve positive patient outcomes were also identified.

7.3 STRENGTHS OF THE STUDY

The study's strengths lie in its novel focus on chiropractors' perspectives in the context of PSLP, an area seldom explored within musculoskeletal rehabilitation. Through rich qualitative data and consistent participant narratives, this research has provided credible, practice-informed insights that can inform clinical education, inter-professional collaboration and guideline development.

A key strength of this study lies in its South African context, where chiropractic is an emerging profession. Conducted within a diverse and evolving healthcare system, it provides contextually grounded insights into chiropractic practice in post-surgical lumbar spine pain management. By capturing the perspectives of practising chiropractors, the study not only fills a significant gap in regional literature but also highlights the role of a developing profession within multidisciplinary and resource-variable settings. This local focus broadens the global understanding of how chiropractic care is positioned and applied in post-surgical spine rehabilitation.

7.4 LIMITATIONS OF THE STUDY

Despite its contributions, this study has several limitations. During sample recruitment the researcher used CASA as the organisation to distribute the advertisement inviting participants to the study. Practitioners who may have been eligible to participate in the study but are not active members of CASA would not have been able to participate in the study. The findings of the study are specific to chiropractors practicing in South Africa and may not be generalizable to other contexts or healthcare systems. The sample size and regional representation were limited, and participants who volunteered may have been more positively inclined toward post-surgical care, introducing potential self-selection bias. Additionally, only practitioner perspectives were explored, excluding patient experiences, which restricts understanding of actual outcomes. This study also looked at PSLP through a broad lens and was not specific to different types of surgeries. Finally, as with most qualitative research, the findings are interpretive and context-dependent, reflecting the emerging nature of chiropractic practice in South Africa.

7.5 RECOMMENDATIONS

Based on the findings of this study as well as the clear gap in literature surrounding the topic, it is the researcher's recommendation that further research studies exploring chiropractic management in PSLP should be conducted. Future qualitative studies should aim to include chiropractors from a broader region to ensure a more generalized sample population, as well as including patient experiences. Quantitative studies such as cross-sectional surveys and randomized clinical trial studies should also be conducted to investigate the role of chiropractic management in PSLP more objectively. Future studies should also look at post-surgical management of specific surgical procedures.

7.6 CONCLUSION

This qualitative study explored the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of PSLP. The findings indicate that chiropractors in the eThekweni municipality believe their role to be in improving patients' overall quality of life through a holistic, patient-centred management approach by improving their patients' mobility, restoring function and reducing pain. They believe this is achieved through various modalities within their scope of practice and alongside other HCPs in a multidisciplinary approach. The participants of this study also believed chiropractic care in the management of PSLP to be effective, based on their clinical experience.

This is the first study of its kind with regards to chiropractic management and PSLP. While findings from this study were congruent with what literature said about general topics, there were no similar studies to compare its results with. Therefore, this study adds a valuable contribution to the chiropractic profession in South Africa.

7.7 DISCLAIMER ON ARTIFICIAL INTELLIGENCE TOOLS

It should be noted that the researcher used artificial intelligence (AI) tools such as 'ChatGPT', 'Consensus' and 'Google AI' during the research process in order to aid in sourcing journal articles relevant to the review of literature and discussion of the

results, however these tools were not utilised for the purposes of writing the dissertation nor analysing the data collected.

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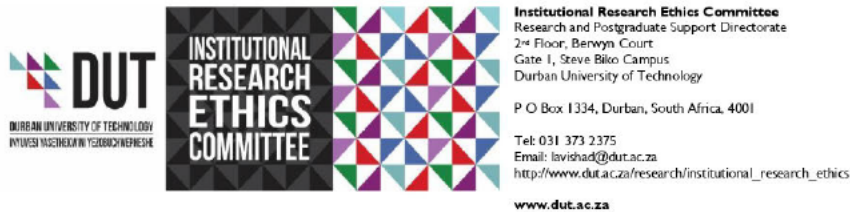
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APPENDICES

Appendix A: Ethics Clearance Certificate



19 June 2025

Mr J C Fourie
60 Bellevue Road
Musgrave
Berea
4001

Dear Mr Fourie

Exploring the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain
Ethics Clearance Number: IREC 326/24

The DUT-Institutional Research Ethics Committee acknowledges receipt of your final data collection tool for review.

We are pleased to inform you that the data collection tool has been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the DUT-IREC acknowledges receipt of your gatekeeper permission letter.

Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC SOP's.

Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely

Professor P Mashau
Chairperson: DUT-IREC

Appendix B: Permission from Allied Health Professions Council of South Africa



The Allied Health Professions Council of South Africa
Ensuring quality complementary and alternative healthcare of choice

10 June 2025

Dear Mr J Fourie

RE: PERMISSION GRANTED TO CONTACT PARTICIPANTS FOR MASTER'S RESEARCH DISSERTATION

We refer to the above-mentioned matter and thank you for the opportunity to engage in this regard.

Your request to contact participants, for your master's research dissertation **Provisional Title:** Exploring the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain, has been granted.

We wish you all the best.

Yours faithfully

MS ESTHER PILLAY-NAIDOO

REGISTRAR: ALLIED HEALTH PROFESSIONS COUNCIL OF SOUTH AFRICA

Appendix C: Letter of Information and Informed Consent



LETTER OF INFORMATION

Title of the Research Study: Exploring the perceptions of chiropractors within the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain

Principal Investigator/s/researcher: Johan Fourie BTech: Chiropractic

Co-Investigator/s/supervisor/s: Dr. A. Abdul-Rasheed, M. Tech: Chiropractic, PhD: Health Science (Supervisor) Dr. K. Padayachy, M. Tech: Chiropractic, PhD: Anatomy (Co-Supervisor)

Brief Introduction and Purpose of the Study: Low back pain is one of the leading causes of disabilities globally and studies have shown that post-operative low back pain is a common symptom that is present in patients who have undergone previous surgeries, the aim of this study is to establish a generalised view of chiropractors, in the eThekweni municipality, on patients who suffer from post-surgical lumbar pain.

Greeting Good day, I wish to welcome you to my research study.

Introduce yourself to the participants I am a 6th year student at DUT doing research for my Masters' Degree in Chiropractic.

Invitation to the potential participant I would like to invite you to participate in my research project.

Outline of the Procedures: You will be required to participate in an interview that is estimated no longer than one hour in duration. A request is made for the interview to be voice recorded for record purposes. The interviews will be conducted in person with consent from you as the participant at a location agreed upon beforehand by both the researcher and participant.

Risks or Discomforts to the Participant: There are no foreseeable risks for participating in the study.

Explain to the participant the reasons he/she may be withdraw from the Study: You are free to withdraw from study at any stage of the study. There will be no adverse consequences should you choose to withdraw.

Benefits: The research will add in literature on the benefits knowledge, attitudes and experiences of chiropractors on patients who suffer from post-surgical lumbar pain. This will provide a basis of understanding on this topic by chiropractors in South Africa which can be utilised as the framework on future widespread research as well as

provide more information on current knowledge of chiropractors to other healthcare professionals, which may aid in more integrated patient care.

Remuneration: There is no remuneration or incentives for participating in the study.

Costs of the Study: There will be no cost involved to participate in this study.

Confidentiality: All personal details will be kept confidential and allocated a code. The raw data will only be accessible to the researcher, research supervisor and co-supervisor.

Results: The results of the study will be distributed to the participants of this study and the full dissertation will be available on the DUT library website. The results of this study will also be published in a peer-reviewed journal article.

Research-related Injury: There are no risks of research related injuries in this study.

Storage of all electronic and hard copies including tape recordings: The consent forms and downloaded interview recordings will be stored electronically in a password protected device while data is being analysed. The data will be kept for a period of five years after which it will be appropriately destroyed by shredding or deletion.

Persons to contact in the Event of Any Problems or Queries: Please contact the researcher Johan Fourie on 0716123661, my supervisor Dr A. Abdul-Rasheed on ashuraar@gmail.com or my co-supervisor Dr K. Padayachy on kererip@dut.ac.za, or the Institutional Research Ethics Administrator on 031 373 2375 in the event of any problems or queries. Complaints can be reported to the Acting Director: Research and Postgraduate Support on researchdirector@dut.ac.za



CONSENT

Full Title of the Study: Exploring the perceptions of chiropractors within the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain

Names of Researcher/s: Johan Fourie, BTech: Chiropractic; Dr. A. Abdul-Rasheed, M. Tech: Chiropractic, PhD: Health Science (Supervisor) Dr. K. Padayachy, M. Tech: Chiropractic, PhD: Anatomy (Co-Supervisor)

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (Johan Fourie), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **IREC 326/24**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	Date	Time	Signature / Right Thumbprint

I, _____ herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

_____	_____	_____
Full Name of Researcher	Date	Signature

_____	_____	_____
Full Name of Witness (If applicable)	Date	Signature

_____	_____	_____
Full Name of Legal Guardian (If applicable)	Date	Signature

Appendix D: Interview Guide

Interview Guide

Date _____ Participant no: _____

SECTION A: DEMOGRAPHIC DATA

Age	
Sex	
Number of years in practice	

SECTION B: INTERVIEW QUESTIONS:

1. Describe your understanding of post-surgical lumbar pain?

Additional probes: What is your knowledge on PSLP? Can you specify the types of surgeries these patients typically have undergone when they present to you?

2. Can you discuss and describe your views on the role of chiropractic care in patients suffering from post-surgical lumbar pain??

Additional probes: how soon/long after surgery should patients seek out chiropractic care for post-surgical lumbar pain? How frequently do you encounter patients with post-surgical lumbar pain?

3. Describe the benefits and effect chiropractic management has on post-surgical lumbar pain?

Additional probes: Do you believe chiropractic management is beneficial to this type of patient? In your experience would you say that patients have had improvement from chiropractic management?

4. Can you describe how you as a chiropractor approach the management of post-surgical lumbar pain?

Additional probes: Can you elaborate on protocols that you follow when assessing progress of patients suffering from post-surgical lumbar pain? Are these protocols different than in other conditions? What are common challenges you observe when managing their pain? Does your treatment and management vary from patient to patient? Elaborate. Do you work with other healthcare professionals when managing this type of patient? Please explain.

Appendix E: Advertisement

CALLING DURBAN CHIROPRACTIC PRACTITIONERS

Would you like to participate in a research study?

Title of Study: **Exploring the perceptions of chiropractors in the eThekweni municipality on the role of chiropractic care in the management of post-surgical lumbar pain**

Requirements

- Participant must be a registered chiropractor at the AHPCSA.
- Participant needs to be practicing currently in the eThekweni municipality.
- Participant must have a minimum of 5 years of experience as a practicing chiropractor.
- Participant must have some experience treating patients with post-surgical lumbar pain



The interview will take place at an agreed upon place between myself (the researcher) and you (the participant).

The duration of the interview will be between 30–45 minutes long.

For more information

Contact Johan Fourie
071 612 3661
jhnfr10@gmail.com

Appendix F: Letter of Information and Informed Consent (Pilot Study)



LETTER OF INFORMATION (PILOT STUDY)

Title of the Research Study: Exploring the perceptions of chiropractors within the eThekweni municipality on the role chiropractic care in the management of post-surgical lumbar pain

Principal Investigator/s/researcher: Johan Fourie BTech: Chiropractic

Co-Investigator/s/supervisor/s: Dr. A. Abdul-Rasheed, M. Tech: Chiropractic, PhD: Health Science (Supervisor) Dr. K. Padayachy, M. Tech: Chiropractic, PhD: Anatomy (Co-Supervisor)

Brief Introduction and Purpose of the Study: Low back pain is one of the leading causes of disabilities globally and studies have shown that post-operative low back pain is a common symptom that is present in patients who have undergone previous surgeries, the aim of this study is to establish a generalised view of chiropractors, in the eThekweni municipality, on patients who suffer from post-surgical lumbar pain.

Greeting Good day, I wish to welcome you to the pilot study of my research study

Introduce yourself to the participants I am a 6th year student at DUT doing research for my Masters' Degree in Chiropractic.

Invitation to the potential participant I would like to invite you to participate in the pilot study of my research project.

Outline of the Procedures: You will be required to participate in an interview that is estimated no longer than one hour in duration. A request is made for the interview to be voice recorded for record purposes. The interviews will be conducted in person with consent from you as the participant at a location agreed upon beforehand by both the researcher and participant after which you will be required to provide constructive feedback regarding the interview questions that you were asked.

Risks or Discomforts to the Participant: There are no foreseeable risks for participating in the study.

Explain to the participant the reasons he/she may be withdraw from the Study: You are free to withdraw from study at any stage of the study. There will be no adverse consequences should you choose to withdraw.

Benefits: The feedback received from this pilot study will be valuable in adapting the interview guide for my main study in order to ensure no ambiguity in during the research process.

Remuneration: There is no remuneration or incentives for participating in the study.

Costs of the Study: There will be no cost involved to participate in this study

Confidentiality: All personal details will be kept confidential and allocated a code. The raw data will only be accessible to the researcher, research supervisor and co-supervisor

Results: The results of the study will be distributed to the participants of this study and the full dissertation will be available on the DUT library website. The results of this study will also be published in a peer-reviewed journal article.

Research-related Injury: There are no risks of research related injuries in this study.

Storage of all electronic and hard copies including tape recordings: The consent forms and downloaded interview recordings will be stored electronically in a password protected device while data is being analysed. The data will be kept for a period of five years after which it will be appropriately destroyed by shredding or deletion.

Persons to contact in the Event of Any Problems or Queries: Please contact the researcher Johan Fourie on 0716123661, my supervisor Dr A. Abdul-Rasheed on ashuraar@gmail.com or my co-supervisor Dr K. Padayachy on kererip@dut.ac.za, or the Institutional Research Ethics Administrator on 031 373 2375 in the event of any problems or queries. Complaints can be reported to the Acting Director: Research and Postgraduate Support on researchdirector@dut.ac.za



CONSENT (PILOT STUDY)

Full Title of the Study: Exploring the perceptions chiropractors within the eThekweni municipality have on the role chiropractic care has on the management of post-surgical lumbar pain

Names of Researcher/s: Johan Fourie, BTech: Chiropractic; Dr. A. Abdul-Rasheed, M. Tech: Chiropractic, PhD: Health Science (Supervisor) Dr. K. Padayachy, M. Tech: Chiropractic, PhD: Anatomy (Co-Supervisor)

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, (Johan Fourie), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **IREC 326/24**
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

Full Name of Participant	Date	Time	Signature / Right Thumbprint
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I, _____ herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher	Date	Signature
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Full Name of Witness (If applicable)	Date	Signature
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Full Name of Legal Guardian (If applicable)	Date	Signature
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Appendix G: Exemplar Transcript

Transcript 5

Interviewer: *OK, so we are recording. Question number one. Describe your understanding of post-surgical lumbar pain?*

Participant: Alright, so obviously in the lumbar spine are a lot of structures and a lot of them can give pain. So the perception of pain and the lumbar spine can come from a lot of structures and so I would say that it could, the pain that's there after a lumbar surgery could be there because it was the pain that was there originally or it can be as a result of the surgery that happened there.

Interviewer: Okay what types of surgeries do these patients typically undergo?

Participant: So a lot of old fusions, so some full, from L1 to L5 fusions, a few discectomies and then a lot of people who had rhizotomies, but yeah, I'd say, yeah, between those three it's, it's about equal measures of full fusions, discectomies and laminectomies then rhizotomies.

Interviewer: *Question number two. Can you discuss and describe your views on the role of chiropractic care in patients suffering from PSLP?*

Participant: So for me personally, in this practise, we are, we focus a lot on structural alignment. So corrective is for me, important

Interviewer: And how soon or long after surgery should patients seek out chiropractic care for post-surgical lumbar pain? Where do you see it to be most beneficial?

Participant: Where do I see it? Well, it's a pity that they didn't come to us first. If that's the case. So preoperatively, I guess that's our best position, before any of the surgery happens. But then if it has, now, if they've had surgery, I reckon chiropractic care can be very soon implemented, when all, you know when, if the wounds are stitched and I mean they here, they, they, it's basically closed up wounds, I reckon chiropractic can immediately start benefiting because we don't necessarily have to focus on that specific area, but the rest of the spine and the rest of the biomechanical chain needs assistance. So pretty soon after surgery.

Interviewer: Okay and how frequently do you encounter patients with post-surgical lumbar pain?

Participant: Pretty frequently in this practise

Interviewer: *OK, question number three. Can you describe the benefits and effect chiropractic management has on post-surgical lumbar pain?*

Participant: I think it's marvellous! We see a lot of post-surgical and failed surgery patients and we, we get good results if the person, if the patient education is sufficient in the beginning of treatment and you and they can start to understand what's happening in their spine and they are then part of the process of the recovery we get good results.

Interviewer: *Question number four. Can you describe how do you as a chiropractor approach the management of post-surgical lumbar pain?*

Participant: I would immediately aim at relief care for the patients. In other words, whether I have to do other modalities for relief care, adjust the levels above and below. But then my long term goal would be to look structurally at getting this, the person's spine, in the best, most ideal structural alignment going forwards.

Interviewer: Okay, and can you elaborate on protocols that you follow when assessing progress of patients suffering from post-surgical lumbar pain?

Participant: Yes, so we, in this practise we very specific and we, we have a very extensive thorough initial, initial assessment we have a, we follow, we do all neuro, neurological, so we do reflexes, we do sensory, we do motor testing and we give it, quantify it and it's recorded. We also do a postural picture, digital postural picture. So that's recorded. We do full spine X-ray so that's recorded. And then we do a pain scale and we do a SF36 form. So that's all quantifiable starting point measurements and as we progress, the patient will do a mini reassessment after a couple of weeks, redo all of that and then, we do that often you know, maybe every month, every and then every third month is a major reassessment, where we do all of that assessments again and we then quantifiably can measure their improvement.

Interviewer: And are these protocols different than in other conditions that you see?

Participant: No

Interviewer: In terms of assessing progress?

Participant: No.

Interviewer: Same?

Participant: Same.

Interviewer: Lots of overlap?

Participant: Yeah.

Interviewer: And what are common challenges you observe when managing this pain?

Participant: Um, I would say um, compliance from the patient's point of view that they continue treatment even though the initial pain has, you know, if you've relieved the prey, the pain, but they're not continuing with treatment. In other words, they then leave it and then another level of the spine starts getting involved. So I think that's the biggest challenge, not so much relieving them because it's, you know, there's lots that you can do to relieve pain. It's the patient's compliance afterwards because they don't understand or they fail to understand that a motion segment has now been compromised and therefore the other motion segments are overcompensating and there will be degenerative changes there.

Interviewer: And does your treatment and management vary from patient to patient with post-surgical lumbar pain?

Participant: Yes and no. So the immediate treatment for in the relief stage is very much patient centred. So it's whatever is causing them the pain, whether it's inflammation, whether it's muscle spasm, whether it's whatever it is so that will be different for every patient. But going forwards it's to, the rest of the treatment is always very similar. Make sure all the motion segments are moving, and make sure that we're approaching the best possible lumbar and T-spine and C-spine curve in that patient's, skeleton, spine.

Interviewer: And do you work with other healthcare professionals when managing this type of patient?

Participant: Yeah, I would say a biokineticist [biokineticist] for me is, is very beneficial, because they believe in the similar, similar philosophy to get back into motion, so it's, to, to reintroduce motion into the spine as soon as possible. So yes, I'd say biokineticist [biokineticist] is probably the person I'll refer to the most.

Interviewer: OK, thank you and that's it.

Appendix H: Editor's Certificate

TO WHOM IT MAY CONCERN

I hereby confirm that I have proofread the dissertation titled:

Exploring the perceptions of chiropractors in the Ethekewini Municipality on the role of chiropractic care in the management of post-surgical lumbar pain

by Johan Carel Fourie for submission as part of the requirements for the Master's degree in Technology: Chiropractic at the Durban University of Technology.

Sincerely

Elize van der Walt

0825753639

vanderwalt.elize@gmail.com

14 November 2025

Appendix I: Plagiarism Check

First submission full thesis draft

ORIGINALITY REPORT

9%	6%	5%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	www.ncbi.nlm.nih.gov Internet Source	1%
2	etd.uwc.ac.za Internet Source	<1%
3	Maheo, Faith. "Backgrounds, Expectations, and Beliefs of the Chiropractic Students Population at a South African University", University of Johannesburg (South Africa) Publication	<1%
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