The Experiences of UK Physiotherapists in Relation to Cauda Equina Syndrome and Litigation

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The Experiences of UK Physiotherapists in Relation to Cauda Equina Syndrome and Litigation

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Abstract

Introduction

Cauda equina syndrome (CES) is widely described as a rare condition which can be challenging to diagnose and can have life changing impacts on the patient. Cauda equina syndrome can lead to clinical negligence claims, and although the prevalence of this condition is low, CES is one of the most litigious spinal conditions in the UK. Legal claims are costing some NHS trusts over 40 million pounds each year and represent 2% of the NHS budget. This thesis aimed to explore the experiences of UK physiotherapists in relation to CES and litigation to help support them in their role and ensure their health and wellbeing.

Methods

Four key studies were conducted using a mixed methods design. These included a scoping literature review (chapter 2) which provided foundational knowledge for the following empirical phases. A multi-methods inquiry (chapter 3) which provided additional data relating to the extent of CES claims in physiotherapy in the UK and information on the legal process for physiotherapists. The qualitative study (chapter 4) generated data from physiotherapists with experience of CES litigation and other stakeholders on their experiences and views of CES litigation. The national survey study (chapter 5) aimed to validate the findings from the qualitative study (chapter 4) using a survey open to all physiotherapists in the UK.

Results

A total of N=2496 CES claims were recorded in the UK between 2009-2021. Of these, 51 CES claims were attributed to physiotherapy. Results found 10% of physiotherapists had been involved in litigation at some point in their career. A total of 23% of neuromusculoskeletal claims were related to CES, which was 9% of all claims captured. There are different legal processes for physiotherapists depending on their employment. However, there was no easily accessible, clear advice, to inform physiotherapists of these legal pathways. Physiotherapists described negative physical impacts of litigation claims, most commonly stress, anxiety and worry and defensive clinical practice. Many physiotherapists felt unsupported, often because they were unaware of where to find appropriate support. There should be opportunities for basic litigation

training for physiotherapy students at undergraduate level and further litigation training at postgraduate level, as physiotherapists' progress through their clinical career.

Conclusion

The extent of CES litigation in UK physiotherapy is suspected to be much higher than the data reported due to the claims recording processes. There is no overarching, clearly articulated information describing the legal process and support available for physiotherapists, and this differs depending on who the physiotherapist is employed by. Litigation impacted physiotherapists' physical health, mental wellbeing and clinical practice. Support should be improved for physiotherapists who become involved in litigation. The need for training was highlighted for both undergraduate and postgraduate levels.

Declaration

No portion of this work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institution of learning.

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Outputs and Dissemination

Publications

Leech, R.L., Selfe, J., Ball, S., Greenhalgh, S., Hogan, G., Holway, J., Willis, E. and Yeowell, G., 2021. A scoping review protocol: investigating the extent and legal process of cauda equina syndrome claims for UK physiotherapists. Musculoskeletal Care, 19(4), pp.457-461. (Appendix 11)

Leech, R.L., Selfe, J., Ball, S., Greenhalgh, S., Hogan, G., Holway, J., Willis, E. and Yeowell, G., 2021. A scoping review: investigating the extent and legal process of cauda equina syndrome claims for UK physiotherapists. Musculoskeletal Science and Practice, 56, p.102458. (Appendix 12)

Yeowell, G., **Leech, R.**, Greenhalgh, S., Willis, E. and Selfe, J., 2022. Medico-legal litigation of UK physiotherapists in relation to cauda equina syndrome: a multimethods study. BMJ open, 12(7), p.60023. (Appendix 13)

Yeowell, G., **Leech, R.**, Greenhalgh, S., Willis, E. and Selfe, J., 2023. The lived experiences of UK physiotherapists involved in Cauda Equina Syndrome litigation. A qualitative study. PLoS One, 18(9), p.e0290882. (Appendix 14)

Yeowell, G., **Leech, R.**, Greenhalgh, S., Willis, E. and Selfe, J., 2024. Clinical negligence and physiotherapy: UK survey of physiotherapists' experiences of litigation. Physiotherapy. (Appendix 15)

Resources

- Yeowell, G,; **Leech, R.**; Greenhalgh, S.; Willis, E.; Selfe, J. (2022) Keep calm and carry on: I have received a clinical negligence claim – what do I do? – Infographic, available at: Keep_calm_and_carry_on_Infographic.pdf (mmu.ac.uk)

- Yeowell, G.; **Leech, R.**; Greenhalgh, S.; Willis, E.; Selfe, J. Keep calm and carry on: I have received a clinical negligence claim – what do I do?. (2022) – Video resource, available at: https://youtu.be/aA5XBt-xXzk

Conferences and presentations

- **Leech, R.** 'Uh-Oh'. Presented at Manchester Metropolitan 3-minute Thesis Competition – Finalist, 28th June 2021.

- **Leech, R.**; Greenhalgh, S. The Experiences of physiotherapists in relation to Cauda Equina Syndrome and litigation. Presented at Bolton Nursing, Midwifery AHP and Healthcare science Research Conference 2021 19th November 2021.

- **Leech, R.** The Experiences of physiotherapists in relation to Cauda Equina Syndrome and litigation. Presented at MMU Post Graduate Research Conference 7th March 2022.

- **Leech, R.** Experiences of Physiotherapists in relation to litigation – National Survey. Presented at 15th Annual - Postgraduate Research Conference 19th April 2023.

Other dissemination

- **Leech, R.**; Yeowell, G.; Willis,E. Research Website. Manchester Metropolitan University, Research: Cauda Equina Syndrome (CES) and Litigation. Accessed on: https://www.mmu.ac.uk/research/research-centres/hpac/projects/CES-litigation

- **Leech, R.**; Yeowell, G.; Willis,E. CES_MMU, research Twitter page Available at: https://twitter.com/CES_MMU

Outputs informed by the results of the research presented in this thesis

- CSP Frontline Issue, February 2023. Litigation…keep calm and carry on, volume 29, issue 2 p24-26. Available at:Litigation…keep calm and carry on | The Chartered Society of Physiotherapy (csp.org.uk) - *Created as a result of the research presented in this thesis.*

- CSP website, Clinical negligence claims, February 2023. Available at: Clinical negligence claims | The Chartered Society of Physiotherapy (csp.org.uk) – *Created as a result of the research presented in this thesis.*

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Glossary

APP – Advanced practice physiotherapist

CES – Cauda equina syndrome

CFG – Critical friend group

CSP – Chartered Society of Physiotherapy

FCP – First contact practitioner

GMC – General Medical Council

GP – General practitioner

HCPC - Health and Care Professions Council

MACP – Musculoskeletal Association of Chartered Physiotherapists

MLACP – Medico Legal Association of Chartered Physiotherapists

MRI - Magnetic resonance imaging

MSK – Musculoskeletal

NI – Northern Ireland

PPIE - Patient and Public Involvement and Engagement

UK – United Kingdom

1. Introduction

1.1. Background

1.1.1 Cauda Equina Syndrome

The cauda equina comprises of 20 lumbar and sacral nerve roots at the base of the spinal cord (Finucane *et al.*, 2020), these provide sensory and motor functions to the lower limbs, as well as bladder, bowel and sexual functions (Dionne *et al.*, 2019). See figure 1.1 for cauda equina anatomy. Cauda equina syndrome (CES) is a spinal condition that occurs due to compression of the cauda equina. Irreversible and life changing damage to these functions can occur, without urgent treatment (Greenhalgh *et al.*, 2015, 2018; Dionne *et al.*, 2019).

Compression of the cauda equina nerves often occurs as a result of a herniated intervertebral disc (Dionne *et al.*, 2019). Although, any space inhabiting lesion could elicit cauda equina compression (Finucane *et al.*, 2020). Symptoms leading to CES often include unilateral or bilateral radicular pain, reduced dermatomal sensation, and myotome weakness (Finucane *et al.*, 2020). Symptoms of CES are rare but can develop quickly and can cause life changing consequences if not treated immediately (Greenhalgh *et al.*, 2018).

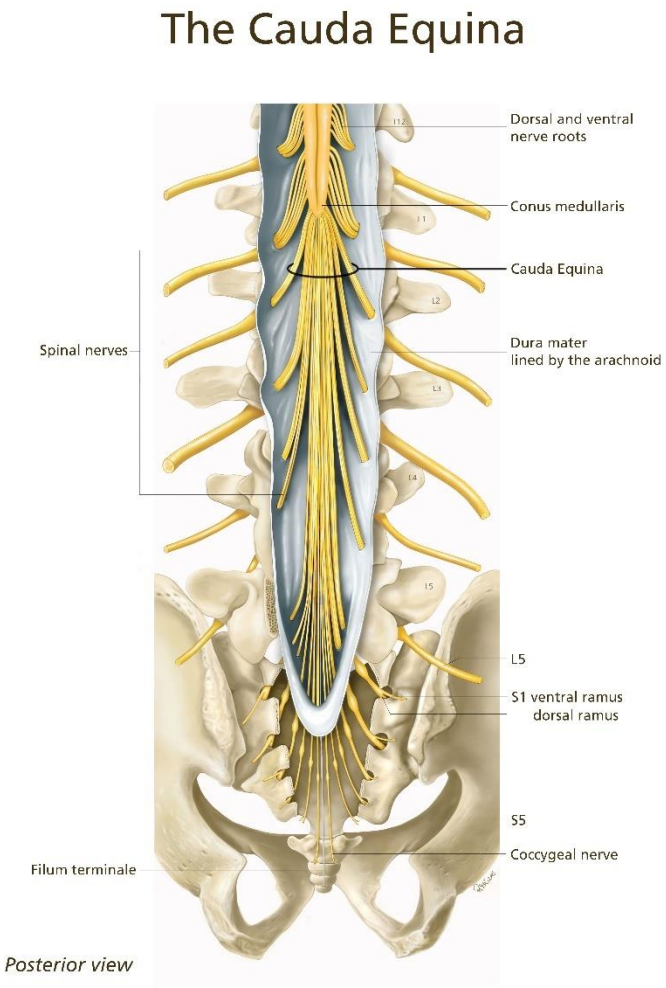

Figure 1.1 Anatomy of the cauda equina taken from (Greenhalgh and Selfe, 2019)

Cauda Equina Syndrome has been identified as a serious pathology internationally, with The International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT) recognising it as one of four key serious spinal pathologies (Finucane *et al.*, 2020). Cauda equina syndrome is widely described as a rare condition which can be challenging to diagnose and can have life changing impacts on the patient (Gardner, Gardner and Morley, 2011; Greenhalgh *et al.*, 2016). Data collected in Denmark from the Danish National Health Insurance Service Register, shows low prevalence, with CES reported at 0.01% (Budtz, Hansen, *et al.*, 2021). Prevalence of CES in the United Kingdom (UK) has been estimated at 0.002% (Greenhalgh *et al.*, 2018). As a percentage of the total Scottish population (5.4 million) per year, the incidence of CES has been reported at 0.0027% (Woodfield *et al.*, 2022). Herniated discs are often a cause of CES and approximately 2% of all herniated discs result in CES

(Dionne *et al.*, 2019). Cauda equina syndrome as a complication following surgery is reported as 0.08% to 0.2% (Jensen, 2004).

1.1.2 Cauda Equina Syndrome management

The national care pathway for CES (GIRFT, 2023), states that an emergency MRI referral is warranted if a patient presents with leg pain and/or back pain with recent onset (within 2 weeks) of any of the following symptoms:

• difficulty initiating urination or impaired sensation of the urinary flow

• altered perianal, perineal or genital sensation S2-S5 dermatomes – the area may be small or as big as a horse's saddle (subjectively reported or objectively tested)

• severe or progressive neurological deficit of both legs, such as major motor weakness with knee extension, ankle eversion or foot dorsiflexion

• loss of sensation of rectal fullness

• sexual dysfunction – inability to achieve erection or to ejaculate, or loss of vaginal sensation.

A 24-hour magnetic resonance imaging (MRI) scanning service, performed locally at the hospital of presentation is best practice, to ensure there is no delay (GIRFT, 2023). Patients who experience sudden onset of bilateral radicular leg pain or unilateral radicular leg pain that has progressed to bilateral leg pain without the presence of any CES symptoms should be urgently referred (two-week wait) to a musculoskeletal (MSK) triage service. In this case, the clinician may suspect the patient could later develop the condition, the patient should be 'safety netted' appropriately including a warning card for the patient and access to the Musculoskeletal Association of Chartered Physiotherapists (MACP) video (MACP, 2021; GIRFT, 2023). Safety netting should guide the patient as to an estimated time course of symptoms including warning signs and symptoms, give clear information regarding when and how to re-consult in the event symptoms do not resolve in the expected time frame, documented safety netting instructions should be given to the patient (Greenhalgh *et al.*, 2020). If the patient reports any of these deteriorating or new CES symptoms, an emergency referral should be made. If the symptoms remain unchanged, the patient should continue with the urgent referral to the MSK triage service (GIRFT, 2023).

Cauda equina syndrome can often be challenging for clinicians to diagnose (Greenhalgh *et al.*, 2018). Common clinical indicators of CES include bladder, bowel and sexual dysfunction and saddle anaesthesia. However, causes of these symptoms can be multifactorial, and could be caused by a range of conditions including other serious conditions such as malignancies, Guillain–Barré syndrome or lumbar spinal stenosis (Winer, 2008; Stolper *et al.*, 2017; Comer *et al.*, 2020) or more common conditions such as benign prostate hyperplasia and stress incontinence (Greenhalgh *et al.*, 2018). Therefore CES symptoms can be seen within the general population and commonly in those with lower back pain, which can often complicate the clinical picture when attempting to diagnose CES (Woods, Greenhalgh and Selfe, 2015; Greenhalgh *et al.*, 2018). Furthermore, side effects of some prescription medication, may masquerade as CES symptoms by influencing the parasympathetic nervous system, leading to voiding or retention of urine (Greenhalgh *et al.*, 2018). Over the counter drugs such as those for decongestion can also affect bladder function, and the majority of medication used for pain relief in patients with back pain and leg pain can also cause symptoms that masquerade as CES (Greenhalgh *et al.*, 2018). Therefore, it is likely that CES patients may be taking these medications for their back pain and could be attributing CES symptoms as side effects of these. For example, non-steroidal anti-inflammatories and opioids can cause urinary retention (Finucane, Greenhalgh and Mercer, 2017), increasing the difficulty for patients and clinicians to recognise CES. The complexity to diagnose CES also increases in the older population due to age-related increases in bladder, bowel and sexual dysfunction (Comer *et al.*, 2020). Therefore, CES symptoms could be mistaken for signs of old age.

For physiotherapists, one of the challenges when deciding if patients should be referred to a specialist, is that early CES symptoms are usually subtle in the early stages (Sun *et al.*, 2014), which is often difficult for patients to recognise and for clinicians to identify. Furthermore, as CES progresses, signs and symptoms do not arise in a particular pattern and have no set chronology (Sun *et al.*, 2014). These factors make early diagnosis of CES more difficult, as physiotherapists often rely on pattern recognition to inform clinical decision making (Greenhalgh *et al.*, 2018).

Good communication is key to identifying related signs and symptoms (Greenhalgh *et al.*, 2018). However, patients may struggle to understand clinical terminology and for patients in a state of severe pain, there is often difficulty in concentrating on clinical questions, especially when the patient may believe the clinical questions (related to bladder and bowel, for example) appear to have no relevance to their back pain (Greenhalgh *et al.*, 2015). This adds to the complexity of diagnosing CES. Language barriers can also contribute to the complexity of diagnosis when trying to ensure clarity of understanding of patient symptoms (Paling and Hebron, 2020). When physiotherapists are screening patients with suspected CES, there may also be some mutual embarrassment between the patient and clinician when asking about sexual function (Paling and Hebron, 2020), leading some physiotherapists to avoid asking these questions and some patients feeling uncomfortable in answering honestly (Kimber and Pigott, 2023).

Tools have been developed to help with the process of diagnosing CES, such as the CES clinical cue card which lists 12 items in bullet point format focussing on bladder, bowel and sexual dysfunction symptoms (Greenhalgh *et al.*, 2016). The CES credit card contains the same information replicated on a small credit card for the patient to take away and use in any future CES emergency situation enabling clear explanation of symptoms (Greenhalgh *et al.*, 2016). These cards are available in over 30 languages (MACP, no date). However, despite the use of these aids, diagnosing CES remains a complex challenge for even the most advanced clinicians.

1.1.3 Patient outcomes

Approximately 20% of CES patients have a poor outcome due to misdiagnosis or delays in treatment (Gardner, Gardner and Morley, 2011). Over recent years an increase in CES litigation cases has been observed (Wilkes, 2019), which has been highlighted in the media (Coleman, 2019). Physiotherapists are taking on new roles with an increase in advanced practice and first contact practitioner (FCP) roles, which is set to continue under the National Health Service (NHS)

Long Term Plan (NHS, 2019). Under these roles, physiotherapists will often be the first point of contact for many suspected CES patients and have increased accountability and responsibility for their patients. Due to this, physiotherapists may be more likely to be involved in CES litigation claims.

For patients living with CES, the condition can often have a substantial impact on their lives. People with CES sometimes struggle to adjust to living with the condition and with their sense of self and identity, in relation to their mobility as well as bladder, bowel and sexual dysfunction (Srikandarajah *et al.*, 2023). These effects can have devastating impacts on work life, relationships and family life. Cauda equina syndrome occurs most commonly in people between the ages of 30 and 49 years old (Hoeritzauer *et al.*, 2020), as such, patients are often young to middle aged and are in full-time work before developing CES (Lavy *et al.*, 2009). Therefore, people living with CES may need to change careers or retire as a result of their ongoing symptoms, as they may no longer be physically capable of working; this can affect family and home life due to lack of earnings (JMW Solicitors, no date). People living with CES have described these impacts on their bladder and bowel dysfunction, as the ‘biggest’, ‘toughest’ and ‘worst’ symptoms of CES; describing these impacts as feeling ‘degrading’, and feeling as though they prompted ‘shameful’ and ‘disgusted’ responses in social situations, with a fear of humiliation (Hall and Jones, 2017). In relation to mobility, people living with CES have described themselves as being in a sort of ‘no man’s land’ as their disability is often not visible, with some describing themselves as ‘not disabled enough’ from an outsider’s perspective to have the same level of support as those with other conditions and disabilities, which may for example, require a wheelchair (Hall and Jones, 2017). Changes in mobility can mean significant changes in lifestyle for those who used to play sport as a regular hobby, who are no longer able to do this, which can also have a significant impact on their social lives (JMW Solicitors, no date).

Coping with pain is often difficult, with some describing how the level of pain took away their ability to drive and heavily impacted their sense of independence (Hall and Jones, 2017). Sexual function is often compromised for people living with CES, which can influence new relationships, due to the fear of being sexually unappealing or humiliated (Hall and Jones, 2017). Impacts on

sexual activity can also affect current relationships, leaving one man living with CES wondering how he and his wife are still together, describing how they now sleep in separate rooms (JMW Solicitors, no date). Fatigue has also been reported as a common symptom which can disrupt home and work life, as well as having an impact on quality of life and social interaction (Srikandarajah *et al.*, 2023). Living with CES can also decrease employment opportunities, and adjusting to a meaningful routine takes longer for people living with CES who may be unable to return to work. Patient's mental health may also be affected by the condition including low mood, suicidal ideation, isolation and anxiety (Srikandarajah *et al.*, 2023). In order to lessen the negative impacts of the condition, it is recommended that adequate guidance, follow up, support services and appropriate pain management should be established for patients; Furthermore, improving patient understanding and setting realistic goals, could contribute to improved outcomes and better re-integration in society (Srikandarajah *et al.*, 2023).

Due to the significant changes CES can have on a patient's life, there are also many psychological implications. This can range from feelings of stress, sadness, or hopelessness, to post-traumatic stress disorder which can involve flashbacks to the events around the time of diagnosis, fear and avoidance of cues that remind them of the original trauma (Penningtons Manches Cooper, 2020). In order to avoid stress invoking events, use of avoidance tactics can also include alcohol or substance abuse (Penningtons Manches Cooper, 2020). Depression is also a well-recognised impact of CES which can be related to a range of psychological symptoms including persistent low mood, loss of interest, fatigue, disturbed sleep, poor concentration, agitation, and suicidal thoughts or psychotic symptoms (Penningtons Manches Cooper, 2020). Some people living with CES told of suicide attempts as a more direct result of the unhappiness brought specifically by bladder, bowel and sexual function symptoms (Adam and Hornea, 2013). This indicates the severe and devastating impact that CES can have on a person's life.

1.1.4 Physiotherapy practice

Professional autonomy for UK physiotherapy was obtained in 1978 (Holdsworth and Webster, 2004), and for the last thirty years, MSK physiotherapists have

been working at advanced practice levels including orthopaedics, rheumatology, emergency care and pain clinics (Greenhalgh *et al.*, 2023 [in press]). In 2014 the FCP role was first created to support primary care services (NHS Health Education England, 2021), following a growing interest in the concept of patient direct access to primary care services during the 1990s (Holdsworth and Webster, 2004). These positions aim to ensure timely access to expert physiotherapy treatment, without the patient needing to be referred by their General Practitioner (GP) and to identify more serious conditions that require a timely medical opinion. This allows skilled physiotherapists to carry out many of the duties usually conducted by GPs (NHS Health Education England, 2021). Although the FCP role was first described in 2014, this is still an emerging role (Halls *et al.*, 2020), and implementation guidance for each of the UK devolved nations was released in 2018 (The Chartered Society of Physiotherapy, 2018a).

Physiotherapists in these roles often see patients with undifferentiated undiagnosed conditions, which often have vague and complex presentations early in disease processes (Pomare *et al.*, 2018). They can come across serious or surgical causes for MSK pain that may masquerade as MSK conditions (Greenhalgh *et al.*, 2023 [in press]). Patients who present with acute back pain and sciatica but without CES, can be proficiently managed by a physiotherapist with no medical intervention (National Spine Network, 2017). For patients who present with suspected CES, the role of the physiotherapist is to ensure patients who appear outside their scope of practice are seen by the appropriate medical professionals in a timely manner (Hutton, 2019; Greenhalgh *et al.*, 2023 [in process]).

1.1.5 Clinical negligence

Legal claims are costing some NHS trusts over 40 million pounds each year and represent 2% of the NHS budget (Machin *et al.*, 2021). Cauda equina syndrome can lead to clinical negligence claims, and although the prevalence of this condition is low, CES is one of the most litigious spinal conditions in the UK. Litigation relating to CES has been increasing over recent years with an exponential increase in pay-outs from the NHS (Coleman, 2019; Wilkes, 2019).

Costs are projected to be £68million for 2014-16 (Coleman, 2019). The average CES litigation award is circa £274,000, with the highest claim approximately £2million. In England between 2013-2016, 23% of spinal surgery claims were related to CES (Hutton, 2019). There is currently no published information regarding the proportion of spinal surgery claims related to CES for the other devolved nations (Northern Ireland, Scotland and Wales). Furthermore, the cost of CES claims to the NHS in England is in excess of £186 million over a 10 year period (House of Commons Health and Social Care Committee, 2022).

Litigation related to CES may be due to a number of reasons, for example, failure to document the signs or symptoms of CES, failure to complete a thorough physical examination or to diagnose CES, failure to obtain emergency imaging, or referral consultation for patients with possible CES (Daniels *et al.*, 2012). Although treatment within 48-hours of symptom presentation is associated with improved outcomes, even patients who receive the most efficient treatment could still be left with permanent neurological damage causing a degree of disability and dependency which may negatively affect their health and quality of life and can become motivation for the patient to pursue litigation (Daniels *et al.*, 2012). People living with CES have described a sense of injustice in relation to their care, due to dissatisfaction with pre and post diagnostic care, with one person stating “No money will make this better... but in a way it’s opening the doctor’s eyes to the mistakes they made. It may help someone else in the future” (Hall and Jones, 2017). Furthermore, symptoms which are not visible, can sometimes be questioned by others, and in some cases patients feel ‘disbelieved’ by healthcare professionals, which can lead to patient distress and anger, which could contribute to participants’ sense of injustice and possibly to litigation (Hall and Jones, 2017).

The rise in the number of claims for clinical negligence is closely related to recent legal reforms and the development of legal services. Most of the increases in the number of claims since 2006-07 has been in claims funded through ‘no-win-no-fee’ agreements, introduced in 1995, to help remove financial barriers to legal services (National Audit Office, 2017). Moreover, in 2010 legal fees were capped for road traffic accident-related claims, causing more legal firms to move into the clinical negligence market (National Audit Office, 2017). Patient attitudes are also likely to be changing over time, and a

small change in the likelihood of people making a claim could have a substantial influence on the number of claims. Only a small number of patients who experience a harmful incident will make a claim (<4%) (National Audit Office, 2017). Although NHS Resolution have not investigated the reasons that people make a claim, their anecdotal evidence suggests people may make a claim because they are disappointed with the response they receive from their trust following an incident (National Audit Office, 2017).

1.1.6 Impact on healthcare professionals

Other health professions have found clinicians involved in litigation cases can experience stress, health issues and loss of confidence in their role, which can have effects on their clinical practice. Furthermore, litigation also leads healthcare professionals to consider leaving their profession due to negative impacts (Robertson and Thomson, 2016). These effects of litigation could affect physiotherapists, causing a loss of talent to the profession and having negative impacts on the patient due to potential changes to their clinical practice.

It is not known how many UK physiotherapists litigation may affect, or the impact it has on them. By understanding the experiences of physiotherapists involved in CES litigation, support and potential training needs for physiotherapists can be improved throughout their career. This research is required in order to ensure physiotherapists are fit for practice, their wellbeing is maintained, and they are supported in their role, and fundamentally, to ensure patient safety.

1.2 Aim and objectives

The overall aim of this thesis was to explore the experiences of UK physiotherapists in relation to CES and litigation to help support them in their role and ensure their health and wellbeing. The objectives of this thesis were:

1. To investigate the extent of CES litigation cases amongst UK physiotherapists
2. To understand the legal process for UK physiotherapists involved in CES litigation cases

3. To understand the experiences of physiotherapists involved in CES litigation cases
4. To understand the support needs of physiotherapists involved in CES litigation cases
5. To investigate the potential training needs for physiotherapists in relation to CES litigation

1.3 Rationale

Cauda Equina Syndrome (CES) is a rare spinal pathology which has an inexplicably high number of medico-legal cases associated with it (Gardner, Gardner and Morley, 2011). It is not known how many UK physiotherapists CES litigation affects, or the impact it has on them. By understanding the experiences of physiotherapists involved in CES litigation we can better understand how to support physiotherapists and their potential training needs throughout their career; from an undergraduate, preparing them for practice, to a highly skilled physiotherapist in advanced roles. From this, recommendations will be made to address these issues, which in turn will provide a pathway to positive outcomes for the patient, physiotherapist, and the profession.

The current research is the first to investigate the extent and process of CES litigation for physiotherapists in the UK. The research will ensure physiotherapists are fit for practice, their wellbeing is maintained, and they are supported in their role, and fundamentally, ensure patient safety. The research will address unmet needs for the physiotherapist, patient, and the profession and help to future proof the profession. Without this research patients are currently experiencing devastating lifelong issues where there is a delay or misdiagnosis in their management, there is a negative impact on the wellbeing of physiotherapists, potentially leading to loss of talent to the profession, unsustainable insurance costs for The Chartered Society of Physiotherapy (CSP) (the professional body and trade union for physiotherapists), and an increased burden to the patient, the NHS and other healthcare organisations and stakeholders.

1.4 Methodology

This thesis includes four studies (see section 1.6); scoping literature review, multi-methods inquiry, qualitative study, national survey. How these studies were linked within the mixed methods framework is now presented.

A mixed methods approach has been used to guide the development of the research studies contained in this thesis. A mixed methods approach can be defined as 'the combining of qualitative and quantitative methods in a single study or linked series of studies' (Melvin, 2015). This methodology was chosen based on the nature of the research aim and objectives and the need for a both quantitative and qualitative data collection in order to answer them. Advantages of mixed methods include the use of qualitative data to assess the validity of quantitative findings and using quantitative data to assist in generating the qualitative sample or explain qualitative findings (Fetters, Curry and Creswell, 2013). Using mixed methods can increase the generalisability of results, for example, in the current thesis the quantitative study (online national survey) will validate the findings from the qualitative study (qualitative interviews) using a much larger sample. Qualitative investigation can contribute to the development of quantitative tools, or create hypotheses which can be tested using qualitative methods (Fetters, Curry and Creswell, 2013). Approaches to implement integration of the two types of data can occur at 3 levels; design, methods and reporting (Fetters, Curry and Creswell, 2013).

1.4.1 Integrating mixed methods at the design level

During the study design stage, integration of qualitative and quantitative methods can occur through basic designs which include:

Exploratory sequential
Qualitative data is collected and analysed. These findings then inform quantitative data collection and analysis.

Explanatory sequential
Quantitative data is collected and analysed. These findings inform qualitative data collection and analysis.

Concurrent

Qualitative and quantitative data are collected and analysed around the same time.

The current thesis uses a multistage mixed methods framework, as there are multiple stages of data collection that include combinations of both exploratory sequential, and concurrent approaches (Fetters, Curry and Creswell, 2013).

Mixed methods research involves the mixing of quantitative and qualitative methods within one or more stages (design, methods and reporting) of the research, partially mixed methods occurs when the quantitative and qualitative elements are not mixed within or across stages, but both elements (quantitative and qualitative) are conducted either concurrently or sequentially in their entirety before being mixed at the data reporting stage (Leech and Onwuegbuzie, 2009).

The scoping literature review (chapter 2) and multi-methods inquiry (chapter 3) collected quantitative data investigating the number of CES claims [sometimes referred to as extent data in this thesis] and qualitative data investigating the legal process for physiotherapists [sometimes referred to as process data in this thesis]. Each of these studies used a partially mixed concurrent equal status design, as they both investigated these two elements that occurred concurrently and had equal weighting with regards to their aims. Furthermore, they were classified as concurrent partially mixed research because the quantitative and qualitative data were collected simultaneously and the data types (quantitative and qualitative) were not mixed until both data types had been collected and analysed (Leech and Onwuegbuzie, 2009).

An interactive approach was used throughout this thesis, as iterative data collection and analysis brought about changes in the data collection procedures (Fetters, Curry and Creswell, 2013). This occurred during chapter 2, scoping review, as additional data collection methods were employed (chapter 3, multi-methods inquiry) as results revealed a lack of in-depth information. The concurrent design includes dependent data analysis, as the implementation of

some components of the research depended on the analysis of results of other components (Schoonenboom and Johnson, 2017). Therefore, between the scoping review (chapter 2) and multi-methods inquiry (chapter 3), there was also a sequential design, as the research studies occurred in a consecutive order, with one study (multi-methods inquiry, chapter 3) emerging from or following the other (scoping literature review, chapter 2). The research questions addressed as well as the methods used in one study were dependent on the previous study (Cronholm and Hjalmarsson, 2011).

The following studies (qualitative study, chapter 4 and national survey, chapter 5) used an exploratory sequential design as the qualitative data collection and analysis from the qualitative study (chapter 4) informed the quantitative data collection and analysis in the national survey (chapter 5). See figure 1.2 below.

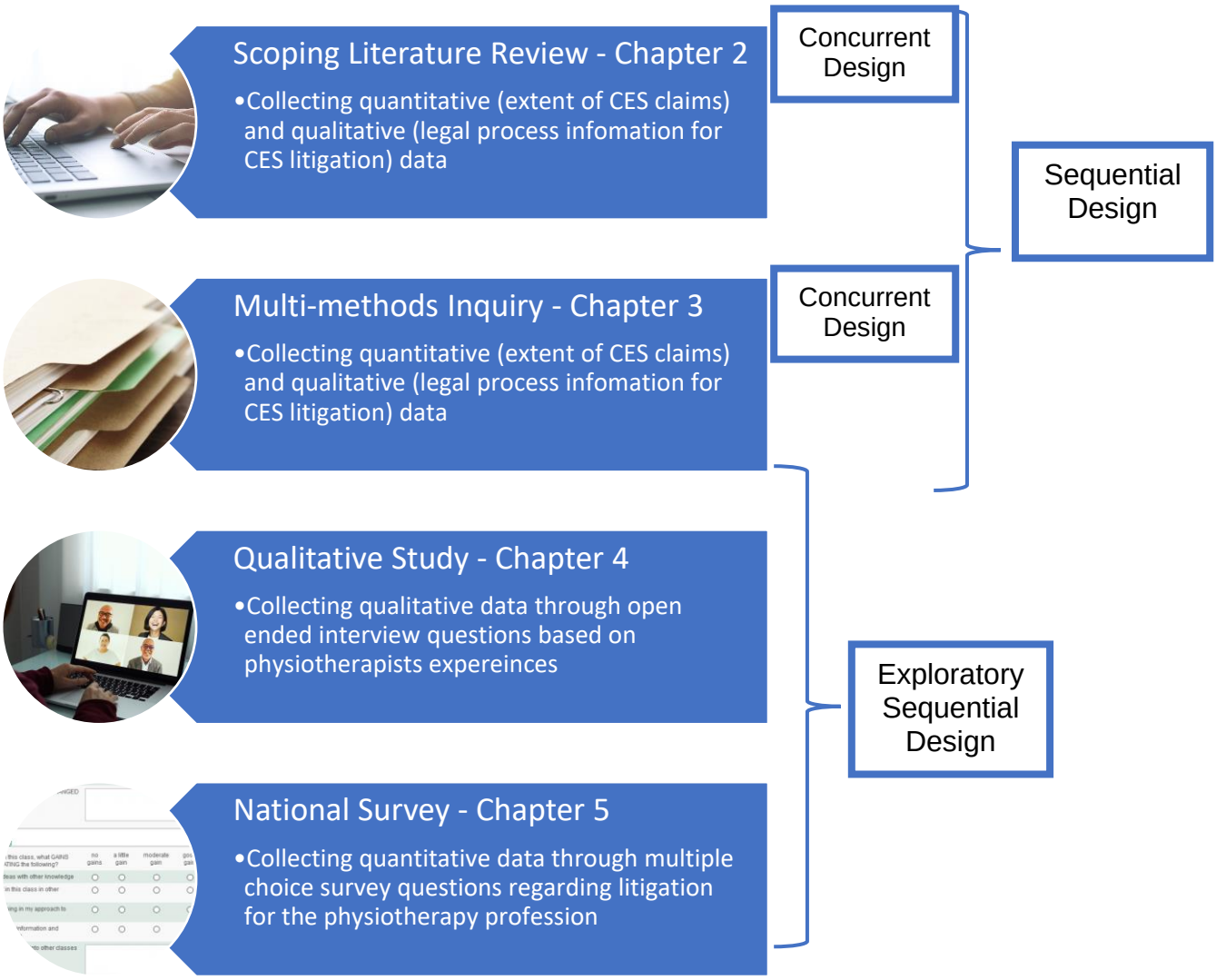

Figure 1.2 Mixed methodology employed across the series of linked studies

1.4.2 *Integrating mixed methods at the methods level*

The current research used a building approach throughout its methods to integrate the mixed methods, as the results from one study informed the data collection approach of the research that followed (Fetters, Curry and Creswell, 2013). For example, the scoping review (chapter 2), informed the data collection approach of the multi-methods inquiry (chapter 3). There were various points at which mixed methods integration occurred during the current research including research aims, methods and instrument development (Schoonenboom and Johnson, 2017). The overall thesis objectives are in relation to the extent of CES litigation cases amongst UK physiotherapists (quantitative), as well as qualitative objectives including: to understand the legal process, to understand the experiences of physiotherapists, to investigate the support needs and the potential training needs for physiotherapists in relation to CES litigation. Furthermore, in terms of instrument development, the qualitative study (chapter 4) informed the national survey (chapter 5) development, including the types of questions that were incorporated.

1.4.3 *Integrating mixed methods at the reporting level*

At a reporting level mixed methods were integrated by narrative using a weaving approach by which both qualitative and quantitative findings were reported together (Fetters, Curry and Creswell, 2013). This occurred during both the reporting of the scoping review (chapter 2) and multi-methods inquiry (chapter 3), with each of these chapters reporting qualitative and quantitative findings together. Furthermore, the overall discussion (chapter 6) discusses all findings, including those from the qualitative study (chapter 4), and the quantitative results from the national survey (chapter 5).

1.5 Philosophical perspective

Research is often linked with key philosophical underpinnings, and paradigms are a set of basic beliefs and theoretical framework based on assumptions, it is our way of understanding the reality of the world and studying it (Rehman and Alharthi, 2016). There are many different paradigms, however the two common

paradigms traditionally used in healthcare are positivism and interpretivism (Everest, 2014).

For over 150 years, positivism has been a dominant form of research in clinical science (Park, Konge and Artino, 2020). Positivism generates explanatory associations or causal relationships that indicate the prediction and control of the phenomena of interest in question (Park, Konge and Artino, 2020). Positivist methodology relies on experimentation, as hypotheses are created regarding a relationship between various phenomena; empirical evidence is collected, analysed and a theory is formed which explains the effect of the independent variable on the dependent variable (Rehman and Alharthi, 2016). The positivist paradigm focuses on factual data and allows researchers to increase statistical reliance and generalisation to develop findings with no human bias, due to the absence of interpretation (Alharahsheh and Pius, 2020). Depending on the research, positivism can cause challenges, for example, research generalisations may not allow rich data to be collected as its findings are often descriptive, which does not align well with research looking to gain further insight of in-depth issues (Alharahsheh and Pius, 2020).

Interpretivism, in contrast, can be considered a more subjective perspective or world-view. It is associated with in-depth variables and factors related to a specific context, which considers humans as different from physical phenomena and assumes that humans cannot be explored in the same way as physical phenomena (Alharahsheh and Pius, 2020). Interpretivism considers differences, for example, different cultures and circumstances. Interpretivism, in contrast to positivism, aims to include richness in the insights gathered rather than providing a universal law that is applicable to all (Alharahsheh and Pius, 2020). An interpretivist paradigm is often used in healthcare research, as it relates to the way in which we make sense of and attribute meaning to subjective reality (Yeowell and Hartley, *[In press]*).

Another perspective is that of pragmatism, which describes beliefs as guides to actions which should be judged against possible outcomes rather than abstract principles (Ormerod, 2006). Pragmatists state that the research question should be of primary importance, more so than either the method or the theoretical

perspective that underlies the method (Migiro and Magangi, 2011). Furthermore, many mixed methods researchers believe pragmatism is the most appropriate philosophical perspective for mixed methods research as it is considered the best philosophical perspective for justifying the combination of both quantitative and qualitative methods within one study (Migiro and Magangi, 2011).

It is argued that pragmatism is the most appropriate philosophy for the research and practice of physiotherapy, because it remains outcome oriented, it is focused on the importance of context; furthermore, it addresses the practical approach related to assessment and treatment of patients (Shaw, Connelly and Zecevic, 2010). Whilst the researcher is not a physiotherapist, with a professional background in sports therapy, pragmatism was aligned with the researchers nature as it combines elements of clinical practice with research processes, generating practice-based evidence which can be effectively employed by physiotherapists and similar professions. When obtaining research evidence, it is thought to be advantageous that research is conducted from a paradigm that aligns theoretically and practically with clinical practice paradigms, to ensure it is best placed to inform clinical decisions (Shaw, Connelly and Zecevic, 2010).

Other perspectives used by mixed methods researchers include post-positivism, which was based on the positivist perspective previously described, however post-positivism seeks to combine positivism and interpretivism (Panhwar, Ansari and Shah, 2017). Post-positivism strives to explore a phenomena, however this perspective does not believe there is an absolute truth, as in positivism (Panhwar, Ansari and Shah, 2017; Tanlaka, Ewashen and King-Shier, 2019). Instead it acknowledges that there are human limitations and characteristics which interfere with the possibility of knowing things about the world (Tanlaka, Ewashen and King-Shier, 2019). Post positivism has been associated with mixed methods research as it is focused on understanding the direction and perspectives from multi-dimensions and multi-methods, combining both quantitative and qualitative data (Panhwar, Ansari and Shah, 2017). However, post-positivism was not deemed to be most appropriate for the overarching perspective of this thesis. It was not deemed the most suitable

perspective to underpin all of the studies presented in this thesis (see section 1.6) and to answer the complexity of the research question.

Pragmatism was chosen as the most appropriate paradigm to answer the research questions presented in this thesis. This perspective was deemed to be most appropriate as it prioritises the research question over any methodological disputes, allowing a deeper and broader understanding of the research topic (Levanon, Lavee and Strier, 2021). Pragmatism is a philosophical system from simple notions about what is pragmatic, this is what works or is efficient for a particular situation (Morgan, 2013). This allows a change in theoretical approach based on the research aims, which is well-suited to mixed methods research, as changes in approaches are likely to occur based on the type of data collected (quantitative or qualitative). Moreover, through the use of mixed methods, the combination of qualitative and quantitative investigation using a pragmatist paradigm facilitates a comprehensive approach to a research question, based on the context of physiotherapy practice (Shaw, Connelly and Zecevic, 2010). As such this paradigm was well suited to underpin the mixed methods approach used in this thesis. This perspective allowed the scoping literature review (chapter 2) and multi-methods inquiry (chapter 3) to be conducted using a post-positivist approach, as these studies gathered both quantitative and qualitative data and were looking to gather data from various places and perspectives, whilst understanding that an exact truth would not be uncovered. A post-positivist approach informed by pragmatism was also used in the national survey (chapter 5), as although quantitative data was collected, there was a qualitative stance, as data in relation to participants views and experiences, was quantified. The qualitative study (chapter 4) however, used an interpretive approach as in-depth interviews were used to gain data regarding the perceptions and experiences of the participants. Interpretivism is associated with this rich qualitative data and allows the researcher to use participant experiences to construct and interpret understanding from data (Cao Thanh and Thi Le Thanh, 2015). This is discussed further in chapter 4, section 4.2.3.

1.6 Chapter summaries

The current section provides chapter summaries for the entirety of this thesis. There are four key research studies (chapters 2-5, see figure 1.3 below), followed by two closing chapters.

1.6.1 Chapter 2 – Scoping literature review

Chapter 2 aims to provide foundational knowledge for the following empirical phases, collecting data relating to the extent of CES litigation cases involving UK physiotherapists and information on the legal process for physiotherapists involved in a CES litigation case.

1.6.2 Chapter 3 – Multi-methods inquiry

Chapter 3 aims to provide further information relating to the extent of CES claims in physiotherapy in the UK and information on the legal process for physiotherapists. This chapter uses a multi-methods approach to provide additional foundational knowledge to the data collected in chapter 2.

1.6.3 Chapter 4 – Qualitative study

The qualitative study gathered data from physiotherapists with experience of CES litigation and other stakeholders on their experiences and views on CES litigation. This was done through in-depth interviews, exploring participants experiences and about their support and training needs. Participants were primarily physiotherapists with experience of litigation, however other health care professionals and stakeholders were interviewed to ensure data collected was thorough and holistic in relation to this topic area.

1.6.4 Chapter 5 – National survey

The national survey study validated the findings from the qualitative study (chapter 4) using a survey open to all physiotherapists in the UK. As this study aimed to validate the findings from the previous chapter (qualitative study), participants were not restricted to those who had experience of CES litigation. Using an inclusive approach to sampling allowed analysis of whether the qualitative results (chapter 4) were applicable more widely, to physiotherapy

litigation more generally. Furthermore, this approach allowed evaluation of the proportion of physiotherapy claims that were CES related, compared to the number of claims relating to other conditions.

1.6.5 Chapter 6 – Overall discussion

This chapter is the overall discussion for the entirety of this thesis. Is discusses results from previous chapters and the implications of findings in relation to key the current topic area.

1.6.6 Chapter 7 – Summary and recommendations

This chapter provides the overall summary and recommendations based on all data collected in previous chapters.

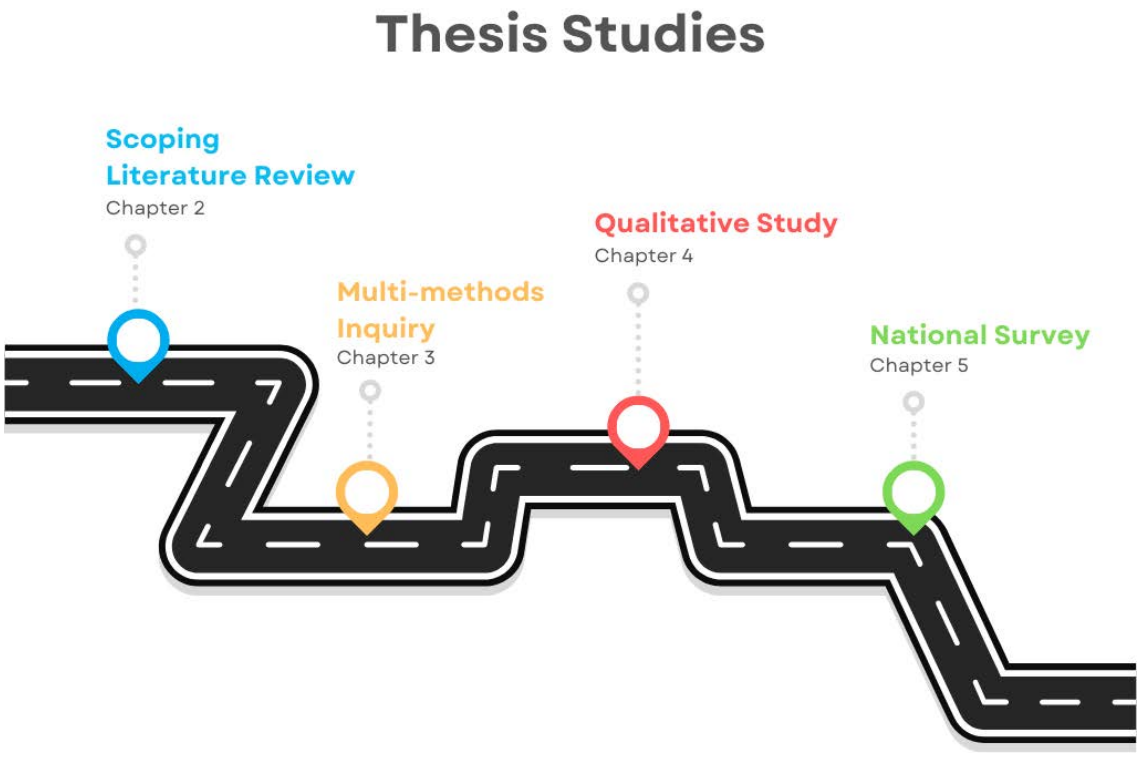

Figure 1.3 Four thesis studies

1.7 Impact of COVID-19 global pandemic on this thesis

The outbreak of coronavirus (COVID-19) started in Wuhan, China, in December 2019. Cases of COVID-19 had been found on all continents by February 2020

(Vlachopoulos, 2020). This was just prior to the commencement of the research presented in this thesis.

The impact of the global pandemic may have affected the time taken for data collection for some of the research presented. In the multi-methods inquiry (chapter 3) data collection was delayed due to organisations' response times being longer as a result of adjustments in working styles and patterns causing delays. See below an example of an automated response, received from an NHS health board, when submitting a request for information as part of chapter 3 methods, this has been redacted to ensure sender anonymity.

> *"Thank you for your recent request for the supply of information from XXXX Health Board.*
> *Under the Act, the Health Board is required to supply the information to you within 20 working days, therefore the date by which you can expect to receive a response is 28 October 2020.*
> ***Given the current Covid-19 situation there has been a delay with our responses. Please accept our apologies for any inconvenience this may cause.***
> *Please find attached our leaflet giving guidance on our procedure for managing requests for information that is covered under the Freedom of Information Act 2000.*
> *Yours sincerely*
> ***XXXX***
> *I am currently working from home, therefore I am only contactable via email as my office phone is un-manned. Please get in touch via email and I will respond at the earliest opportunity."*

The qualitative study (chapter 4) may have also had an extended data collection period due to COVID-19, as there were increased time restraints and clinical pressures on physiotherapists and other stakeholders who were interviewed. In the absence of COVID-19, it is likely that Microsoft Teams would have been an optional interview method for participants whose preference this was over face-to-face methods. However, due to the pandemic, all interviews completed in the qualitative study were conducted virtually, using Microsoft Teams. This was necessary in order to ensure participant and researcher safety, and also increased the ability for healthcare professionals to participate in the qualitative study, allowing them to complete the interview from anywhere with reduced impact on their day (Santhosh, Rojas and Lyons, 2021). The impacts of the use of this method on results is discussed in more detail in chapter 4 – qualitative study, section 4.4.1 – virtual research methods.

The other research studies presented in the current thesis (chapter 2, scoping review and chapter 5, national survey) are unlikely to have been affected by COVID-19, as the methods used would have been online irrespective of the pandemic.

All PhD supervisory meetings, reviews and milestone meetings associated with this thesis were conducted on Microsoft Teams. As this PhD was started at the beginning of the pandemic, partaking in online meetings was the norm for the entirety of the completion of this award. Therefore, it is difficult to comment on the impact of this. There have been reports of the COVID-19 pandemic causing negative repercussions for PhD candidates, for example through reduced availability of data, reduced academic support and frequency of supervisory meetings, reduced networking and professional development (Pyhältö, Tikkanen and Anttila, 2022). However, throughout the current PhD, the candidate was in communication with academic supervisors daily, additional to formal supervisory meetings that were completed monthly, as recommended. Furthermore, the candidate attended regular departmental and post graduate research meetings, as well as presenting at various online conferences and events in a bid to ensure the pandemic had minimal impact on networking and professional development.

1.8 Ethical approval

Ethical approval for all phases of the current research was granted on the 15th July 2020 by the Health, Psychology and Social Care Research Ethics and Governance Committee at Manchester Metropolitan University (Ethos Number: 18122). A further minor amendment was made and accepted on 11th October 2021. See appendix 1 for ethics approval letters.

1.9 Organisational setting

The partnership between Manchester Metropolitan University and The CSP Charitable Trust has facilitated this PhD. The CSP Charitable Trust commissioned Manchester Metropolitan University to conduct a project to investigate the experiences of CES litigation on the health and wellbeing of UK

physiotherapists. This PhD thesis has been developed concurrently, to complement this project. However, the views and methods presented in the current thesis were independent to the funded project.

2. Scoping literature review

2.1 Introduction

The previous chapter discussed the clinical aspects of Cauda Equina Syndrome (CES) and how the condition is managed, it also gave a brief introduction to the link between CES and litigation claims. The current chapter is related to the first research study of this thesis, the scoping literature review, see figure 2.1. The first part of this chapter will address the background and aims of the current study and will describe the framework used in the methods section. The results section follows a reporting guideline for scoping reviews (Tricco *et al.*, 2018). The chapter ends with a discussion and conclusion.

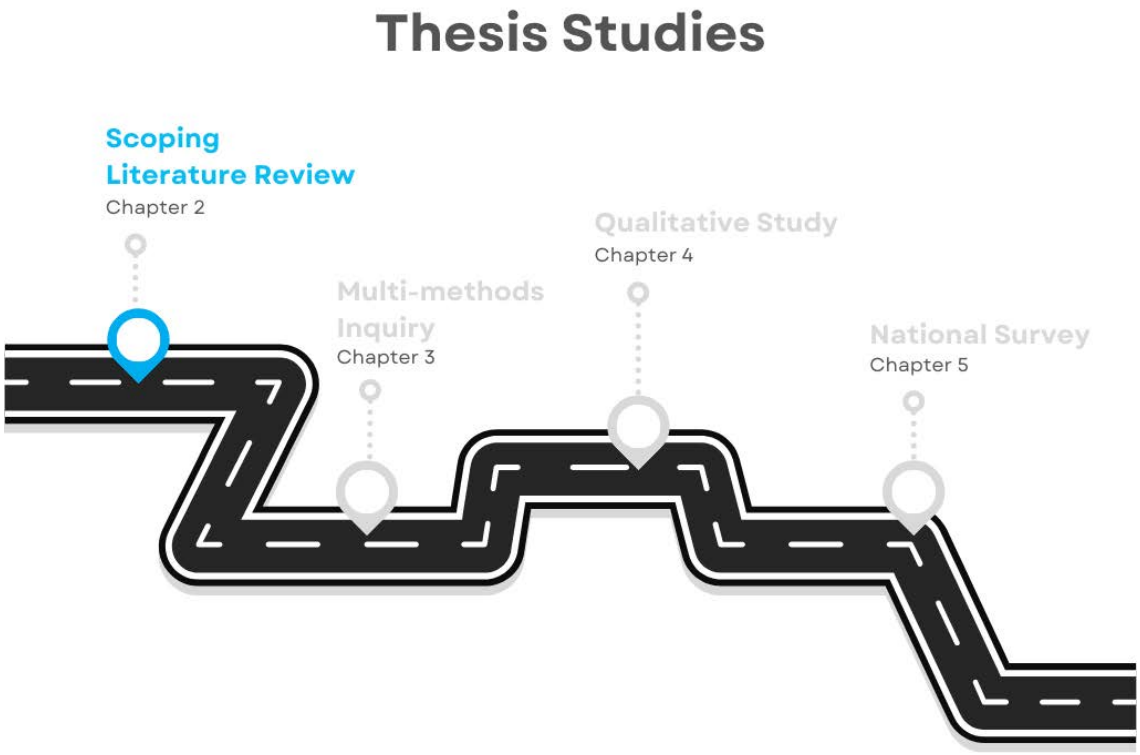

Figure 2.1 Scoping literature review

2.1.1 Background

Historically there have been a small number of successful claims related to failure or delay in diagnosis of CES against UK physiotherapists, however this number has increased over recent years (Beswetherick, 2017, 2019). This increase, may be in part, be related to changes in the physiotherapist's role. The FCP role (as described previously in section 1.1.4), is a new approach to the management of musculoskeletal conditions within the UK, which aims to

relieve pressure on general practitioners (GP's) and gives physiotherapists more autonomy (Hutton, 2019; Greenhalgh, Selfe and Yeowell, 2020). The aim of the FCP role is to provide timely access to expert musculoskeletal practitioners without the patient needing an initial GP appointment (Hutton, 2019). This allows the introduction of physiotherapists with advanced practice skills to undertake many of the musculoskeletal responsibilities currently carried out by GP's (Greenhalgh, Selfe and Yeowell, 2020). Therefore, physiotherapists are likely to be at an increased risk of being involved in litigation, as they are often the first point of contact for many CES patients.

The only previous literature in the UK to investigate the number of CES claims in physiotherapy was that of Beswetherick (2017 and 2019). In 2017 Beswetherick investigated the number of CES claims against self-employed physiotherapists between 2001/02 to 2015/16 and found a n=124 claims related to misdiagnosis with N=10 related to CES. Claims against self-employed physiotherapists increased 388% over the 15 year period (Beswetherick, 2017). Beswetherick then investigated the number of CES claims in England between 2006-17 related to misdiagnosis, against NHS employed musculoskeletal physiotherapists. A small number of claims against NHS physiotherapists was found (4%, N= 5) (Beswetherick, 2019). However, this prevalence is likely to be under-reported as the database used to search for claims was not designed as a research tool and settled claims may not have been identified. Furthermore, Beswetherick's study focused on NHS England, with data from the rest of the UK and outside the NHS, not being captured. As such, the true extent of physiotherapists' involvement in CES litigation is unclear as there is currently no centralised recording of these data from a whole UK perspective. In addition, it is unclear what guidance and processes are in place to support physiotherapists who become involved in litigation. Therefore, to gain appropriate contextual knowledge on this topic, further data needed to be gathered to gain a complete view of the number of CES claims involving UK physiotherapists and to identify the process for UK physiotherapists who become involved in these claims.

2.1.2 Aims

The research question in relation to the current scoping review was:

With respect to physiotherapy, what is the extent of CES litigation in the United Kingdom, and what is the legal process by which these litigation cases are managed.

The aims of the scoping review study were:
1. To review the extent of CES litigation in physiotherapy in the UK
2. To review the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK

2.1.3 Method exploration

Many review methods were explored a priori and evaluated for their relevance to the current study based on their methods for search, appraisal, synthesis and analysis (SALA) (Grant and Booth, 2009); including mapping review, rapid review, overview, systematic review and umbrella review. Based on the broad research question, investigating the extent and legal process of CES claims for UK physiotherapists, an iterative process was needed, using all evidence available. As opposed to only using the most high-value evidence available which is usually the case for systematic reviews (Murray *et al.*, 2016). The aims of the current review were exploratory rather than hypothesis testing (Tricco *et al.*, 2016). Formal quality assessment of the literature was not necessary for this review due to the types of information being attained; as extent data is numeric factual data, relating to the number of CES claims and it is not a result of a study or experiment, traditional quality assessment is of low importance. Similarly, although not numerical, legal process data is not created or attained through a research experiment, it relates to current legislation and therefore quality assessment was not prioritised when choosing the method. However, scoping reviews still have a comprehensive and rigorous search strategy (Peters *et al.*, 2015; Murray *et al.*, 2016). Additionally, scoping reviews are particularly useful when the topic areas has not been extensively reviewed before, as in the current case (Pham *et al.*, 2014).

A similar method explored was the evidence mapping review method, as scoping review methods often describe ‘mapping’ of literature (Arksey and O’malley, 2005) and both methods involve searching broad topic areas. Although scoping reviews are only occasionally used to identify gaps in the

research, this is the primary element of an evidence map (Miake-Lye *et al.*, 2016). Furthermore, evidence maps aim to produce a user-friendly visual figure to present data (Miake-Lye *et al.*, 2016). These elements were not applicable to the current research question; therefore the scoping review method was deemed most appropriate as its purpose is to examine the extent, range and nature of literature (Pham *et al.*, 2014). Furthermore, a scoping review was most appropriate as they typically map a wide range of literature from various sources to identify key concepts (Levac, Colquhoun and O'Brien, 2010) which enabled the use of different sources outside of traditional journal articles alone.

2.1.4 Scoping review framework

The framework guiding this scoping review is that developed by Arksey and O'Malley (2005), which was further clarified by Levac et al. (2010) and the Joanna Briggs Institute (JBI) (Peters et al., 2015). This is a well-established framework that is commonly used to provide a structured method for scoping reviews.

Arksey and O'Malley's (2005) framework has a six-stage process which has been implemented for this scoping review. The sixth stage (consultation exercise with stakeholders) was originally stated as optional; however, it has since been argued that this is a necessary stage (Levac et al., 2010). Furthermore, this stage is particularly relevant for the topic area which involves people living with CES as well as physiotherapists. This ensures the research, although focused on clinicians, remains patient centred and relevant. Therefore, the existing framework was modified specifically for the purpose of this PhD. Rather than conducting a stakeholder consultation as the sixth stage, as stated by the framework, a Patient and Public Involvement and Engagement (PPIE) meeting was convened at the beginning of the scoping review process to co-determine the research questions and co-produce the search strategy. The stakeholders named the group as the Critical Friends Group (CFG). The name of the group (CFG) was decided as an alternative to the more commonly used Patient and Public Involvement and Engagement group, as this reflected the groups previous involvement in research and their expertise in this area. Furthermore, although the term PPIE is used by the National Institute for Health

and Care Research (NIHR) (NIHR, 2022), the group felt that PPIE was a research term given to them rather than from them. Therefore, a novel name, ‘critical friend’ was created, which the group were happy with, within the ethos of collaboration and co-production. This name better reflected their role in giving advice, listening to ideas and providing honest and impartial feedback. The group included four people (three female and one male) living with CES, with one pursuing a litigation case. The CFG living with CES were diagnosed in their mid-thirties and had often suffered with back pain for years prior to their severe episode of back pain, in which they were diagnosed and had surgical intervention. Since their surgery, they all continue to live with various effects of CES. Another member of the CFG was a physiotherapy stakeholder with experience of being involved in a CES litigation case. As part of the novel adaptation of the Arksey and O’Malley framework for the purposes of the current research, a second one-hour CFG meeting was held via Microsoft Teams, at the midpoint of this study. This allowed further iterative discussion with the CFG members around their own thoughts and experiences related to the study aims discussed previously.

2.2 Methods

2.2.1 Introduction

The following methods are titled according to the Arksey and O’Malley (2005) 6-stage framework. Although as stated above the sequence of activities were adapted in a novel way for the purpose of this thesis and commenced with the CFG helping to develop the research question, rather than having a final stage conclude with convening the CFG to confirm findings. This ensured a patient centred approach was maintained and guided the process throughout.

The PRISMA-ScR reporting guidelines were used for reporting the results (Tricco et al., 2018). Using reporting guidelines increases methodological transparency by providing a description of the minimum elements that should be included in research studies, the PRISMA-ScR guidelines are specific to scoping reviews (Tricco *et al.*, 2018). The checklist includes 20 items and two optional items, the items are grouped in relation to sections of a research study:

title, abstract, introduction, methods, results, discussion and funding. See appendix 5 for a copy of the PRISMA-ScR.

2.2.2 Stage 1: Identifying the research question

A preliminary research question was developed while considering the target population (UK physiotherapists) and health outcomes of interest (well-being of physiotherapists in receipt of CES claims) in relation to the aims of this scoping review:

1. To review the extent of CES litigation in physiotherapy in the UK
2. To review the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK

This was informed by a one hour zoom meeting with the CFG. Ethical approval is not needed for conducting involvement activities such as this, as no data is being collected, only members' opinions (NIHR, 2023). Members of the CFG volunteered to attend as part of their contribution towards the research. Three academics involved in the research also attended the meeting. This meeting involved introductions from each of the CFG members, describing their experiences of CES and why they decided to be involved in the current research followed by a group discussion of the research itself in relation to the scoping review and its aims. The researcher personally chaired and presented the CFG with a brief overview of the research plan as a whole and the preliminary ideas for this scoping review including the types of data that may be useful, how this data would answer the current aims and on what platforms the searches for this data could take place. This was done to ensure the research question and search strategy would be relevant and comprehensive. During the one-hour meeting, the broad research question was developed with all attending the meeting in agreement: With respect to physiotherapy, what is the extent of CES litigation in the United Kingdom, and what is the legal process by which these litigation cases are managed.

2.2.3 Stage 2: Identifying relevant studies

The scoping review involved two key searches:

i) Traditional academic literature

ii) Websites

The results of these searches were then synthesised to produce the conclusions.

2.2.3.1 Search strategy for databases

The search strategy was produced in collaboration with the CFG and then further refined. The Allied and Complementary Medicine Database (AMED), The Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline were selected for the search as they are the largest and most well-known databases in the physiotherapy field; and therefore, included articles relevant to the research area. Having selected the most appropriate databases, advice was taken from a university subject specialist librarian for constructing an optimal search strategy.

Determining the most successful search strategy involved deciding on keywords best relating to the topic area and trialling the search strategy on the databases in an iterative manner to pilot them. This involved looking through the first 10 pages of records displayed for each pilot, checking for relevancy and checking what key words relevant articles were registered under, in order to feedback the most relevant words into the search. Adjustments were made to the keywords and input format of Boolean operators ‘AND’ and ‘OR’ and a strategy was selected which retrieved the most relevant articles. The search was undertaken on 14th January 2021 and databases were searched from inception, in order to adhere to the broad search nature of a scoping review. Table 2.1 below shows the keywords used in the database searches.

Table 2.1 Primary and secondary search terms used for databases

Primary search terms	cauda equina syndrome	litigation	UK
Secondary search terms	or central disc prolapse	or negligence	or England
	or bilateral sciatica	or malpractice	or Wales
	or urinary retention	or medicolegal	or Northern Ireland
	or perineal hypoaesthesia		or Scotland
	or sexual dysfunction		
	or spinal		
	or surgery		

The search terms used for the databases were entered as one complete search. See figure 2.2 below.

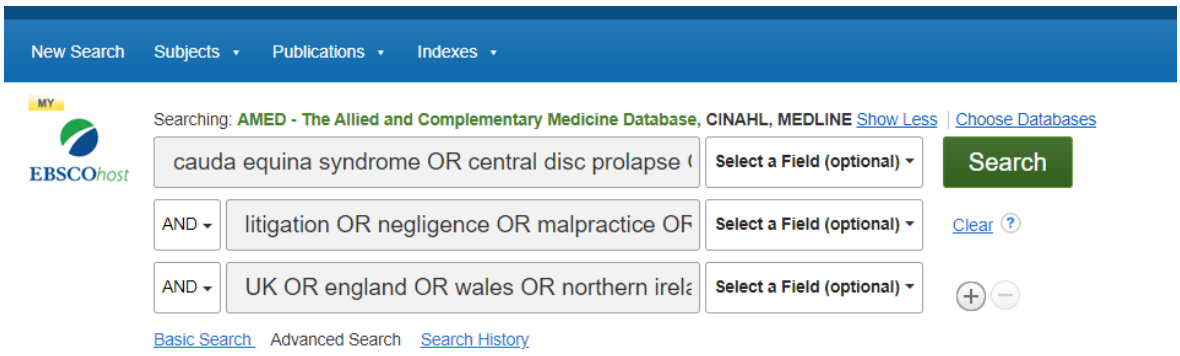

Figure 2.2 Database search entry

2.2.3.2 Search strategy for grey literature and websites

Records included from the databases were also searched for additional relevant references using the same eligibility criteria. This is in line with the aim of a scoping review, in identifying extent and type of research evidence available (Grant and Booth, 2009). The Chartered Society of Physiotherapy (CSP) website was searched as it is the professional body and trade union for physiotherapists. The Health and Care Professions Council (HCPC) regulatory body, and NHS Resolution (formerly NHS Litigation Authority) were also searched. NHS Resolution is an arm's-length body of the Department of Health and Social Care in England, established in 1995 (NHS Resolution, 2021c). They provide expertise to the NHS on handling negligence

claims, resolving disputes and sharing learning from litigation. The three websites searched are those most closely linked with the topic, therefore any extent data in relation to physiotherapy claims may be found on these websites and they are websites which a physiotherapist would most likely search for information on the legal process if they were involved in a CES claim.

The search terms used for websites included: ‘cauda equina’, ‘insurance’, ‘negligence’ and ‘litigation’. The same search terms were used for all websites and keywords were chosen which were most closely related to the topic area. These search terms were piloted on each of the websites to ensure that there were results being populated from the websites.

2.2.3.3 Eligibility criteria

The subsequent inclusion and exclusion criteria were established to guide the scoping review search. They were evaluated and revised during the piloting process.

As the review was looking for information relating to UK physiotherapists, the inclusion criteria included records involving adults aged 18 and over and only those involving data from a UK perspective. Records needed to focus on the extent and prevalence of litigation and which health professionals and sectors were involved in the claims, in order to answer the research objectives. Inclusion criteria also needed to capture relevant information relating to legal process information and support for physiotherapists.

In order to comply with the principals of a scoping review, sources of information were very broad. For relevance, the websites that were searched (CSP, HCPC and NHS Resolution websites) needed to be applicable to the physiotherapy profession or those linked with the medico legal process.

Inclusion criteria

Phenomenon of interest

- Adults—18 years and older, as physiotherapists begin their training at the age of 18 or older.
- Includes information from the UK perspective.

- Focusses on the extent and prevalence of litigation cases for spinal pathologies (must include CES) and associated costs where available.
- Focusses on the extent and prevalence of litigation cases for CES spinal surgery (including spinal orthopaedic surgery and spinal neurosurgery as records in these areas may include a breakdown of case causes, of which CES may be one) and associated costs where available. Claims relating to CES surgery may not only concern the surgeons, therefore physiotherapists can be involved in these.
- Research study that investigates which professions are involved in CES litigation (including how many of these are physiotherapists and if relevant which NHS terms and conditions agenda for change (AfC) pay scales they are from and associated costs where available).
- Data concerning how many litigation cases involve NHS staff and how many involve the private sector and not-for-profit/ charitable organisations and associated costs where available. This is relevant to physiotherapists as extent of claims may differ depending on their employment.
- Information regarding litigation processes from NHS Resolution as these may be applicable to physiotherapists.
- Any literature regarding processes/pathways for dealing with litigation in relation to physiotherapy and other healthcare professionals acting as a defendant.

Sources

- Sources of information may consist of research studies, reports, reviews, guidelines, frameworks/pathways, ongoing court cases and grey literature.
- Websites of organisations involved in the management of medicolegal processes (NHS Resolution).
- Websites of professional and governing bodies of health professionals (CSP and HCPC).

Exclusion criteria

- Information solely related to medicolegal costs.

- Information regarding wrong site surgery.
- Literature solely based on consent in surgery.
- Literature relating to spinal anaesthesia.
- Literature not written in the English language.

2.2.4 Stage 3: Study Selection

Records were selected based on the eligibility criteria stated above. Full texts of the records were obtained and two reviewers (RL & GY) independently reviewed 100% of the records. Concordance between the two reviewers (RL & GY) was >95% regarding inclusion/exclusion. Where there was any disagreement, a third reviewer (JS) made the final decision (Levac, Colquhoun and O'Brien, 2010), this occurred in two cases. One record was included (Todd, 2011) as it gave some extent data; one surgeon had 40 CES claims against them. The other record was excluded as it did not contain any CES extent or process data.

2.2.4.1 Study selection for databases

All titles and abstracts of records retrieved were evaluated independently by one reviewer (RL). A second reviewer (GY) repeated the process on 10% of the records retrieved to ensure eligibility criteria had been applied correctly. If there was any uncertainty on the decision to include or exclude a particular record and no consensus was reached between the reviewers, it was included for full text review (Murray et al., 2016). There was concordance of 100% between the two reviewers when evaluating the titles and abstracts. There were two disagreements during full text screening, which were decided by the third reviewer as described above.

2.2.4.2 Study selection for grey literature and websites

There was a slightly different process applied to study selection for grey literature and websites, as there was a standard way of applying the inclusion and exclusion criteria for the databases, allowing a second researcher to audit 10% of titles and abstracts prior to the full text review. This was not applicable for grey literature and websites therefore the titles and descriptive information from website results (or abstracts in the case of articles) were evaluated independently by one reviewer (RL) against the inclusion and exclusion criteria

(see section 3.2.3.3). If there was any uncertainty on the decision to include or exclude a particular record it was included for full text review. There was uncertainty for 117 web pages which were included for full text review before being included or excluded.

Records obtained from the CSP website were filtered to exclude ‘posts’. These records were items which any CSP member could publish on the website, for example, a comment on a webpage, and therefore did not meet the eligibility criteria. Full web pages or text was then gathered and 100% of records were evaluated according to the inclusion and exclusion criteria, independently by two reviewers (RL and GY). Following the full text reviews, concordance between the two researchers (RL & GY) was 100% regarding inclusion/exclusion.

2.2.5 Stage 4: Data charting

A bespoke data charting form was developed based on an existing framework described by The Joanna Briggs Institute (JBI) (Peters et al., 2015), this was adapted to suit the purpose of the current study. See appendix 2 and 3 for the full data extractions tables for databases and websites. Headings included:

- Author(s)
- Year of publication
- Title Aims/ purpose of the study
- Type of claim
- Type of study
- NHS or non-NHS
- UK Nation
- Methodology
- Results (Claims Data Cost Data Process Data)
- Conclusions that relate to review objectives
- Conclusions that relate to wider context

These headings included the key demographic components relevant to the area of research, details of the records and conclusions relating specifically to physiotherapy and the current review objectives and conclusions relating to

wider context, for example, relevant data that did not specify if it was related to the physiotherapy profession. Two headings relating to conclusions were used as most data did not specify any link to the physiotherapy profession, furthermore this layout makes it easier for the reader to establish what the conclusions relate to.

One researcher (RL) independently obtained data from the records included during study selection using this data charting form. A second researcher (GY) checked 100% of the data extracted for accuracy, the researchers (RL & GY) met throughout the data charting process, at regular intervals to establish if the data extraction approach was consistent, to discuss any uncertainty and to refine the charting form where needed (Levac, Colquhoun and O'Brien, 2010). This was an iterative process, with researchers continuing to extract data and update the form. If useful data was found which did not fit with the charting form, when appropriate, further headings or categories were added to the from.

2.2.6 Stage 5: Collating, summarising and reporting the results

Using the data retrieved, key concepts were mapped in relation to the aims of this scoping review, current research findings were summarised and gaps in the literature identified (Peters et al, 2015). This was done through presenting the results in various formats, including diagrammatical and tabular format to show the number of records found. Further tabular presentation was used to show extent related data. Diagrammatical mapping was used to show the process for attaining web pages that provided legal process data, and further narrative was used to describe the information provided by these web pages. The results section below presents this numerical analysis of the number of studies found and the narrative synthesis.

2.3 Results

2.3.1 Descriptive analysis

The flow diagram (figure 2.3) shows the results of the search and the number of records found.

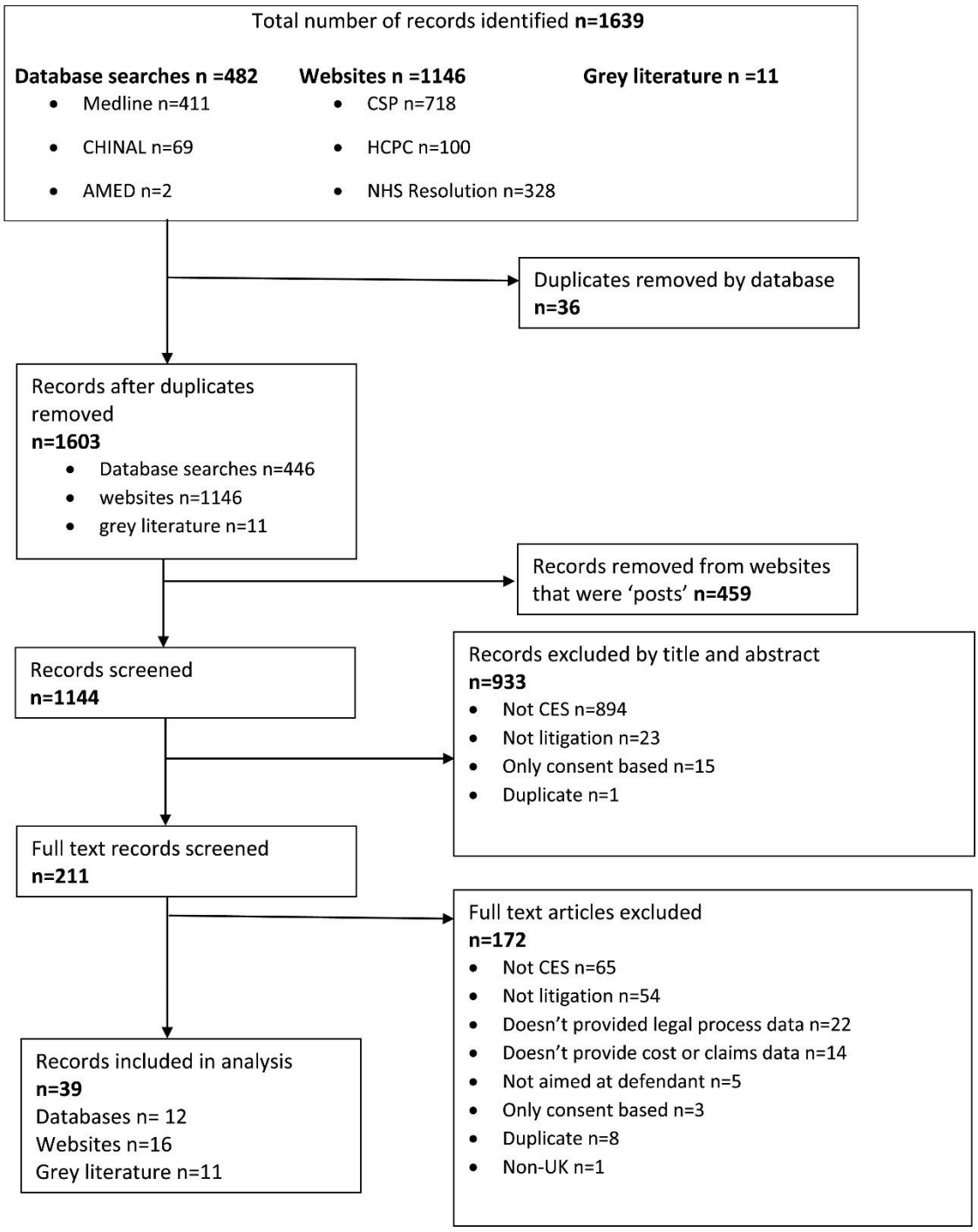

Figure 2.3 PRISMA Flow chart of records retrieved

The initial search of the databases identified N=1639 records, N=482 of these were identified from databases, N=1146 from websites and a further N=11 were identified via the grey literature. After duplicates were removed, N=1603 records remained. Website results that were 'posts' were excluded (N=459). A total of N=1144 records underwent title and abstract review and N=933 were excluded. N=211 records underwent a full text review and were independently screened against the eligibility criteria by the same reviewers. A further N=172 were

excluded, leaving a total of N=39 records for analysis. Records were excluded according to the exclusion criteria, the most common reason for exclusion was that records were not related to CES. Furthermore, some records were primarily related to taking consent and were not relevant to CES, these records can be found under the 'only consent based' exclusions in figure 2.3.

2.3.2 Website descriptive results

See table 2.2 for the number of records found from each of the websites.

Table 2.2 Website records retrieved

Website	Search term	Records found
CSP	Cauda equina	N=65 records found N=22 records following removal of 'posts'
CSP	Insurance	N=497 records N=185 records following removal of 'posts'
CSP	Negligence	N=82 records found N=33 records following removal of 'posts'
CSP	Litigation	N=74 records found N=19 records following removal of 'posts'
HCPC	Cauda equina	N=0 records found
HCPC	Insurance	N=90 records found
HCPC	Negligence	N=6 records found
HCPC	Litigation	N=4 records found
NHS Resolution	Cauda equina	N=14 records found
NHS Resolution	Insurance	N=18 records found
NHS Resolution	Negligence	N=200 records found
NHS Resolution	Litigation	N=96 records found

2.3.3 Included records by year of publication

The earliest published record included in the current scoping review was from 2009. Records dated up until 2021 (year of search) were retrieved.

2.3.4 Extent of CES litigation

Most of the source data presented in the 39 records, regarding the number of CES claims and associated costs, was gained through the NHS Resolution; via freedom of information requests previously submitted by members of the public, searching of their databases or via personal communication (Lavy *et al.*, 2009). Other data was gained in the form of articles from the Medical Defence Union (MDU) (Markham, 2004; Hutton, 2019), insurance brokers (Beswetherick, 2017), individual hospitals (Mukherjee, Pringle and Crocker, 2014) or surgeons (Todd, 2011). In total, 28 of the 39 records analysed, gave claims and cost data in relation to CES litigation cases. A total of 2050 claims were reported in these records, see table 2.3 below. Many cited data which was not original that had already been captured from the original record, therefore these values were not used in the calculation to avoid double counting claims. Of the 2050 claims, 15 were attributed to physiotherapists: 10 claims from Beswetherick, 2017, and 5 from Beswetherick, 2019.

Table 2.3 Number of claims from records collected

Author(s) Year of publication	Number of Claims	NHS or non-NHS claims
Atrey; Gupte, Corbett, 2010	20	NHS
Beswetherick, 2017	10	non-NHS
Beswetherick, 2019	119	NHS
Fairbank, 2014	No original data	
Ford, Cooper, 2016	No original data	
Gardner, Gardner, Morley, 2011	46	NHS & non-NHS
Greenhalgh, Truman, Webster, Selfe, 2016	No original data	
Greenhalgh Finucane, Mercer, Selfe, 2018	No original data	
Hamdan, Strachan, Nath, Coulter, 2014	16	NHS
Hutton, 2019	No original data	
Lavy, James, Wilson-MacDonald, Fairbank, 2009	22	NHS
Machin, Briggs, 2014	12	NHS
Machin, Hardman, Harrison, Briggs, Hutton, 2018	131	NHS
Markham, 2004	95	NHS & non-NHS
Mukherjee, Pringle, Crocker, 2014	Not CES specific	
Quraishi, Hammett, Todd, Bhutta, Kapoor, 2012	34	NHS
Thavarajah, Podger, Hobbs, 2013	Not CES specific	
Todd, 2011	40	NHS
Todd, 2015	118	non-NHS
Wilson-MacDonald, Fairbank, Lavy, 2018	117	NHS
CSP, 2017	No original data	
CSP, 2017	No original data	
CSP, 2018	No original data	
CSP, 2019	Gives number of decompressions but not necessarily claims	
NHSLA, 2016	293	NHS
NHS Resolution, 2018	No original data	
NHS Resolution, 2020	827	NHS
Taylor, 2017	150	NHS & non-NHS
Total =	2050	

2.3.5 Process of litigation

In total, 11 records of the 39 records analysed related to the legal process. Six records were found from the NHS Resolution website and five records were found on the CSP website. See figure 2.4 and 2.5 showing how these pages were found, what to select and search on the websites to find these web pages. These web pages include information such as who to contact and the legal process should a physiotherapist be involved in clinical negligence case (The Chartered Society of Physiotherapy, 2017a). Another of the web pages discusses insurance, why it is needed and what it covers (The Chartered Society of Physiotherapy, 2017c). Other pages give information on who to contact with regard to medicolegal issues (The Chartered Society of Physiotherapy, 2019a), explains why patients may make a complaint and how concerns may be investigated (The Chartered Society of Physiotherapy, 2019c). They also provide support regarding what a physiotherapist should include in a statement, if asked to write one (The Chartered Society of Physiotherapy, 2019d). The CSP state that they may be able to provide support to physiotherapists undergoing litigation depending on their circumstances.

See appendix 2 for the data extraction table for databases and appendix 3 for the data extraction table for websites. Records that were grey literature were split between the data extraction table for databases and the table for websites, depending on the type of record. For example, grey literature in the form of journal articles were included in the database table as these were the same sources of information found through the database searches. Similarly, grey literature in the form of webpages were included in the websites table.

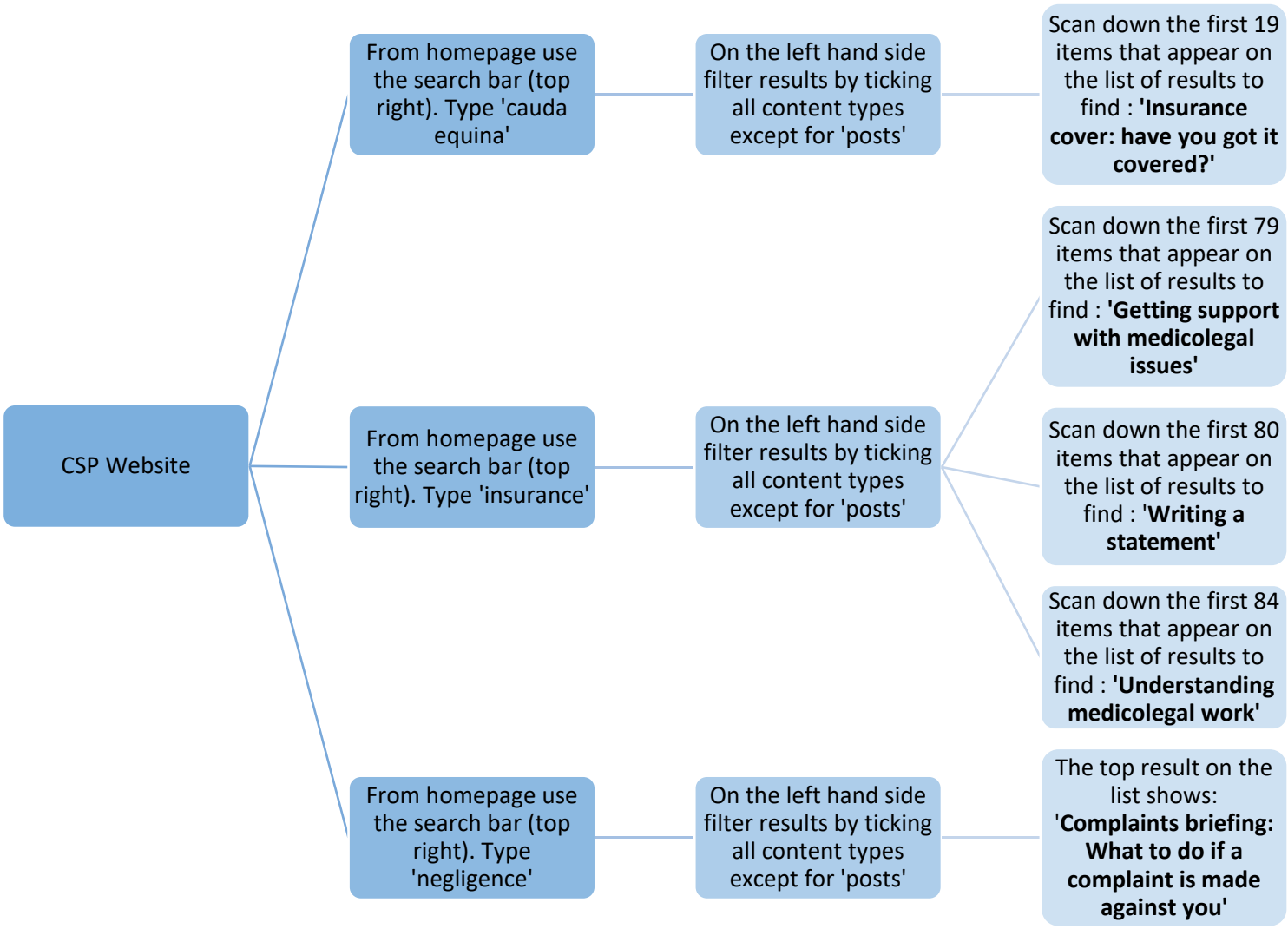

Figure 2.4 Process of finding relevant web pages relating to the legal process through the CSP web search **correct at the time of scoping review searches*

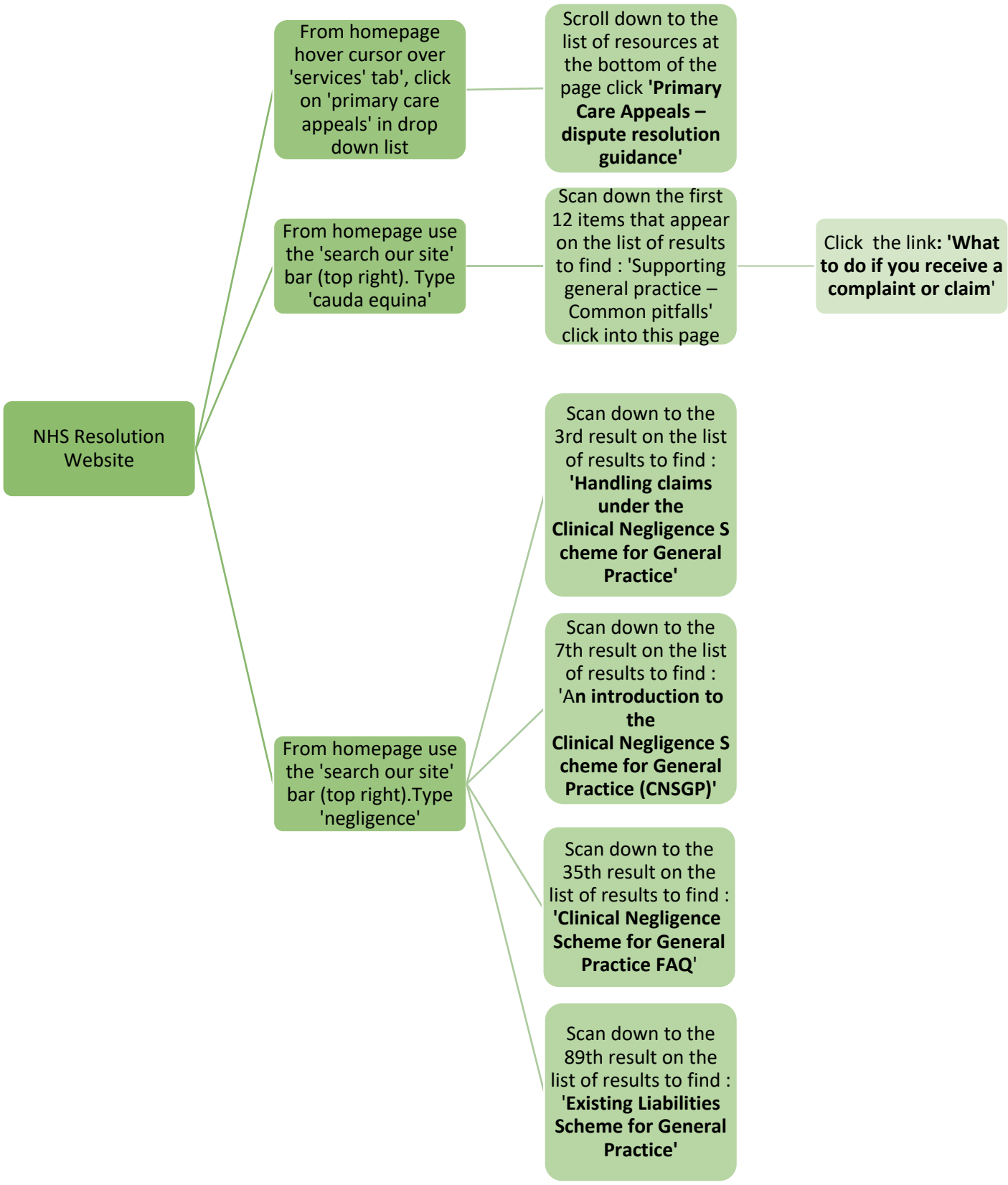

Figure 2.5 Process of finding relevant web pages relating to the legal process through the NHS Resolution web search **correct at the time of scoping review searches*

2.4 Discussion

The aims of the scoping literature review were to 1. Review the extent of CES litigation in physiotherapy in the UK and 2. To review the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK. Regarding aim 1, The current results show between 2009 and 2021 a total of 2050 CES claims were found. Of these 2050, 15 (0.7%) were physiotherapy related. Regarding aim 2, little information was found describing the legal process for physiotherapists undergoing litigation, this information was difficult to find and there was no clear and in-depth description of the legal process. This suggests there is poor guidance for physiotherapists undergoing litigation cases. However, the scoping review only evaluated data in the public domain and any data available to CSP members. Therefore, there may be more guidance for physiotherapists internally at their places of work. Though, if this is the case this information may not be available to those physiotherapists who are self-employed or sole traders.

2.4.1 Extent of CES litigation

2.4.1.1 Period recorded

Data relating to medical negligence and litigation processes has only become available in more recent years, with the earliest record retrieved being published in 2009. The lack of publications prior to this date may relate to when it became mandatory in 2002, for NHS Resolution to be informed of all claims against NHS trusts in England (it was not possible to identify a specific date for other UK nations). Before this there was no complete record of litigation as NHS trusts did not regularly inform NHS Resolution of smaller claims (Machin *et al.*, 2014). There may also be an increase in litigation cases and associated costs over recent years (Machin *et al.*, 2014). Greenhalgh and Selfe (2019) found that the number of papers published per decade with CES in the title slowly increased throughout the 20th century, with a substantial rise in the number of papers published in the first decade of the 21st century. They described numerous factors contributing to this, including the digital information revolution during the 1980s which increased opportunities to publish papers, and allowed patients to access information that would have otherwise only been available to

medical professionals. The increasing litigious culture around the condition may have been a further driver for clinicians and academics to publish CES papers, in an attempt to safeguard themselves, further contributing to the increase in publications (figure 2.6) (Greenhalgh and Selfe, 2019).

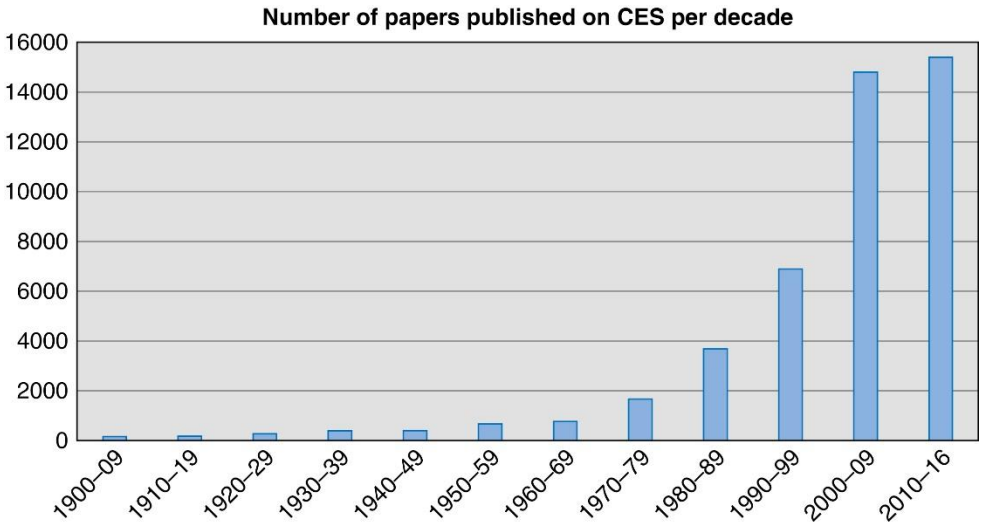

Figure 2.6 Graph taken from Greenhalgh and Selfe (2019)

2.4.1.1 Records relating to NHS/non-NHS claims

Of the records analysed N=11 included NHS based data, with a total of 1631 CES claims recorded (not including duplicated data). N=2 records related to non-NHS data, with a total of 128 CES claims. N=3 records included NHS and non-NHS data, with a total of 291 CES claims (not including duplicated data). Most data regarding CES claims related to the NHS and there was less information relating to non-NHS physiotherapists. This is likely due to the NHS being the biggest employer of physiotherapists in the UK, employing around 51% of all physiotherapists in the UK (figures according to 2018 data, calculated using The Chartered Society of Physiotherapy, 2018; Statista, 2021).

2.4.1.2 Claims data

It is perceived that the actual number of CES claims in the UK is likely to be higher than data recorded as the NHS Resolution database is not a research tool and there is no guarantee that coding on their database is consistent (Atrey, Gupte and Corbett, 2010). Therefore, CES claims could be saved under other keywords and may not be included in data when searching for ‘Cauda

Equina Syndrome' on the NHS Resolution database. If a cause code specifically for CES was created on the NHS database, CES claims could be accurately recorded and analysed in future research. Furthermore, there has previously been debate as to whether the department cited as 'responsible' for the so called error is accurate, as details on the NHS database do not give reasoning regarding the decisions for claims categories (Hulson, 2018). Providing this information would help to improve research in this area to learn from litigation cases and make positive changes to reduce claims going forward. However, NHS Resolution do state that their database is not a research tool.

2.4.1.3 Cost data

Cost data was collected and reported in the current scoping review as many of the records collected presented this information. This information is relevant background knowledge in relation to the topic area of this thesis and highlights the importance of conducting research in this area. The cost data presented will be used to provide context throughout the following chapters. However, examining costs of CES claims was not an aim of the current scoping review, nor will cost data be analysed in further chapters.

Average damages for CES claims ranged between £200,000 - £400,000, however some claims were much higher, at over 1.5 million (Mukherjee, Pringle and Crocker, 2014). Damages and claimant solicitors' costs related to CES claims were high but also varied depending on each case, this is because settlements depend on factors related to each individual patient. For example, younger patients tend to be awarded higher settlements as negligence is likely to have a larger impact on their future in terms of their ability to work, potential earnings over their lifetime and their quality of life (Hutton, 2019). Unfortunately, there is insufficient data to attribute the average cost of damages specifically related to physiotherapy or other professions, such as general practitioners or surgeons.

Papers retrieved from this scoping review, which reported data regarding reasons for litigation highlighted that failure or delay in diagnosis was often the top factor which led to the most expensive CES claims (Mukherjee, Pringle and

Crocker, 2014; Medical Protection Society, 2017; Wilson-MacDonald, Fairbank and Lavy, 2018; Beswetherick, 2019). Many papers included in this review described data for spinal disease, spinal surgery, orthopaedic surgery or neurosurgery as a whole, with CES often cited as one of the most common pathologies for claims (Quraishi *et al.*, 2012; Thavarajah, Podger and Hobbs, 2013; Machin *et al.*, 2018). Many litigation cases relating to CES mention a lack of out of hours imaging facilities (Thavarajah, Podger and Hobbs, 2013; Mukherjee, Pringle and Crocker, 2014; NHSLA, 2016; Hutton, 2019) or out of hours GP appointments as reasons for lack of timely treatment (Taylor, 2017). This could be contributing to CES claims involving physiotherapists as many physiotherapists now work in GP surgeries. Furthermore, physiotherapists have the autonomy to order investigations such as MRI scans, however if there is a lack of out of hours facilities, this could contribute to a lack of timely treatment and a litigation claim from their patient.

A number of papers recommend raising awareness of the red flag symptoms related to CES and when it is appropriate to take action (Beswetherick, 2017; Medical Protection Society, 2017). Previously initiatives have been created to improve the use and documentation of red flags in physiotherapy related to the assessment and management of low back pain, and it is reported that while these initiatives improved the documentation of red flags, some patients were still not receiving optimal management, which highlighted the need for ongoing education (Ferguson, Holdsworth and Rafferty, 2010). However, some suggest that the problem is not a lack of knowledge relating to CES symptoms but a lack of application of the existing knowledge (Todd, 2011). This could be the case for physiotherapists when diagnosing patients with suspected CES, with the suggestion that improving the application of red flags knowledge and clinical reasoning during patient assessment could contribute to improving efficiency when diagnosing CES. This potential lack of understanding and knowledge application does not appear to be limited to the UK alone. Academics in Denmark and Austria are creating resources specifically to increase red flag knowledge for physiotherapists, as it has been found that physiotherapists are often uncertain of their differential diagnostic abilities (Budtz, Rønn-Smidt, *et al.*, 2021; Budtz *et al.*, 2022; Lackenbauer *et al.*, 2023). Therefore, further training related to CES could be implemented in the UK to improve the application of

red flags knowledge. This may help improve physiotherapists confidence with suspected CES cases. It has been reported that physiotherapists feel more confident with increased experience and training in relation to diagnosing CES, this helps physiotherapists understand the condition and its management and builds their confidence and competence when managing patients with suspected CES (Paling and Hebron, 2021).

2.4.2 Process of CES litigation

There is little information describing the legal process for physiotherapists undergoing litigation in the public domain. There is information available to physiotherapists who are members of the CSP regarding the litigation process and who they should contact regarding negligence claims. However, physiotherapists would need to know where to search for this and would need to be a member of the CSP to access some of this information.

Five records were found that related to the legal process as applied to physiotherapy, these were all from the CSP website (The Chartered Society of Physiotherapy, 2017a, 2017c, 2019a, 2019c, 2019d). Web pages from the CSP relating to the legal process are not readily available in one place on the CSP website, using the specific terms ‘cauda equina’, ‘insurance’, ‘negligence’ and ‘litigation’ retrieved a total of 718 results across multiple pages (before the removal of ‘posts’) including titles such as ‘Hidden impact of cauda equina’ and ‘Clinical update: cauda equina syndrome’. Currently physiotherapists would have to search through multiple records to find the appropriate guidance on the process of CES litigation. Furthermore, legal terminology in these documents is often used interchangeably, for example, the terms ‘complaint’, ‘claim’ and ‘litigation’. This could be confusing for a clinician seeking guidance on the legal process who may have little knowledge of legal terms. See figure 2.4 (section 2.3.5) for the process of finding relevant web pages relating to the legal process through the CSP web search.

NHS Resolution is a body of the Department of Health and Social Care providing the NHS with knowledge on how to fairly resolve disputes, share learning for improvement and maintain resources for patient care; with their main functions including claims management, practitioner performance advice,

primary care appeals and safety and learning (NHS Resolution, 2022). NHS Resolution may not be the first place a physiotherapist may look for information on the litigation process, however some guidance on the litigation process is available and is easier to find than those on the CSP website. The information on their website is available publicly and non-NHS physiotherapists may also find some of this information useful, however they may not think to look here.

There were six records relating to the legal process found from the NHS Resolution website. These web pages include information for healthcare professionals regarding the litigation process and providing support including legal advice contact. Including information regarding the clinical negligence scheme for general practice and existing liabilities scheme for general practice (NHS Resolution, 2019, 2021b). They also answer common questions regarding the clinical negligence scheme for general practice (NHS Resolution, 2021a) and how these claims are handled (NHS Resolution, 2020b), what healthcare professionals should do if they receive a complaint or claim (NHS Resolution, 2020f) and brief dispute resolution guidance (NHS Resolution, 2020e). Records from NHS Resolution may not always be applicable to and therefore useful for physiotherapists, as the CSP records are. These documents are not aimed at physiotherapists specifically; however, they are still applicable to them. One of these records is easily accessible from the NHS Resolution homepage using the primary care appeals link (NHS Resolution, 2020e). However, the others may need to be searched for using specific terms. See figure 2.5 for the process of finding relevant web pages relating to the legal process through the NHS Resolution web search.

In contrast with physiotherapy, there seems to be clearly described legal and support processes for other professions such as doctors and surgeons. For example, organisations such as the General Medical Council (GMC) have information on their website regarding their 6 month process for concerns about doctors and their investigation process which is publicly available on their website (General Medical Council, 2021).

The HCPC are the regulatory body for physiotherapists, they set professional standards, approve programmes, keep a register of professionals who meet

their standards and take action if a registered professional does not meet their standards (HCPC, 2018d). They protect the public through regulating 15 health and care professions in the UK, including physiotherapy. The HCPC give information on their investigations process, however this guidance is oriented to the person making the complaint or claim, rather than HCPC registrants i.e. defendants (HCPC, 2019). Therefore, no records were found relating to the legal process from a physiotherapists' perspective.

The MDU offer support, guidance and advice to healthcare professionals, however their membership information is largely aimed at doctors, nurses, consultants and general practitioners. There is no specific mention of physiotherapy on the MDU website, although they do provide membership for physiotherapists, this information is only available through enquiry. There is publicly available information on the MDU website for support (The MDU, 2021) and includes pages such as:

- I've had a complaint
- I've had a letter from the GMC
- I'm being sued
- I have to attend court
- I have to write a report or statement
- I'm being investigated by the police
- I've had an inquiry from the media (The MDU, 2021).

These pages provide clear and easily accessible information for healthcare professionals who become involved in a complaint or legal claim (as stated previously these terms are often used interchangeably, section 2.4.2.1). They provide step-by step support, including resources such as videos and podcasts (Figure 2.7). However, as most of the information provided seems to be aimed at health professions outside of physiotherapy, it is unclear how applicable this is to the profession. Furthermore, as their website does not state that their membership is available for physiotherapists, many may be unaware of this support and may not think to search for this information on their website.

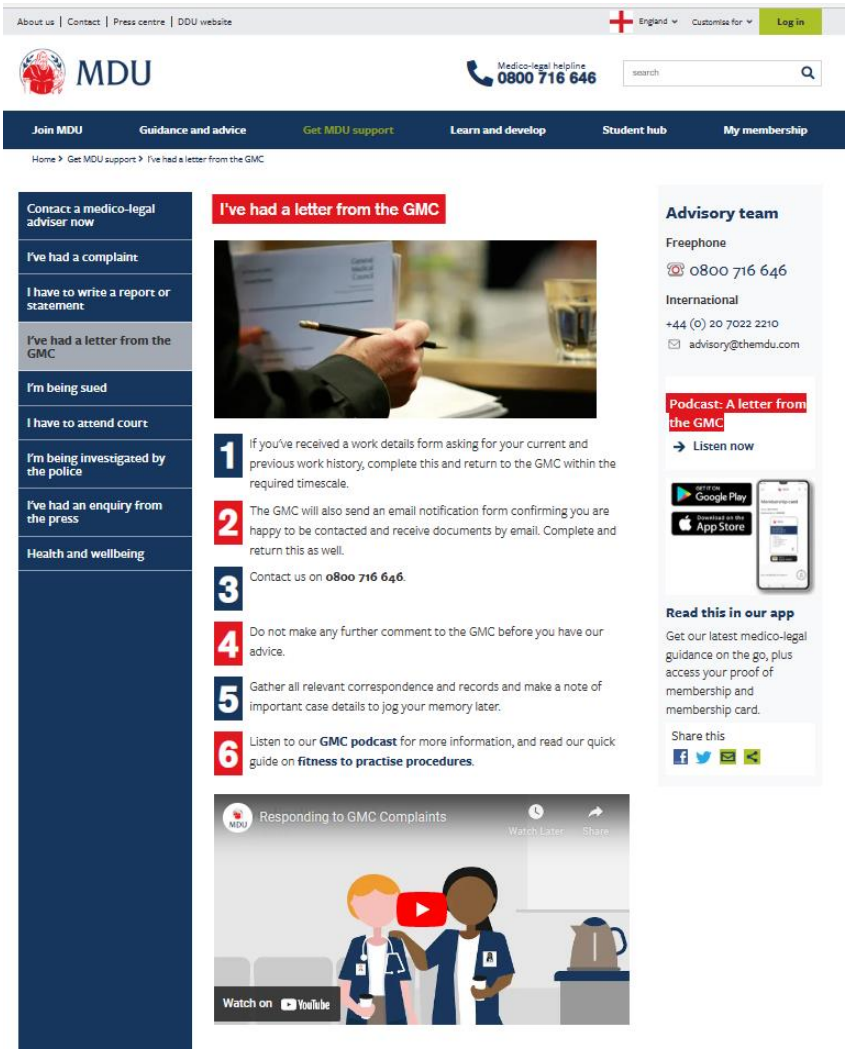

Figure 2.7 Step-by-step support through MDU website (The MDU, 2021)

2.4.3 Analysis

The PRISMA-SCR reporting guidelines were used for reporting the results (Tricco et al., 2018), the guidelines were comprehensive and improved the quality and consistency of data reporting. The guidelines were developed using rigorous and iterative methods and has been well received by researchers, being cited 631 times in its first year of publication (McGowan *et al.*, 2020).

2.4.4 Strengths and limitations

The current scoping review is the first in this area of research to investigate the extent of CES litigation and the legal process for physiotherapists in the UK. The results of this study have highlighted the lack of information available in this area which needs improving to fully understand the extent of CES litigation within physiotherapy and to make recommendations to improve practice.

Therefore, further methods may be required to achieve this and to fully answer the study objectives.

Most of the source data presented in this scoping review originates from NHS Resolution, however the NHS Resolution database is not primarily a research tool, it is a claims management tool and there is no guarantee that coding on their database is consistent or that detail is adequate for research purposes (Atrey, Gupte and Corbett, 2010). Therefore, data obtained through their database could be inaccurate and the numbers presented are likely to be an underestimation. Some figures only including secondary and tertiary care, do not include costs made against FCPs in primary care settings and therefore actual CES claims costs are also expected to be much higher than stated (Coleman, 2019).

Arksey and O'Malley (2005) recognise that a limitation of using a scoping review method is the lack of formal quality assessment. Some believe that quality assessment is an essential component of a scoping review which is an important task that should be performed using validated tools (Daudt, Van Mossel and Scott, 2013). They believe that this change to the methods should occur simultaneously with changes to how a scoping review is defined; as adding the extra element would alter the fundamentals of a scoping review and add an extra time element which opposes the term 'rapid' used in Arksey and O'Malley's definition of this method (Daudt, Van Mossel and Scott, 2013). Conversely, scoping reviews are broad in nature and outline all literature regardless of quality, which allows a wide ranging and more contextual overview (Murray et al., 2017). For the purpose of the current thesis, it is considered that scoping reviews should include all data regardless of the quality of the methods, as the purpose of a scoping review is to provide an overview of all information available relating to the topic area. Furthermore, including a formal quality assessment as part of a scoping review may present challenges, considering the wide range of data types and the vast number of records that may be included.

2.5 Chapter conclusion

This study has investigated the extent of CES litigation cases amongst UK physiotherapists and explored the legal process for UK physiotherapists involved in CES litigation cases. Between 2009 and 2021 there were 15 CES claims recorded against physiotherapists which is 0.7% of all CES claims recorded in the UK. In terms of the legal process for CES claims, there is currently limited information for physiotherapists regarding what steps they would need to take once they receive notification they are involved in a legal claim.

The data required to fully answer the aims of this study was not available through searching websites and databases alone. Therefore, the next study presented in Chapter 3 will continue to investigate these aims through additional methods to ensure these aims are answered fully. This will be achieved using a multi-methods approach.

3. Multi-methods inquiry

3.1 Introduction

The previous chapter discussed the scoping literature review conducted to gather information relating to the extent of CES claims involving UK physiotherapists and the legal process for physiotherapists involved in these claims and how this process is managed. The current chapter is related to the second research study of this thesis, the multi-methods inquiry, see figure 3.1. The first part of this chapter will address the background and aims of the current study, followed by the methodology. The methods section describes each of the methods used in the current study, followed by the results section which corresponds to each of the methods. The chapter will end with a discussion and chapter conclusion.

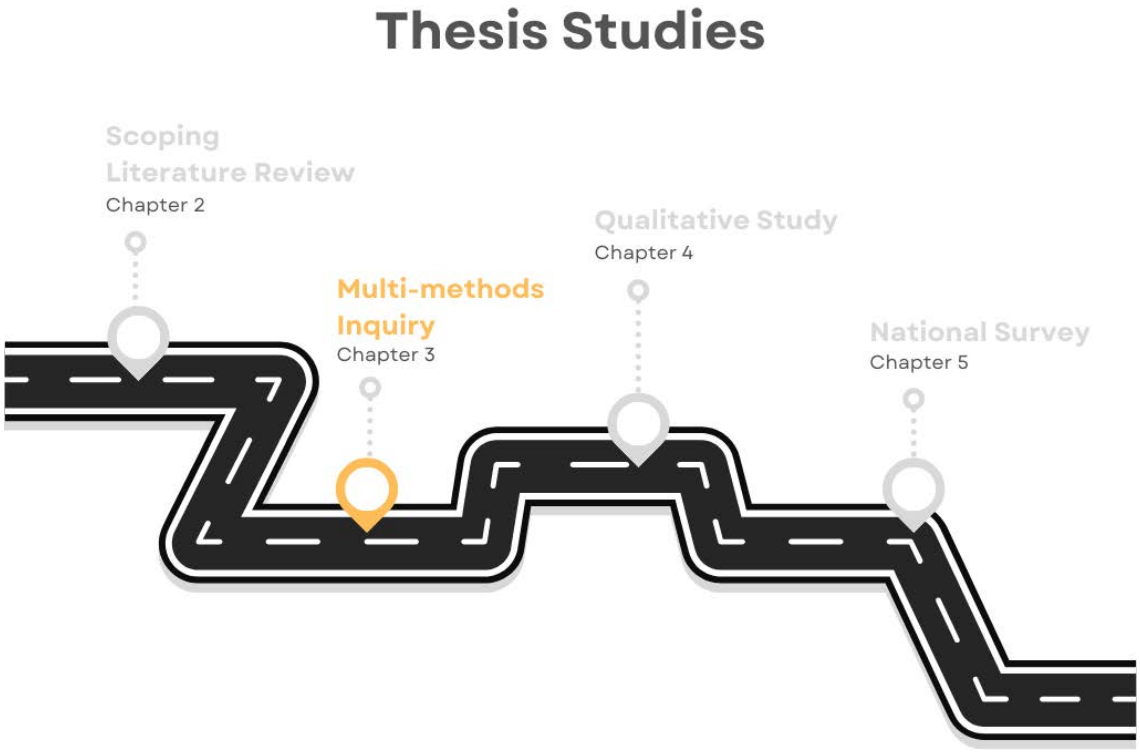

Figure 3.1. Multi-methods Inquiry

3.1.1 Background

The previous study (chapter 2) gathered all the relevant information available in the public domain in relation to the extent of CES claims and legal process for

UK physiotherapists. However, chapter 2 highlighted the lack of information available in relation to comprehensive extent data for CES claims involving physiotherapists, and a lack of information describing the legal process for physiotherapists involved in these claims. Therefore, due to limited data being available through the previous methods, to make recommendations to inform practice, further data was needed to understand the magnitude of the problem and to create meaningful recommendations.

It has previously been reported (chapter 2) that 0.7% of CES claims involve physiotherapists (Leech *et al.*, 2021). However, due to the methods used, it is likely that this number is under reported. Additionally, it remains unclear what guidance and processes are in place to support physiotherapists involved in litigation for CES (Leech *et al.*, 2021).

The aim of the multi-methods inquiry was to further investigate the extent of CES litigation and to further explore the process of medico-legal litigation in relation to physiotherapy in the UK. This study addresses two of the overall objectives of this thesis (section 1.2):

1. To investigate the extent of CES litigation cases amongst UK physiotherapists
2. To understand the legal process for UK physiotherapists involved in CES litigation cases

3.1.2 Aims

The aims of this multi-methods inquiry are:
1. To review the extent of CES litigation in physiotherapy in the UK
2. To review the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK

3.1.3 Methods

The current study built on the results of the scoping review (chapter 2) and employed a variety of additional methods to gain sufficient information to answer the aims above. The current chapter is described as a multi-methods

inquiry as it uses a multi-methods design, formally requesting information via different methods, including:

- Personal communication with the Chartered Society of Physiotherapy (CSP)
- Freedom of information (FOI) requests
- Personal communication with large non-NHS employers
- Personal communication with large organisations who may be involved in the legal process

These methods were used to collect numerical data relating to the number of CES litigation claims in the UK and how many of these claims involved physiotherapists and to gain information clarifying the legal process for physiotherapists involved in these claims.

3.2 Methodology

As stated previously, the overall methodology of the current thesis is mixed methods (chapter 1, section 1.4), which can be defined as 'the combining of qualitative and quantitative methods in a single study or linked series of studies.' (Melvin, 2015).

The current chapter uses a multi-method design. There is often controversy when defining a multi-method study and differentiating this from a mixed method study. Some authors use the terms mixed methods and multi-methods interchangeably and make no distinction between the two and some describe multi-methods involving multiple types of either qualitative or quantitative methods (Anguera *et al.*, 2018). However, for the purposes of the current study the following use of the terms multi-methods has been used; multi-methods refers more broadly to combining two or more methods, with no suggestion that both qualitative and quantitative methods are involved (Melvin, 2015). This approach is most suited to the current research aim, as more than two methods were combined in this study and they include both qualitative and quantitative methods.

Mark and Shotland's (1987) framework was used as it is specific to multi-methods research and gives three models of intended uses for multi-methods research:

- Triangulation
- Bracketing
- Complementary purposes

The model relating to the current research is 'complementary purposes', this model uses different methods to address different ends of the research. Mark and Shotland (1987) describe four types of complementary purposes;

i) Enhancing interpretability: in which one method acts as the principal method to answer research question, and the other method refines the first.

ii) Alternative tasks: two different methods focus on different but related research questions.

iii) Alternative levels of analysis: where different methods examine different types of effects of one variable on another e.g. behavioural and physiological effects.

iv) Assessing the plausibility of threats to validity: a second method is used to assess validity.

The current type of 'complementary purpose' used involves 'alternative tasks', whereby the methods used do not address the same research question but conceptually related questions (Melvin, 2015). In the current study the two questions relate to the extent of CES claims for UK physiotherapists and the process of litigation.

Other frameworks considered include that of Rossman and Wilson (1985) and Greene et al (1989). These frameworks overlap in terms of their models and purposes and can be used for either mixed method or multi-method research. However, Mark and Shotland's (1987) framework was largely intended for multi-method research compared to the others that are described primarily for mixed methods.

3.3 Methods

A multi-methods inquiry was considered the optimal approach as when considering where data would be found to address the research aim, three groups of physiotherapists were identified based on their employment status

i.e., NHS employed, non-NHS employed, or self-employed. As such, different methods were required to obtain data, including freedom of information (FOI) requests and direct communication with relevant stakeholders and organisations. The FOIs were submitted to access the data that could not be found from the previous study methods (chapter 2), in relation to the number of claims relating to CES on the NHS database and those of other large non-NHS employers up to the current year (2020 at the time of writing). These requests were submitted to: NHS Resolution for England, the NHS Central Legal Office for Scotland, 5 health boards in Northern Ireland and 7 health boards in Wales, resulting in a total number of 42 FOIs.

Methods used during the current multi-methods inquiry include:

I. Freedom of Information requests (table 3.2): The FOI requests related to the number of CES claims per year and the healthcare professional(s) cited in the claim. The claims were grouped into four categories relating to type of claim (table 3.1).

II. Personal communication with Chartered Society of Physiotherapy (CSP): To supplement the data from Beswetherick (Beswetherick, 2017, 2019) obtained via the scoping review (chapter 2), the researcher contacted the CSP to seek detail on the information provided to its members regarding the legal process, and via a gatekeeper, requested data from their insurance broker relating to the extent of litigation for self-employed physiotherapists (table 3.2). The gatekeeper provided information on behalf of the CSP and any of its constituent parts e.g. the Medico Legal Association of Chartered Physiotherapists (MLACP). The MLACP are a professional network of the CSP whose members undertake medicolegal work (MLACP, 2018). Data from 2012 – 2021 were collected. Data were requested for the date range 2015-2020 to enable data comparison. However, where more data was provided, this additional data has also been presented (table 3.2).

III. Personal communication with large non-NHS employers, to attain extent data. Large employers were described as those

who employed more than 200 physiotherapists. This was decided as 250 employees is the threshold to be classed as a large company/ organisation according to the Companies Act 2006 (Deloitte., 2019). However, a large physiotherapy employer would not solely employ physiotherapists, they would also employ staff in other roles such as admin, I.T etc. Therefore, the figure used in the current thesis to be described as a large employer was those who employ over 200 physiotherapists. These employers were contacted to obtain data for physiotherapists employed outside of the NHS (table 3.2). Three organisations were identified. These organisations were assured anonymity, as they may have been reluctant to share data without it. Therefore, a pragmatic decision was made to protect their anonymity because of potential commercial sensitivity and the attempt to maximise amount of data from diverse sources outside the NHS. For the first employer, a FOI request needed to be submitted. The request submitted was identical to those sent to the NHS health boards (method I). The second organisation provided extent data following personal correspondence. The third organisation did not respond to any correspondence. Therefore, to ensure anonymity, data were aggregated for the two non-NHS organisations (table 3.2).

IV. Personal communication with large organisations (such as regulatory bodies for physiotherapists) who may be involved in the legal process, for information relating to the process.

Table 3.1 Definitions of Types of Claim, from NHS FOI requests

Type of Claim	Definition
Open claim	Claims opened by litigation management department of local NHS trust
Closed claim	Conclusion made and claim closed
Potential claim	A claim that is under review but is not confirmed and may not progress to a clinical negligence claim
Confirmed claim	Claims that have all required information and have been confirmed as an active clinical negligence claim

3.4 Results

3.4.1 Extent of CES litigation in physiotherapy in the UK

To obtain extent data of CES litigation for staff employed in the NHS, 42 FOI requests were submitted across 14 NHS organisations (7 health boards in Wales, 5 health boards in Northern Ireland, NHS Resolution for England and the Central Legal Office of Scotland) (Table 3.2).

It was unclear at the outset of this study, that each of the devolved administrations within the UK had its own separate process for submitting FOI requests. This information was found via personal communication following contact with NHS Resolution. A recent request was made to the Information Commissioner's Office (ICO) for email addresses through which to send FOI requests to all NHS trusts in the UK, however the ICO did not hold this information (Information Commissioner's Office, 2021). For England, requests for data were sent to NHS Resolution who had a transparent process for submitting these requests. Obtaining information about the organisation to submit FOI requests to for Northern Ireland, Scotland and Wales was much less clear and it was difficult to find this information in the public domain. Additionally, Wales and Northern Ireland required a separate FOI request to each of the individual health boards.

For extent data of CES litigation for staff employed outside the NHS, 5 organisations were identified who were suspected to meet the eligibility criteria for a large non-NHS employer of physiotherapists. Following contact with these organisations, one stated they do not directly employ the physiotherapy practices that are recognised with them and therefore did not have any figures for the total numbers of physiotherapists so could not be included. Another of the organisations confirmed they were in fact an NHS-commissioned service and therefore do not employ any non-NHS staff members, including MSK physiotherapists. The other three organisations met the large non-NHS employer criteria and a request for data was submitted to these organisations. One of these did not respond to the data request. Data were obtained from two non-NHS organisations. These data were aggregated to ensure anonymity

(table 3.2). Extent data of CES litigation for self-employed physiotherapists was obtained via personal communication with the CSP (table 3.2).

Table 3.2 Number of CES claims retrieved from FOI requests and personal communication *(continued on next page)*

Employment category	Location submitted	Number of CES claims per year
NHS	NHS England	2015/2016: N=113 2016/2017: N=110 2017/2018: N=65 2018/2019: N=26 2019/2020: N=19
NHS England total 2015-2020 N=333 (Population 56.3 million. ONS)		
NHS	Scotland	2015/2016: N=<5 2016/2017: N=<5 2017/2018: N=<5 2018/2019: N=6 2019/2020: N=<5
NHS Scotland total 2015 – 2020 N=10[a] (Population 5.5 million. ONS) [a] where < is indicated, these were calculated as N= 1		
NHS	Wales	2015/2016: N=4[b] 2016/2017: N=8[b] 2017/2018: N=6[b] 2018/2019: N=4[b] 2019/2020: N=7[b]
NHS Wales total 2015-2020 N=29[b] (Population 3.2 million. ONS) [b] includes aggregated data for 7 health boards; where data was recorded <5, these were calculated as N=1		
NHS	Northern Ireland	2015/2016: N=5[c] 2016/2017: N=4[c] 2017/2018: N=2[c] 2018/2019: N=8[c] 2019/2020: N=4[c]
NHS Northern Ireland total 2015-2020 N=23[c] (Population 1.9 million. ONS) [c] includes aggregated data for 5 health boards, where data was recorded <10, these were calculated as N=1		
Non-NHS	2 non-NHS large employers of physiotherapists	2012–2021: N=15[d]
Non-NHS large employer total 2012–2021 N=15 [d] Data from 2 Non-NHS employers were aggregated to ensure anonymity of the data		

Self Employed		2012/2013: N=1 2013/2014: N=4 2014/2015: N=6 2015/2016: N=10 2016/2017: N=6 2017/2018: N=1 2018/2019: N=2 2019/2020: N=6
Self-employed physiotherapists 2012–2020 N=36		
Grand total N=446		

A total of 446 CES claims were found across the three categories (NHS employed, non-NHS employed and self-employed). Of the 446 claims, it was not possible to state how many of these claims involved physiotherapists for NHS-employed and non-NHS employed staff, as the data provided by these employers related to CES claims involving all healthcare professions. In these organisations, claims related to physiotherapy were either not recorded or could not be released for anonymity reasons. However, the self-employed group data relates solely to physiotherapy CES claims, of which there were 36 between 2012-2020.

Figure 3.2 shows there were a total of 395 NHS CES claims between 2015-2020. This data includes claims for CES relating to all healthcare professionals and not solely to physiotherapists. The graph shows a peak number of claims between 2015-2017. These figures indicate a reduction in the number of CES claims over recent years which appears contradictory to information presented earlier, which described CES litigation increasing (section 1.1.5). This is later discussed in more detail (section 3.5.1).

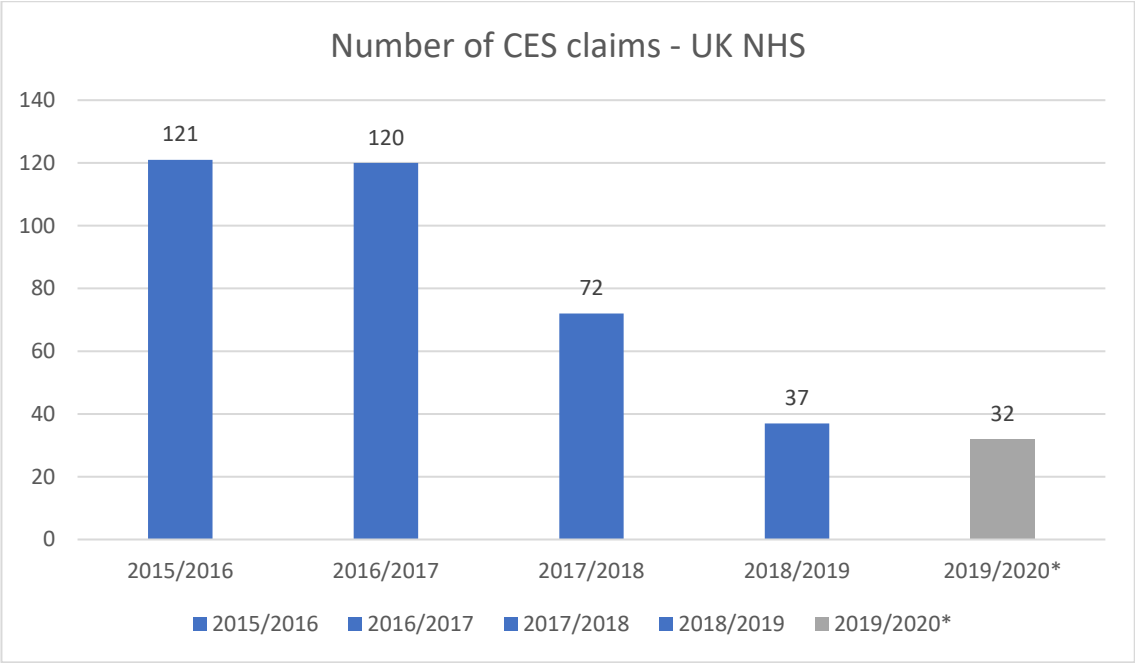

Figure 3.2 Number of CES claims per year for all healthcare professionals in UK NHS (England, NI, Scotland, Wales)

**Data collected during 2020 therefore, some data may be incomplete depending on reporting periods*

The number of CES claims per year that involved self-employed physiotherapists is presented in Figure 3.3. This data shows an increasing number of claims up to 2015/2016 where the number of claims peak. Claims then begin to decrease, before starting to rise again in 2018/2019.

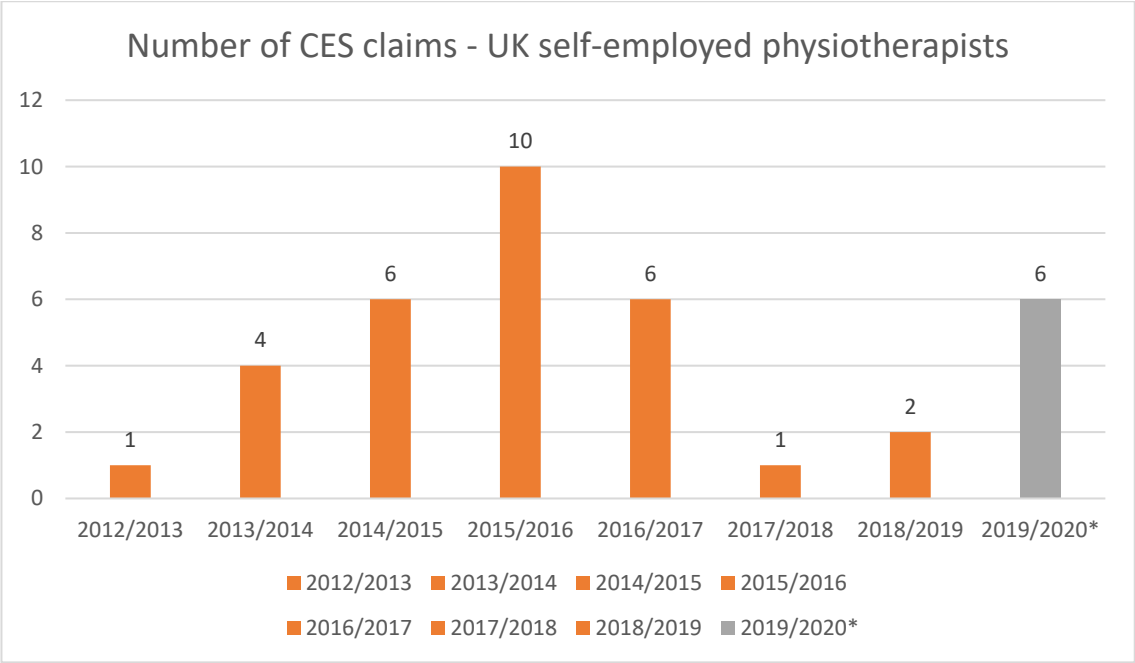

Figure 3.3 Number of CES claims per year for UK self-employed physiotherapists in UK (England, NI, Scotland, Wales)

**Data collected during 2020 therefore, incomplete data presented for this time period*

For the non-NHS employed group, raw data provided by one of the employers was as a total number for 2012–2021, thus the aggregated data (N=15) for this group could not be displayed at yearly time intervals (table 3.2).

3.4.2 Process of CES litigation in relation to physiotherapy in the UK

Through personal communication with the CSP (method II), it was clarified that the CSP are only involved in providing support for litigation cases for self-employed physiotherapists. For employed physiotherapists (NHS and non-NHS), their employers are vicariously liable for CES claims by their employees in the course of their employment. The CSP therefore have no duty to be involved in the legal cases of those physiotherapists who are employed. Currently, this is not stated anywhere on the CSP website or any other domain. Outside of the current methods involving specific communication requesting this information, this remains unclear to physiotherapists. Please see figure 3.4 showing the various pathways for physiotherapists involved in legal claims based on their employment.

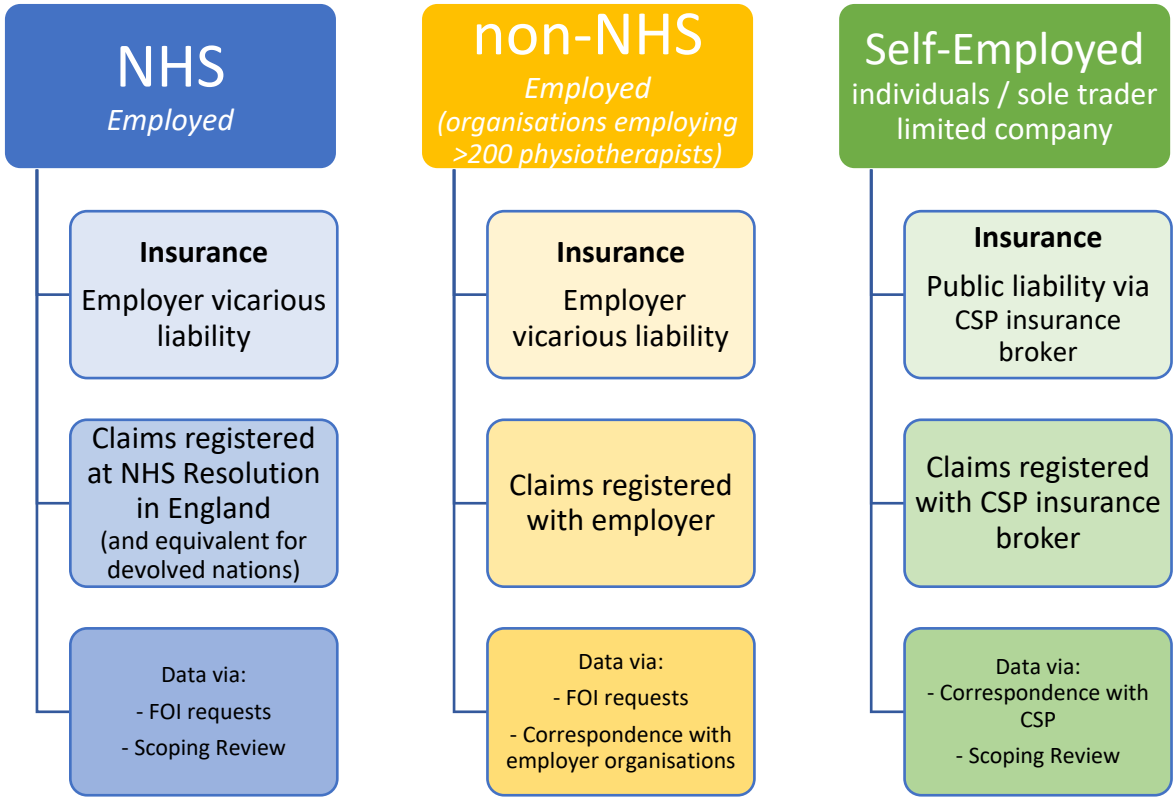

Figure 3.4 Pathway for litigation cases in physiotherapy and sources of data

Information provided via a CSP gatekeeper (method II), described the litigation process followed by the solicitor firm used by the CSP. The information highlights three elements that the claimant must prove for negligence in healthcare that:

- their healthcare practitioner owed a duty of care
- their healthcare practitioner was in breach of the duty of care
- as a result of this breach, an injury or loss has been suffered.

Each of these three elements must be demonstrated for the claim to be successful. Duty of care means that the healthcare practitioner must provide "reasonable care". This is based on medical judgement whereby if a healthcare practitioner is treating their patients in accordance with an approved medical practice, they cannot be found negligent. This is known as the Bolam test (Carson and Bull, 2003). Importantly, the healthcare practitioner must follow a reasonable and reputable body of medical opinion, and the court must be

satisfied that the medical body used by the practitioner can prove that their decisions are reasonable. Furthermore, the healthcare practitioner must ensure that their patient is aware of any material risk to ensure they obtain informed consent prior to treatment. If the claimant is able fulfil these conditions, then a pre-action protocol follows. The protocol describes the conduct that prospective parties would typically be expected to follow before the start of any legal proceedings. It allows the creation of a process and timetable for the exchange of any relevant information to the dispute. It also allows for pre-action negotiations between the claimant and the healthcare practitioner in order to avoid unnecessary court proceedings. If no pre-action resolution can be reached, court proceedings could be issued against the healthcare practitioner. Consequently, if the claimants' solicitor considers that there is a case to answer by the healthcare practitioner, they are required to serve a letter of claim based on facts, listing their allegations of negligence. The letter should include a description of the claimant's injuries, current condition, and prognosis. Furthermore, it should describe the financial losses suffered by the claimant including the disclosure of any expert evidence.

The letter of claim should be acknowledged within 14 days by the healthcare practitioner, who then has four months to provide a detailed response to the allegations in the form of a letter of response. This should contain reasoned answers to the allegations including any admissions or denials, with reference to any supportive expert evidence, if so obtained.

The purpose of the protocol is to encourage openness, transparency and early communications. This is to discourage the prolonged pursuit of unmeritorious claims or defences.

Following receipt of the letter of response, the claimant may wish to enter into further communications/ negotiations with the healthcare practitioner or advance court proceedings. The claimant may also consider that there is no case to answer. Court proceedings should be a last resort.

Claims can be resolved in multiple ways. Settlement offers can be made informally; round-table meetings can be convened between the councils for the

defendant and the prosecution; mediation can be organised with solicitors and an impartial mediator; or cases may go to trial in court (NHS Resolution, 2020c).

Physiotherapists may be involved in a claims process as a witness of fact. This is where the treating physiotherapist comments on their treatment records and their recollection of the facts as they recall them (MLACP, 2021). It is important to note that no training is required by the physiotherapist to be a witness of fact and they cannot decline the request to be involved (MLACP, 2018).

Furthermore, physiotherapists can be involved in a litigation case as an expert witness, who is independent of the patient. Physiotherapists may choose to take up work as an expert witness for the prosecution or defence if they have expertise in certain areas of physiotherapy. An expert witness can accept or decline a request to provide a report for the case. Expert witnesses must be practising their profession, which can be in any context, including through direct patient care, education, or research. They are required to have additional training for clinical negligence report writing and in order to understand their role and responsibilities as an expert witness (MLACP, 2018).

The claim process consists of two phases: the pre-claim phase and the claim phase. Figure 3.5 summarises the process of the different phases of a claim that an NHS employed healthcare professional can be involved in. In the pre-claim phase, the legal team for the claimant contacts the healthcare professional's employer to undertake preliminary checks. This includes considering if there was a duty of care and whether there was a breach of the duty of care (figure 3.5). If this is not found, then the case does not proceed. It is during this phase that many claims are dropped. During this phase, the healthcare professional involved may not have been notified of the potential claim. Where there appears to be grounds for a case to proceed, the claim phase begins. When a letter of claim is received, this may be the first time the healthcare professional becomes aware of the claim.

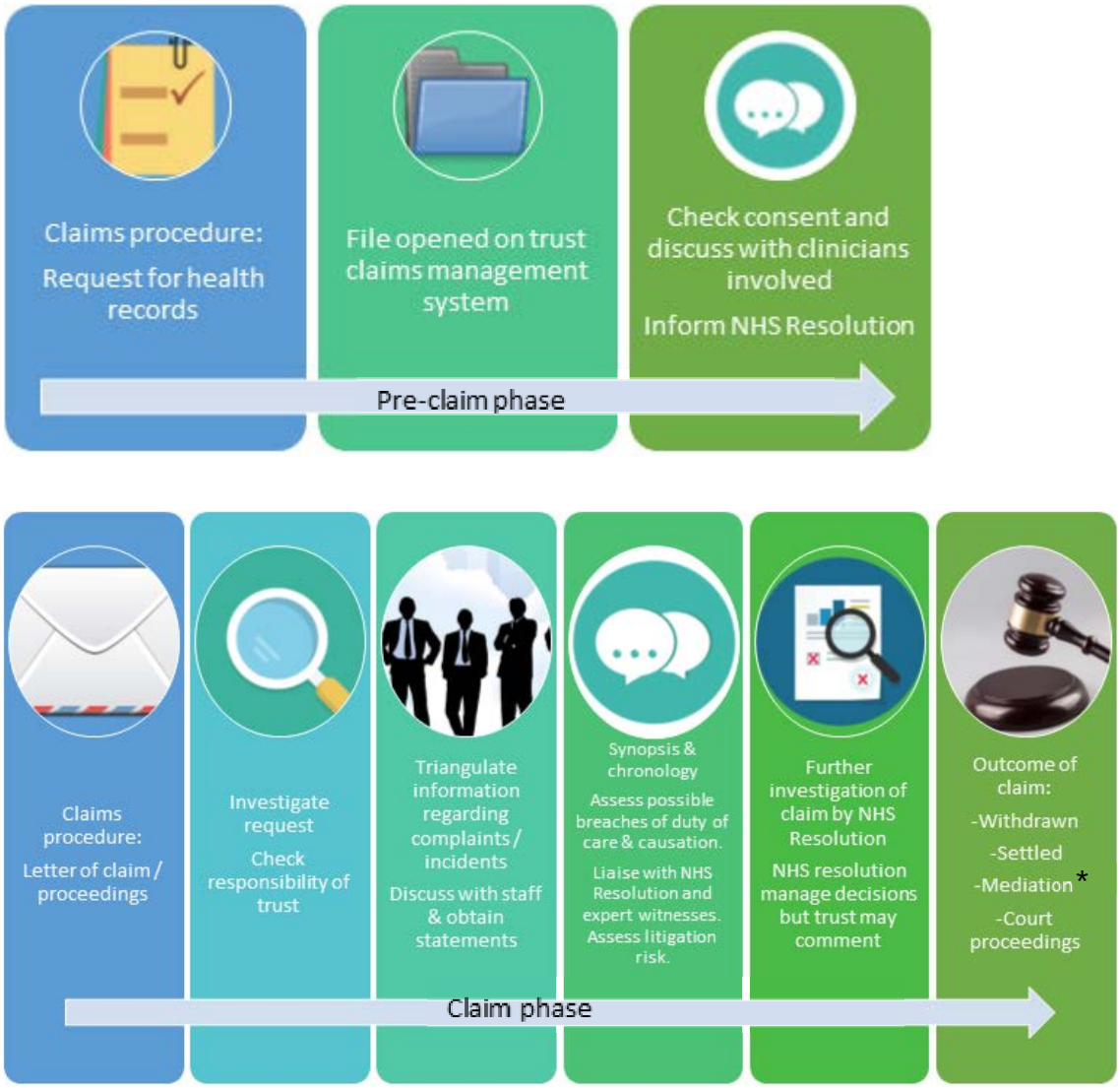

Figure 3.5 NHS Process for phases of litigation claim (adapted from Machin et al., 2021) ** the NHS process describes pre-action negotiations as mediation*

Through method IV (personal communication with large organisations who may be involved in the legal process) several organisations were contacted for information on the litigation process. One organisation did not provide any response to the enquiry despite reminder emails being sent. Another organisation could not provide any information relating to litigation due to confidentiality. The National Audit Office were unable to assist with our enquiry and recommended contacting the NHS Resolution.

The GMC advised contacting the HCPC and gave information on their 6-month process for concerns about doctors. The GMC's process for doctors explains that when they receive a complaint or concern about a doctor they will only

investigate when there are issues raised about a doctor's ability to practise safely or there is a threat to public confidence in the profession. The guide explains what happens if they open an investigation to look into a concern, how they investigate and what this might mean for doctors.

The HCPC's role is to protect the public, as they are the regulator of health and care professions in the UK (HCPC, 2018c). The HCPC provided a 'how to raise a concern' document which provides information on how members of the public can raise a concern about health professionals registered with the HCPC. From further contact with the HCPC, they confirmed via email that they will only be involved if they have been contacted if the registrant's fitness to practise may be impaired by reason of e.g. alleged misconduct or lack of competence. Therefore, this confirms that they do not get involved in litigation support and they would not typically be involved in a CES clinical negligence case, unless it also involved a competence or misconduct complaint relating to the physiotherapists fitness to continue to practice. This remains unclear to physiotherapists seeking this information outside of the current thesis methods and physiotherapists who become involved in a CES litigation claim may contact the HCPC assuming they provide some support or may be involved in the legal process.

3.5 Discussion

This study investigated the extent of CES litigation claims related to physiotherapists in the UK and the legal process for physiotherapists involved in CES claims. The findings from aim 1, which investigated the extent of CES litigation in physiotherapy in the UK will be discussed first, followed by discussion of aim 2 which investigated the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK.

3.5.1 Extent of CES claims

Combining the data from the scoping literature review (chapter 2), with that from the multiple methods employed in this chapter, the total number of CES claims recorded in the UK between 2009-2021 was 2496. Of these, 51 CES claims could be specifically attributed to physiotherapy (15 from the scoping literature review (chapter 2), 36 from methods I-IV). As data obtained in the current study

is subsequent to that collected in the previous study (chapter 2, scoping review) in terms of claim dates, none of these 51 claims could have been double counted.

With regards to claims from one of the large non-NHS employers, it was confirmed that some of these claims involved physiotherapists. However, as these figures were aggregated with the second large non-NHS employer's data (for anonymity), who did not specify which health professionals were involved, these were unable to be counted as part of the physiotherapy claims, therefore it is guaranteed that the claims data attributed to physiotherapists, is underestimated.

Data for the number of CES claims per year for all healthcare professionals in the NHS showed a peak total of 121 claims in 2015/2016 followed by a decrease in claims over the following years. Self-employed UK physiotherapy claims also mirrored this, with a peak number of claims in 2015/2016 followed by a decline in claims. The number of claims could be impacted by many factors such as the number of cases of the condition per year. However, the incidence of CES is likely to remain the same. Furthermore, NHS Resolution stated in 2018 that the number of claims had dropped dramatically due to the use of mediation, however the cost of pay outs related to successful claims was still rising (NHS Resolution, 2018), with the NHS paying out over £1.63 billion in damages to claimants in 2017/18, compared to £1.08 billion in 2016/17 (NHS Resolution, 2018). Additionally, as mentioned previously in section 1.1.4, the FCP role only emerged in recent years, with implementation released in 2018 (The Chartered Society of Physiotherapy, 2018a). Therefore, if these roles put physiotherapists at increased risk of being involved in litigation, there would be a time lag between these potential claims occurring and them being processed and recorded, which could mean that CES claims increase in the years following those presented in the current data.

3.5.2 Challenges to obtaining CES litigation data

Obtaining data to ascertain the extent of CES litigation in relation to physiotherapy was complex and lengthy. Furthermore, the claims data obtained for this study was not consistently reported. This was largely due to varying time

periods in which the claims were recorded. In addition, how CES claims were recorded varied across the UK and were also inconsistently recorded within the NHS and other institutions.

Data obtained from the NHS was via FOI requests. When submitting FOI requests to the NHS, several issues became apparent, including the way that claims are categorised and recorded (sections 3.5.2.1 and 3.5.2.2), and the varying terminology used across the UK (section3.5.2.3). The main issue was the overall fragmentation and subsequent opacity of the system leading to the necessity of submitting 42 separate FOI requests. It was unclear that each of the devolved nations had its own separate process for submitting FOI requests. Requests for data were initially sent to NHS Resolution, assuming that this organisation would have access to data from the whole of the UK, however they only held data for England. This information was revealed via personal communication following contact with NHS Resolution. Although the process for where and how to submit a request for information was clear for NHS Resolution; finding where to submit FOI requests to for Northern Ireland, Scotland and Wales was much less clear and it was difficult to find this information in the public domain. The process for submitting FOI requests was unclear and inconsistent across the devolved UK administrations, making it difficult to retrieve data. Therefore, having an equivalent body to NHS Resolution for the devolved UK administrations is recommended to facilitate the recording of claims across the UK. It is interesting to note that on the Information Commissioners website for the UK, titled ‘How to access information from a public body’, there is no suggestion that differing processes may need to be employed for FOI requests across the devolved UK administrations (Information Commissioner’s Office, 2021).

3.5.2.1 Recording of CES claims

NHS data for England was retrieved via FOI requests to NHS Resolution. Due to the way claims were recorded in the NHS Resolution database, CES cases were not able to be specifically identified. Litigation cases were categorised against a pre-defined cause, injury or speciality code, of which CES was not one (NHS Resolution, 2020a). Therefore, CES was not recorded as the nature of the claim, instead CES was included within a broad category, such as ‘nerve

damage', thus making it unclear how many claims were actually CES related (Thavarajah, Podger and Hobbs, 2013; Leech *et al.*, 2021). Considering the extent and large costs associated with CES litigation it is surprising that there is no specific CES coding within the NHS Resolution database.

Consequently, to identify CES cases in the NHS in England, a review of each individual litigation case would be required to determine if it was a CES case. As the cost to do this would exceed the cost compliance limit (£450) for FOI requests, the FOI request can be rejected on these grounds (NHS Resolution, 2020d). In this study, the initial FOI request to NHS Resolution for CES data was rejected due to this. However, as part of an ongoing review of NHS claims data, NHS Resolution subsequently undertook a 'deep dive' of CES claims data, which meant that a later FOI request submitted was successful. However, in the absence of the NHS Resolution deep dive review, this data would not have been available. This potentially has serious implications for the NHS. Healthcare professionals would not have the skills or time to navigate such an opaque and fragmented system, this was only possible as a full time PhD student. Therefore, if they are unable to access this data, they are unable to identify what the issues are and the extent of the problem. Moreover, they are unable to learn from litigation claims and where they can make a difference to improve patient care. Claims regarding medical negligence are an important source of information regarding causes of harm to patients and have the ability to provided valuable learning from litigation (Vincent *et al.*, 2006).Therefore, it is essential that this data is more readily available. As such it is recommended that the recording of claims within the NHS Resolution database is reviewed as a matter of urgency.

3.5.2.2 Recording of the healthcare professional

The purpose of the current chapter was to gain a more complete picture of the extent of CES claims involving physiotherapists and the legal process, and how this is managed. The results of the current chapter built on those from the scoping review (chapter 2), through employing a variety of additional methods. The scoping review found 15 CES claims recorded against physiotherapists between 2009 and 2021, which is 0.7% of all CES claims recorded in the UK.

The additional methods employed in the current chapter were successful in discovering more cases against physiotherapists (N=36).

A challenge to understanding the extent of CES litigation in the UK in relation to physiotherapy, was that the healthcare professional the claim concerned with, was not recorded by most organisations. Requests for this information were rejected by most NHS and non-NHS organisations due to this. Therefore, it was not possible to provide exact numbers or an analysis of the specific CES claims that physiotherapists were involved in. The only data collected which confirms physiotherapists involvement in the CES claims was that of the self-employed group, provided by the CSP (the professional body for physiotherapists) and as such, only this data is specifically attributed to physiotherapists. Consequently, the data presented in this study is likely to be a significant underestimation of the extent of physiotherapists involved in CES litigation claims, which is a limitation of the study. Although only 51 claims could be attributed to physiotherapists (from the scoping review, chapter 2 and current multi-methods inquiry, chapter 3), data from the two large non-NHS employers were aggregated to ensure anonymity. One of these large employers provided data confirming physiotherapists were involved in some of the claims. However, this could not be counted towards the total figure of claims involving physiotherapists, as the other large employer did not provide information on the health professionals involved in the claims therefore the data could not be aggregated. This confirms that the current figure (N=51) related to the number of physiotherapists involved in CES claims is underestimated. Not understanding the healthcare professionals involved in these cases limits the effectiveness of any initiatives to address this issue. Therefore, it is recommended that the primary healthcare professional(s) involved in litigation cases are recorded within the claims database.

3.5.2.3 Terminology of records

The current study has clarified where to submit FOI's for the NHS and that this is different across the devolved nations of the UK. Initially it was thought all requests for the NHS should be submitted through NHS Resolution, but this only covers England. Consequently, initial requests were sent using the terminology from NHS Resolution containing the term 'incident description field'

in relation to their database. However, this term is not consistently used across all databases and therefore needed clarification in some cases. Initial FOIs requested the number of claims in the previous 12-month period as it was unclear how much data was acceptable to request, consequently a further FOI was submitted for data from 2015 onwards. Furthermore, terminology for claims categories (Table 4.1) was uncovered throughout the process of the current study, therefore multiple FOI requests were submitted to the same health boards to ensure data collection and interpretation was consistent. More in depth consideration and deliberation is needed going forward in relation to the finer details of the information requests prior to submission to ensure requests are accurate. See Appendix 3 for examples of FOI requests submitted.

Claims are categorised into four categories by the NHS Resolution and health boards of the devolved administrations, based on the progress of the claim (see Table 4.1 for definitions). However, not all health boards report data in this way; data from the records retrieved seldom state if claims are open, closed, potential or confirmed. This means it is unclear if all claims are being accounted for. Consequently, the extent of claims may be higher if, for example, all claims reported in a study are only referring to claims that are closed as those that remain open would not be accounted for, this affects the accuracy of CES claims extent data reporting (Leech *et al.*, 2021).

A difficulty in aggregating the data to present an overview of CES claims for the UK included, the period the claims relate to, which were different across the UK, with some running in line with the calendar year (January to December), and others in line with the fiscal year (April to March). Furthermore, some health boards/ organisations gave data broken down into years and others aggregated their data over non-standardised time periods, meaning data could not be compared across data sets.

For NHS health boards there were also inconsistencies in the way the number of CES claims were displayed, as some health boards did not disclose low number of CES claims to ensure anonymity, whereas others did. Some health boards used a threshold of <5 when displaying low number of claims and others used a <10 threshold. For the purposes of this study, where undisclosed figures

using the thresholds <5 or <10 were provided, only 1 CES claim was counted and presented in the results to ensure the number of claims were not overestimated. This methodological approach ensured that data presented was conservative and was not exaggerated. As such, CES claims data are likely be higher than the data recorded in this current study.

3.5.3 Process of medico-legal litigation

From the information provided via a CSP gatekeeper (method II), the following infographic was created as an output summarising the process of clinical negligence claims for healthcare professionals in the UK, including those relating to CES litigation and physiotherapy (figure 3.6). This infographic was created as an aide memoir for physiotherapists and stakeholders, included in a published journal article (Yeowell, Leech, Greenhalgh, *et al.*, 2022).

Figure 3.6 Litigation process

In the UK, the professional body and trade union for physiotherapy is the CSP, and the regulatory body is the HCPC. Both of these organisations have a statutory responsibility to provide legal advice in relation to litigation claims and the CSP highlight that one the most valuable aspects of being a member is legal advice (The Chartered Society of Physiotherapy, 2019b). However, neither provide their registrants with any comprehensive resources to guide them on these legalities. Whilst the HCPC investigates professional conduct complaints against physiotherapists, they are generally not involved in litigation and as

such do not provide guidance or support for the litigation process for physiotherapists. However, it is not clear that the HCPC do not deal with medico-legal claims. Furthermore, it is unclear that the CSP are only involved in supporting self-employed physiotherapists through the litigation process, and do not support NHS employed and non-NHS employed physiotherapists, who instead, are supported by their employer through vicarious liability. This lack of transparency may cause frustration and confusion for the physiotherapist when seeking initial support, who may assume that it is their union/ professional and/ or regulatory body who provides such support. Physiotherapists who are notified of being involved in a claim are likely to be stressed and anxious about this. Additionally, this lack of clarity around entitlement to support, could cause increased stress and anxiety to the healthcare professional (Robertson and Thomson, 2014). Therefore, it is recommended that the CSP and HCPC should clearly communicate to physiotherapists, the boundaries of their responsibilities and what advice and support they are able to provide. Furthermore, they should provide signposting to appropriate places where physiotherapists can find appropriate support with the legal process.

There seems to be a clearer legal process and support for other healthcare professions such as doctors and surgeons. For example, organisations such as the General Medical Council (independent regulator for doctors in the UK) have information on their website regarding their 6-month process for concerns about doctors and their investigation process following a complaint (General Medical Council, 2021) see appendix 5. Therefore, it is recommended that advice and support structures regarding litigation for physiotherapists build on best practice examples provided for other health professionals, to make them most suitable and of the highest standards. However, it is currently unknown where is most appropriate for this information to be stored and who should be responsible for overseeing this for physiotherapists. This is something that will be explored further (chapters 4 and 5).

3.6 Chapter conclusion

Throughout the current study (chapter 3) it became clear that it is difficult to establish the true extent of CES claims relating to UK physiotherapists under

the current reporting methods. The extent of CES litigation is suspected to be much higher than the data reported during the current study due to the recording of CES claims.

During the current multi-methods inquiry, it became apparent how unclear it may be for physiotherapists who are in receipt of a CES claim or lawsuit as there is no clear pathway for physiotherapists. There is no clearly articulated information describing the process and support available specifically for physiotherapists, and this differs depending on who the physiotherapist is employed by.

This study has investigated the extent of CES litigation cases amongst UK physiotherapists and the legal process for UK physiotherapists involved in CES litigation cases. Chapters 4 and 5 will build on the current and previous studies (chapters 2 and 3). This will be achieved through in-depth interviews with physiotherapists with experience of CES litigation claims to explore their experiences (chapter 4) and will be further validated through an online national survey to the wider UK physiotherapy profession (chapter 5).

3.7 Recommendations

- For NHS databases CES needs to have its own specific category for accurately recording claims. Furthermore, the primary healthcare professional(s) cited in the litigation case should also be recorded, in order to facilitate greater understanding of the professions involved in CES claims. For all categories (NHS, non-NHS and self-employed) claims data should specify if their data relate to a calendar year, fiscal year or other and what they count as a claim that is, do they include open/ closed and potential/ confirmed. This would provide more transparent data and allow for accurate data analysis in future.
- The process for submitting FOI requests across the UK needs to be made clearer and more transparent. Having an equivalent body to NHS Resolution, for the devolved UK administrations is recommended.
- Organisations, such as the CSP could provide clearer information on the pathway for physiotherapists in receipt of a litigation case and the

support available. A single repository of clear information regarding the legal process for physiotherapists involved in claims is advised. It should be made clear that there is support for physiotherapists regardless of their employer, however where this support comes from differs based on their employment (NHS employed, non-NHS employed, self-employed).

- Although the HCPC is not involved in the litigation process for physiotherapists, they should make this much clearer. It is anticipated that physiotherapists would assume the professional regulator would be involved in the litigation process and so the HCPC should anticipate that they will get more enquiries regarding this as litigation increases.

4. Qualitative study

4.1 Introduction

The previous chapter discussed the multi-methods inquiry, conducted to gather comprehensive data relating to the extent of CES claims involving UK physiotherapists and the legal process for physiotherapists involved in these claims. This chapter is related to the third research study of this thesis, the qualitative study, see figure 4.1. The first part of this chapter will address the background and aims of the current study, including how this builds on the previous findings. The methods section describes the methods and the theoretical perspective used in the current study. The results section includes anonymised verbatim quotes in relation to each of the themes described. The chapter will end with a discussion and chapter conclusion.

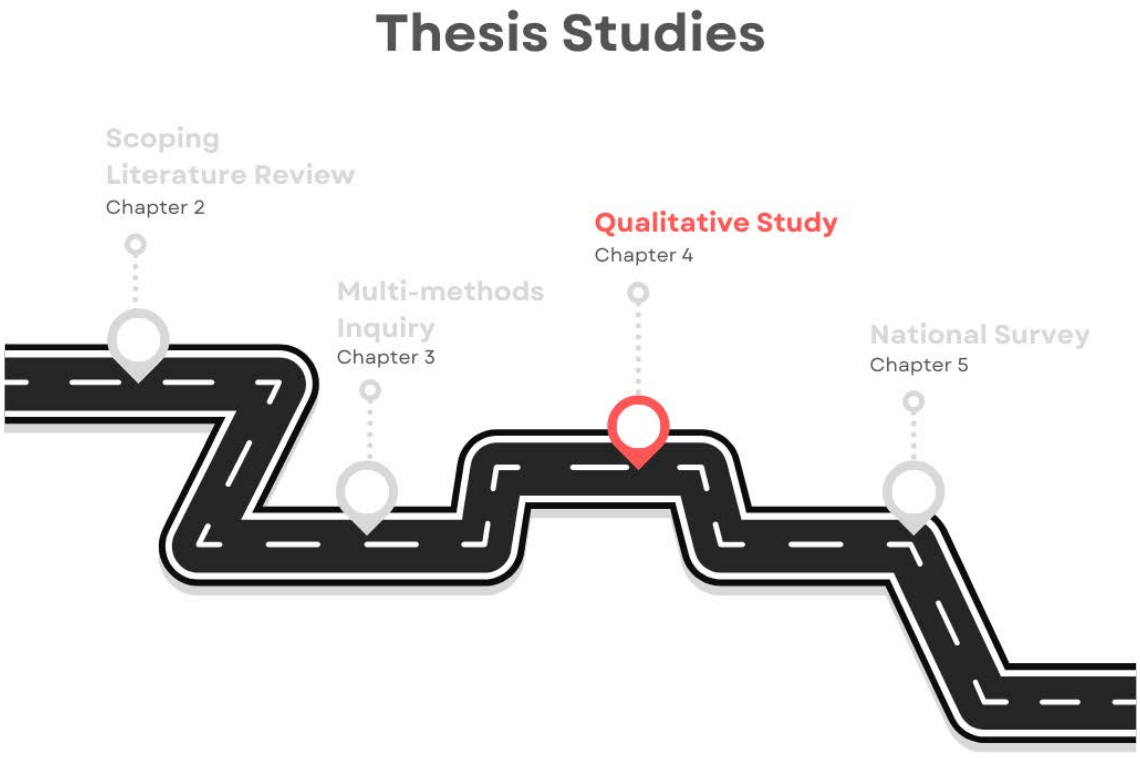

Figure 4.1 Qualitative study

4.1.1 Background

Chapters 2 (scoping literature review) and 3 (multi-methods inquiry) reported a total of 2496 CES claims in the UK between 2009-2021. Of these, 51 were

attributed to physiotherapists, however, due to the limitations in the systems for the recording and reporting of CES claims data, as discussed previously (chapter 3), it is suggested that these figures are underestimated (Leech *et al.*, 2021,Yeowell *et al.*, 2022). Previous chapters of this thesis also found limited information available to physiotherapists describing the associated legal process and the support available to them, in the event they become involved in litigation (Leech *et al.*, 2021; Yeowell, Leech, Greenhalgh, *et al.*, 2022). Furthermore, there is a paucity of literature, exploring living through litigation from a physiotherapist's perspective, including whether this process affected their health and wellbeing and personal or professional lives. By understanding these experiences, positive changes can be made to ensure physiotherapists have appropriate support.

Most clinicians working in a healthcare setting aim to improve the lives of their patients and provide the best quality care, however when things go wrong, this can result in patient harm. In this instance, it is important to consider the mental, physical and psychological impact on the clinician involved as well as supporting the patient and their family (Second Victim Support, accessed 16 December 2021). Litigation has been described as a major stressor for healthcare professionals, and a post-traumatic-type stress reaction has been described for those individuals involved in a claim. In the US this is often described as "medical malpractice stress syndrome" (MMSS) (Hulson, 2018).

In healthcare professions, such as midwifery, litigation has caused loss of confidence, self-doubt and absence from work and some individuals contemplate changing jobs to work in areas of clinical practice that are considered to have lower risk of litigation or to leave their profession all together (Robertson & Thomson, 2016). Similarly, in nursing many strong emotions (see figure 4.2) and physical symptoms (see figure 4.3) have been described of second victims (a clinician who has experienced personal or professional impact related to a patient safety incident) following the clinical event, which can last weeks, months or longer. Furthermore, many feel personally responsible for their patients outcome, and if left unaddressed this can cause personal and professional consequences for the clinician and even cause them to change or end their career (Scott, 2015).

Figure 4.2 Emotions of a second victim – data taken from (Scott, 2015)

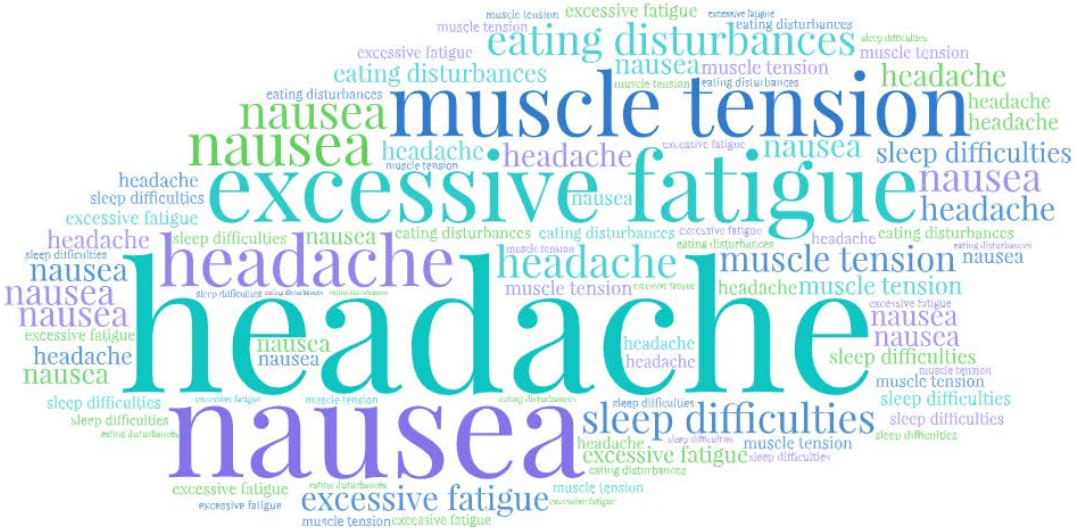

Figure 4.3 Physical symptoms of a second victim – data taken from (Scott, 2015)

Defensive medicine is the term often used to describe the excessively precautious management of patients, which can include over investigation, unnecessary appointments and interventions. This is often counterintuitive, as the care becomes less patient focused and more based on lowering the risk of litigation (Finucane *et al.*, 2022). Defensive practice has been observed in medics, whereby there is a deviation from what may be considered best practice including ordering investigations to reduce the risk of litigation (Ortashi et al., 2013). It is argued that this is not advantageous to the patient or clinician,

as it not only impacts costs in healthcare, due to the costs of unnecessary appointments, investigations and treatments, but also the quality of the healthcare system; furthermore, patients could be exposed to unnecessary and often invasive procedures (Ortashi et al., 2013). To reduce harm and prevent similar claims from reoccurring in the future, the NHS needs to learn from things that go wrong (Pro-vide Law, 2016). Through learning from litigation claims, patient safety can be improved (Machin et al., 2021).

Physiotherapists are involved in litigation claims (Leech *et al.*, 2021; Yeowell, Leech, Greenhalgh, *et al.*, 2022). There is a reported lack of in-depth qualitative investigation regarding litigation and its effect on clinicians' wellbeing (Paling and Hebron, 2021). Consequently, the impact of litigation on physiotherapists both personally, in terms of their health and wellbeing, and professionally, remains unknown.

4.1.2 Aims and objectives

The aim of this qualitative study was to understand physiotherapists experiences and perceptions of CES litigation.

The objectives of the qualitative study were:

1. To understand physiotherapists experiences of CES litigation cases and the impact of this on their personal and professional lives
2. To understand the support needs of physiotherapists
3. To investigate the potential training needs for physiotherapists in relation to CES

4.1.3 Methodology

The overarching methodology for the current thesis was mixed methods. The current study investigated physiotherapists' experiences of CES litigation and identified their support and training needs (overall thesis objectives 3-5 - section 1.2). A qualitative study was undertaken to address these objectives, as this allowed collection of in-depth data based on the experiences of physiotherapists and other stakeholders in relation to their CES litigation experiences.

Although this study's initial focus was on physiotherapists with CES litigation experiences, an additional participant group 'physiotherapists at risk of CES litigation' was identified. This participant group first emerged during early stakeholder meetings where physiotherapists expressed their interest to be involved in the research despite not being involved in a claim. They felt they may be able to contribute some additional insight to this topic area for a number of reasons:

- they had been involved in litigation cases for other conditions.
- they had been involved in CES patient journeys that could have resulted in them being involved in a litigation claim.
- they are the first point of contact for potential CES patients because of the nature of their role.
- or they knew of colleagues who had been involved in this type of litigation, which made them fear that they could also become involved in a claim in the future.

Following critical reflection and through discussion with the supervisory team it became apparent that litigation affected others in addition to those cited in a clinical negligence claim. Therefore, to ensure a deeper and more holistic understanding of the impact of litigation on the physiotherapy profession, the decision was made to include this group.

As previously discussed, (chapter 1, section 1.5), the research presented in this thesis has been conducted from a pragmatist perspective, which allowed a pragmatic approach to be taken to theoretical perspectives depending on the research aims. Therefore, the theoretical perspective that informed this qualitative study was interpretivism. Interpretivism has previously been used in research looking to explore the experiences of its participants (Cao Thanh and Thi Le Thanh, 2015). Interpretivism seeks to understand phenomena from the view of those who are directly involved with the phenomenon, allowing constructs to emerge from the data whilst the researcher attempts to understand the phenomenon (Cavaye, 1996). Interpretivism accepts multiple viewpoints from different individuals and various different groups (Cao Thanh and Thi Le Thanh, 2015). The idea of multiple perspectives comes from the belief that reality is variable and that different people and different groups of people, will have different perceptions of the world (Willis, Jost and Nilakanta,

2007). As interpretivists accept multiple perspectives, this allows a more comprehensive understanding of the situation and facilitates the need for 'in-depth' data and 'insight' from participants (Cao Thanh and Thi Le Thanh, 2015). As such this is the most appropriate theoretical perspective to investigate the aims of this study.

4.2 Methods

4.2.1 Participants

Participants eligible to participate in the qualitative study included:

- UK physiotherapists with experience of a CES claim
- UK physiotherapists who feel they are at risk of being involved in a CES claim
- Other healthcare professions (HCP) with experience of litigation
- Legal advisors from legal firms
- Representatives from healthcare professional bodies
- National healthcare improvement advisors
- Physiotherapy clinical leads

The extent of purposive recruitment calculated a priori was 40 participants. This was based on around 20 participants recruited in previous research of a similar nature, which provided sufficient data for authors to create themes and answer their research question (Robertson and Thomson, 2014). This number was applicable to the main participant group in the current study (UK physiotherapists with experience of a CES claim). Therefore, this number was doubled in order to include participants from all other participant categories described above to enable data to be collected in a holistic manner. A list of initial participants were recruited through personal and professional networks of the researcher and snowball sampling was used to recruit further participants once the interviews were underway.

The interview guide was created by the research team and questions were compiled based on the findings from the previous two studies (chapters 2 and 3) and the aims of the current study. The CFG also reviewed the interview

guide, and their comments were taken into consideration. The interview guide was developed to explore the following topics:

- Demographic information, current role, previous MSK experience
- Previous training related to CES, litigation, fear of litigation, impact of fear on practice
- Personal experiences of litigation (if relevant)
- If more than one litigation, difference between first litigation experience and subsequent experiences (if relevant)
- Lasting impact of experiences of litigation (if relevant)
- Identifying ways to improve training and support for those involved in litigation
- Anything else the participant would like to add, questions from second interviewer, snowball sampling

These topics and the questions within them were created iteratively by the research team through two one-hour meetings. During the first meeting the aims of the interviews were discussed, and the first draft of topic areas and questions were formed. Following this meeting, members of the team adjusted the topic guide by adding and reordering questions to a shared document. During the second meeting, these additional questions were deliberated and justified. The interview guide was then shared with the CFG via email, who confirmed its appropriateness in relation to the aims and objectives of the current study.

The topic guide was tested during a pilot interview with a physiotherapist who was self-employed at the time of interview and had previously worked within the NHS. The pilot interview consisted of a 1-hour Microsoft Teams call to reflect the interview environment to be used during data collection. The use of Microsoft Teams has increased exponentially during the COVID-19 pandemic (Hargreaves, Clarke and Lester, 2022). It has been found that participants feel safe to participate in virtual interviews during the pandemic, and find it easier to agree on a convenient time to conduct the interview, while saving time that would be spent travelling to attend an in-person interview (Sah, Singh and Sah, 2020). Present during the pilot interview were two members of the research

team (additional to the interviewer [PhD candidate] and interviewee), who turned off their cameras and microphones during the interview to mimic the style to be used during data collection. Only the interviewer and interviewee had their cameras and microphones turned on.

Following the interview, the research team stayed on the call to reflect and give feedback on the interview content and delivery style. The main points of discussion were changing the order of the question topic areas depending on the participant category and what elements they are most likely to have experience of. This was discussed to allow interviews to be more logical for the participant, allowing their experiences and reflections to flow in a rational order, as some parts of the pilot interview seemed disjointed. Following the pilot, minor adjustments to the topic guide were made. These included changing the order of the topics to make future interviews flow more smoothly and some adjustments to the way some questions were phrased in order to ensure these were explicitly clear for interview participants. Please see appendix 5 for the full topic guide for physiotherapists. Based on this primary topic guide, this was adapted to ensure its appropriateness for other groups who were interviewed. These topic guides were based on the primary topic guide tested in the pilot interview; however, they had some questions and sections adjusted or removed based on the relevance to the group of participants they were designed for. These included:

- Non-physiotherapy clinicians who deal with CES in their caseload
- Non-physiotherapy clinicians who do not deal with CES in their caseload
- Stakeholders involved in the legal process
- Stakeholders representing professional bodies

4.2.2 Interview guide

Interviews were semi-structured through using the interview guide. Thematic analysis with an interpretive paradigm was used (Braun & Clarke, 2013). Some approaches to thematic analysis involve assumptions and underpinnings related to a positivist research stance, reflexive thematic analysis, developed by Braun and Clarke, is an interpretive method within a qualitative paradigm and is therefore appropriate for qualitative health researchers (Campbell *et al.*, 2021).

Therefore, although the topic guide contained relevant questions in each section, it is important to note that this document was used purely to guide the interviews, questions differed between interviews based on the natural course of the conversation. Furthermore, as data collection and analysis was iterative using this design, this allowed the topic guide to be added to, based on results of initial interviews. For example, the topic guide was initially based on the findings from the previous research (chapters 2 and 3), however as discussions emerged through the preliminary interviews, these topics were able to be included in the interviews which followed. This would not have been achievable had the iterative approach not been used, as these additional topic areas were unknown before the qualitative study. The topic guide was not shared with participants, in order for the interview to feel informal and resemble a normal conversation to make participants feel at ease. If participants requested more information in relation to the line of questions, a summary of the main areas of questions was provided.

4.2.3 Virtual interview methods

Interviews were undertaken by four researchers (RL, GY, MM, SG), interviews were one to-one and were completed using Microsoft Teams or via telephone. The telephone interview was used as a backup option if there were any technical issues with using Microsoft Teams which impacted the conduct or clarity of the interview. For example, if the participant struggled to join the Microsoft Teams call, or if there were technical difficulties during the interview itself such as disruption to the audio element. Virtual interviews were used due to the COVID-19 global pandemic status during the time the interviews took place.

Furthermore, due to the time restraints and clinical pressures on physiotherapists and other healthcare professionals during this time, conducting the interviews online was more time efficient for participants, as it eliminated any travel time that would have been necessary had the interviews been in-person (Santhosh, Rojas and Lyons, 2021). Moreover, it is likely that this also allowed a greater geographical reach of participants, as those who are based further afield may have been less likely to travel in the event of face-to-face interviews.

Microsoft Teams was the videoconferencing platform of choice for the current study, as it is one of the most widely used platforms, allowing participants to join a call regardless of whether they have their own teams account, allowing ease of use for participants who may not wish to set up an account to participate in an online interview. Furthermore, Manchester Metropolitan University has a subscription with this service ensuring no associated costs for participants and unlimited time on each call. This was imperative to the current study to allow as much time as was necessary for each interview, allowing the participants to speak in their own time regarding a topic that was often sensitive to those sharing their experiences. Many existing digital communication platforms had not been approved for professional use due to concerns over information governance, and some platforms such as Zoom came under scrutiny during the pandemic in relation to data security (Mehta *et al.*, 2020). However, Microsoft Teams was approved for professional use in many workplaces including the NHS during the Covid-19 pandemic (Mehta *et al.*, 2020). See table 4.1 below comparing elements of common videoconferencing platforms.

Table 4.1 Overview of common videoconferencing platforms – taken from Santhosh, Rojas and Lyons, 2021

	Zoom	Microsoft Teams	Google Meet	BlueJeans
Supported operating systems	Windows	Windows	Windows	Windows
	MacOS	MacOS	MacOS	MacOS
	iOS	iOS	iOS	iOS
	Android	Android	Android	Android
	Web browser	Web browser	Web browser	Web browser
Cost	Free tier available	Free tier available	Free tier available	Monthly charges for individuals or enterprise
	Monthly charges for individuals or enterprise	Monthly charges for individuals or enterprise	Monthly charges for individuals or enterprise	
Encryption	Yes	Yes	Yes	Yes
Time limits	40 min on free tier	No limits	60 min on free tier	No limits
	No limits on paid tiers		No limits on paid tiers	
Screencasting supported	Yes	Yes	Yes	Yes
Chat functionality	Yes	Yes	Yes	Yes
Audio recording	Yes	Only on paid tiers	Only on paid tiers	Yes
Breakout rooms	Yes	No	Yes	Yes
Waiting room	Yes	No	No	No
Electronic calendar Integration	Outlook	Outlook	Outlook	Outlook
	Google calendar		Google calendar	Google calendar
	iCal			
HIPAA compliance	Available to organizations	Available to organizations	Available to organizations	Available to organizations

Definition of abbreviation: HIPAA = Health Insurance Portability and Accountability Act.

To ensure interviews were conducted consistently between researchers, often two interviewers would be present in one interview, with one conducting the interview and a secondary interviewer listening (on mute, with their camera turned off). All interviewers listened to the audio-recordings and met at regular intervals to discuss reflexivity. Researchers involved in the interview process convened weekly reflexivity meetings throughout the interview process to iteratively discuss the structure, flow, and content of the interview topic guide and to reflect on any preliminary results and areas of further questions that could be added to remaining interviews. Researchers also discussed interview techniques to ensure high quality and unbiased data collection and consistency in interview styles across interviewers. See section 4.4.4 for further discussion of trustworthiness, reflexivity, and positionality.

Interviews were transcribed verbatim, using the transcription company, ‘Type it Write Transcription’. This is a professional transcription and proofreading

company who provide well-typed, well-formatted and accurate transcripts completed by skilled transcribers who must meet their professional standards. They use the latest security and encryption technologies; transcription is undertaken in the UK and is not outsourced to any other country. Furthermore, they work in accordance with the Data Protection Act 1998 and they delete all work from workstations and servers seven days after the completed transcription has been returned (Type it Write, accessed October 2022).

Member checking was used to validate the findings and ensure the participants' own perspectives were represented and not biased by the researchers' thoughts and knowledge (Tong et al., 2007). Synthesised analysed data was shared with participants (physiotherapists with experience of CES litigation) to ensure validity. Following the initial member checking email a further two reminder emails were sent to participants over a 4-week period. Physiotherapists with experience of CES litigation were the group of participants contacted for member checking, as the aims of this study related to understanding the experiences of physiotherapists involved in CES litigation. The other interviews conducted were to give context and holistic understanding to the themes that emerged from the data. Please see appendix 8 for data synthesis which was shared with participants via email.

4.2.4 Recruitment

Participants were purposively recruited through professional networks of the research team and snowball sampling was used to recruit further participants. Participants were eligible if they were:

i) Physiotherapists with experience of CES litigation
ii) Physiotherapists at risk of CES litigation
iii) Other healthcare professions (HCP) with experience of litigation (Midwives, medics)
iv) Legal people involved in the litigation process (Legal advisors from legal firms; MLACP; expert witness; NHS claims co-ordinators, NHS Resolution)

v) Representatives of healthcare professional bodies (National healthcare improvement advisors; CSP representatives; national back pain clinical network representatives, CES national pathway representatives)
vi) Clinical leads (NHS physio managers; Clinical and operational leads; Clinical directors non-NHS, Clinical directors AHP NHS)

The consent form and participant information sheet were circulated to participants prior to the interviews and consent was taken verbally and audio-recorded on the day of the interview. Participants were reminded that they were able to withdraw, take a break or move on to the next group of questions if they felt uncomfortable at any point during the interview. Interviewers reiterated that interviews would be pseudonymised to encourage openness during interviews.

Participants were recruited until data saturation was achieved. Data saturation has been defined as the point at which there is enough information in order to replicate the study, no new information will be attained through further interviews and when further coding is no longer feasible (Patricia, Ph and Ness, 2015). Furthermore, data saturation is not only in relation to the number of participants recruited but also the richness of the data and data triangulation can be used in order to achieve data saturation (Patricia, Ph and Ness, 2015). This method was used in the current study, as researchers undertaking the interviews met at regular intervals in order to discuss preliminary findings and to reflect on when data saturation had occurred, it was at this point that no further participants were recruited.

4.2.5 Reporting and analysis

The Enhancing the QUAlity and Transparency Of health Research (EQUATOR) website highlights two key reporting guidelines to facilitate transparency for qualitative research (Enhancing the QUAlity and Transparency Of health Research, 2023), these include the consolidated criteria for reporting qualitative (COREQ) research (Tong et al., 2007) and the Standards for Reporting Qualitative Research (SRQR) (O'Brien *et al.*, 2014). These have been described as the two popular reporting standards for reporting qualitative research (Peditto, 2018). Both guidelines were created by comparing, synthesising, and supplementing previous recommendations (Dossett, Kaji and

Cochran, 2021), COREQ is a 32 item checklist, published in 2007 (Tong, Sainsbury and Craig, 2007), and the SRQR is a 21 item checklist published in 2014 (O'Brien *et al.*, 2014). The COREQ checklist ensures the comprehensive reporting of qualitative studies, including guidance on the components of study design which should be reported (Tong, Sainsbury and Craig, 2007). The COREQ checklist was designed by public health researchers, specifically for the reporting of interviews and focus groups (Peditto, 2018). The SRQR includes similar criteria but was created for a broad spectrum of qualitative research (O'Brien *et al.*, 2014) and is a more general qualitative checklist (Haenssgen, 2019). Whilst both the COREQ and SRQR are valuable checklists for researchers to ensure decisions are well communicated (Peditto, 2018), the COREQ checklist was used in the current study as it is more specifically adapted for the reporting of in-depth interviews, which was the method used in the current study.

Data analysis, undertaken from the interpretive paradigm, was completed using Braun and Clarke's six phases of thematic analysis listed below (Braun & Clarke, 2013):

1. "Familiarising yourself with the data"

Data analysis began by the researcher (RL) reviewing audio-recordings and reading participant transcripts.

2. "Generating initial codes"

Following familiarisation of the dataset, initial codes were created and recorded using Nvivo software. NVivo is a Qualitative Data Analysis (QDA) software package created by QSR International which can significantly improve research quality, allowing professional qualitative analysis results by reducing many otherwise manual tasks and allowing more time to discover tendencies, recognise themes and develop conclusions from the data (Hamed, Saleh and Alabri, 2013). Nvivo also allows multiple researchers to access the analysis, which works well when multiple researchers are contributing to, or reviewing the analysis process. Transcripts were uploaded into Nvivo and software functions were then used to highlight and sort meaningful participant quotes into

the codes. Codes were created iteratively throughout the process of reviewing the transcripts within the software.

3. “Searching for themes”

Codes were collated into emergent themes which were then reviewed to ensure the coded extracts were representative. See figure 4.4 showing codes in Nvivo.

4. “Reviewing themes”

Emergent themes were reviewed by the research team and assessed for relevance to the research aims, through a series of two, one-hour meetings.

5. “Defining and naming themes”

During the two one-hour meetings, themes were revised, defined and named. Each step of the analysis process was reviewed by a second member of the research team (GY).

6. “Producing the report”

The themes were then written up as results, with each theme correlating to part of the story told by the dataset.

Braun and Clarke (2012), describe different approaches to thematic analysis. A deductive approach to data analysis is described as a “top-down” approach, where the researcher would have pre-conceived ideas or concepts that they would use to interpret the data. Using this approach means codes and themes originate from the concepts of the researcher (Braun and Clarke, 2012). For this study, an inductive approach to thematic analysis was used during data coding and analysis, this is a “bottom-up” approach, as the analysis was driven by the data and the themes were derived from the data itself, so the analysis corresponds to the content of the data (Braun and Clarke, 2012). Although it may not be possible to be purely inductive, as researchers will always bring something to the data, as at the very least, the researcher would have to know whether data is worth coding. However, the inductive approach was dominant for this study, which also shows the study prioritizes participant data meaning

over researcher or theory-based meaning, “giving a voice” to experiences of the physiotherapists from the data (Braun and Clarke, 2012).

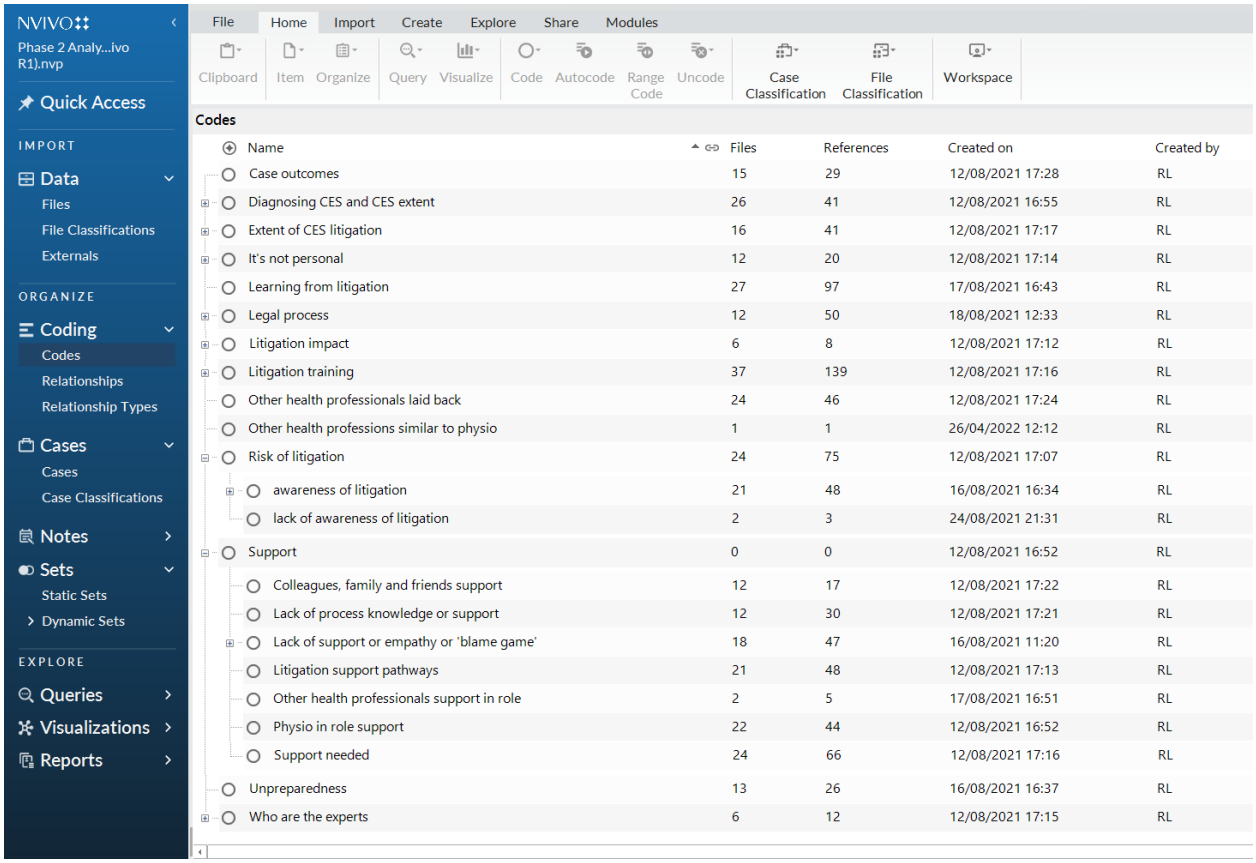

Figure 4.4 Coding in Nvivo

4.3 Results

A total of forty participants were recruited, no additional participants were recruited as data saturation was achieved. This was evident as the final four interviews added no new data and no further sub-themes or themes were created as a result of these. Forty participants were interviewed from across all UK nations and all employment statuses (self-employed, NHS employed, non-NHS employed). Seventeen participants were physiotherapists who had experience of being involved in a CES litigation case, some were involved in more than one case. Eleven were physiotherapists who are at risk of being involved in litigation due to the nature of their role involving them being the first point of contact for CES patients. Twelve participants were other stakeholders. These included other HCP with experience of litigation, legal people who are involved in the litigation process, representatives of healthcare professional bodies and clinical leads. See Table 4.2 for participant demographic data.

Table 4.2 Participant demographic data

	Physiotherapist with experience of CES litigation (n = 17)	Physiotherapist at risk of CES litigation (n = 11)	Stakeholders (n = 12)
Number of claims participants were involved in*	*Claims* = mean 1.5 (SD 0.9), range 1-4 1 case n = 12 (71%) 2 cases n = 2 3 cases n = 2 4 cases = 1	NA	***Other healthcare professions (HCP) with experience of litigation*** Midwives, medics ***Legal*** Legal advisors from legal firms; MLACP; expert witness; NHS claims co-ordinators, NHS Resolution ***Healthcare professional bodies*** National healthcare improvement advisors; CSP representatives; national back pain clinical network representatives, CES national pathway representatives ***Clinical leads*** NHS physio managers; Clinical and operational leads; Clinical directors non-NHS, Clinical directors AHP NHS
Categories of employment*	NHS = 16 SE = 5 Non-NHS = 4	NHS = 8 SE = 5 Non-NHS = 0	
Physiotherapy role*	Consultant n = 5 Clinical lead = 2 FCP =1 APP = 8 Band 7 = 1 Physiotherapist (private / non-NHS) = 2	Consultant n = 5 Clinical lead = 2 FCP = 4 APP = 2 Physiotherapist (private / non-NHS) = 2	
Number of years participants were qualified*	Mean = 24 years (SD 7.83) Range 11-42	Mean = 25 years (SD 7.69); range 15-38	
Number of years participants had been in MSK practice*	Mean = 20 years (SD 4.96) Range 10-28	Mean = 23 years (SD 8.22); range 13-37	
CES training completed by participants*	Extensive (inc. research) = 5 MSc / PG Units = 2 CPD / in-service training = 9	Extensive (inc. research) = 2 MSc / PG Units = 3 CPD / in-service training = 6	
Litigation training completed by participants*	Courses = 5 CPD / in-service training = 1 BSc = 1 None = 9	Courses = 6 CPD / in-service training = 1 None = 4	

*at the time of interview, musculoskeletal (MSK)

The telephone backup option was used during 10% of the interviews held, due to technical issues with Microsoft Teams. Of these, 5% were held as complete telephone interviews and 5% started as a Microsoft Teams interviews and were

transferred to the telephone due to connection issues. RL led 26 interviews, GY led 10 interviews, MM lead 3 interviews and SG led 1 interview.

With regards to member checking, following the first member checking email to the physiotherapists with experience of CES litigation (N=17), 8 responses were collected. Two weeks after the initial email a first reminder email was sent to participants which returned a further 3 responses. After a further two-week period had passed a final reminder email was sent which returned no further responses. Therefore, a total of 11 participants responded to give their comments on the data synthesis. All participants who responded confirmed via email, the results summary accurately reflected all or some of their experiences.

4.3.1 Themes

Four themes were identified from the data: ‘Litigation effects’, ‘It’s not personal’, ‘Learning from litigation’ and ‘Support and training’ each of which were associated with several sub-themes (see figure 4.5).

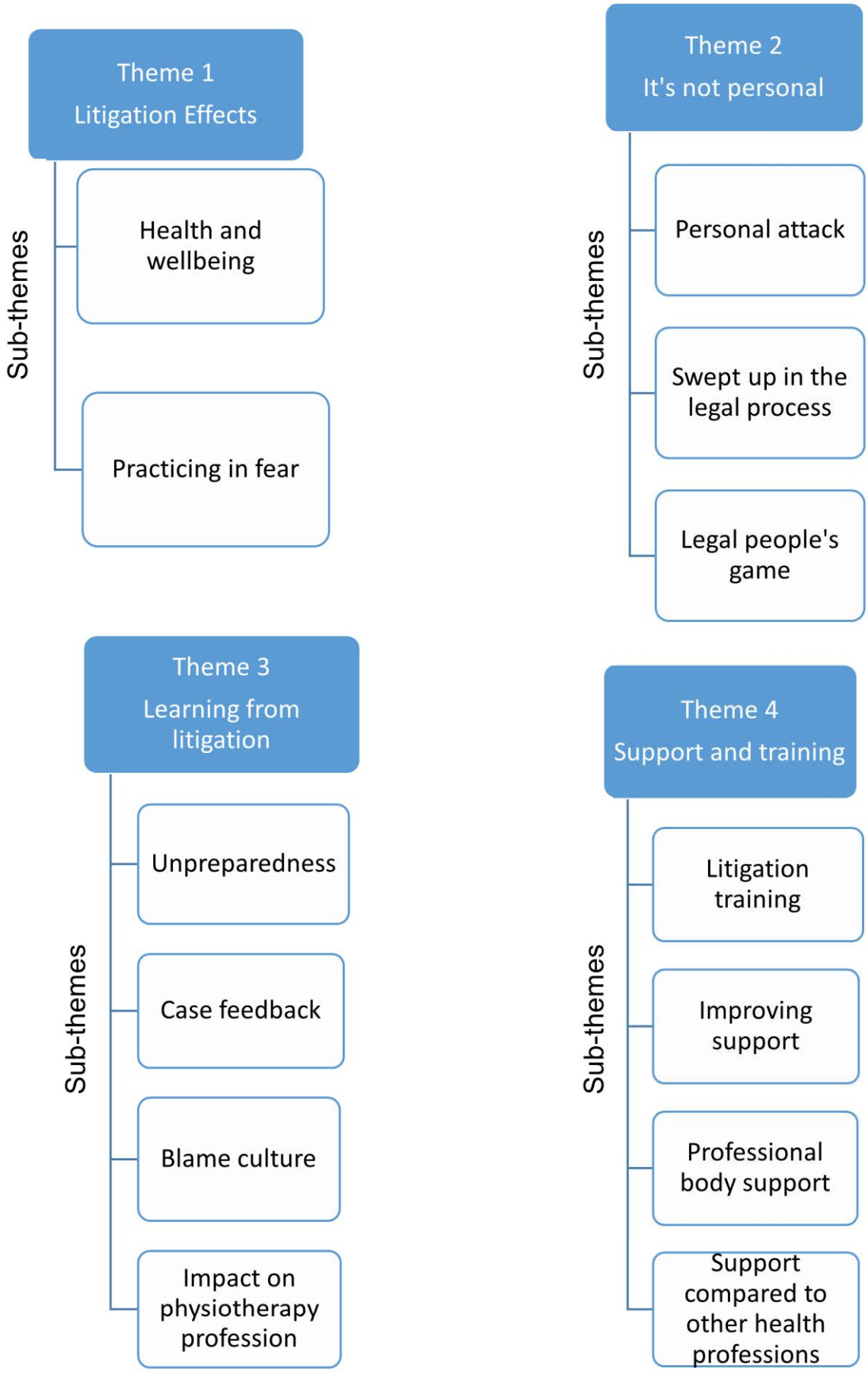

Figure 4.5 Themes and sub-themes identified

A further breakdown of the number of contributions to each theme from the various participant groups (Physiotherapist with experience of CES litigation, Physiotherapist at risk of CES litigation and stakeholders) can be seen in table 4.3. Pseudonymised verbatim quotes have been included to support each theme.

Table 4.3 Breakdown of participant groups contributions to each theme

Theme	Subtheme	Physiotherapists with experience	Physiotherapists at risk	Stakeholders
Litigation effects	Health and wellbeing	N=11	N=0	N=2
	Practicing in fear	N=11	N=1	N=4
It feels personal	Personal attack	N=7	N=3	N=1
	Swept up in the legal process	N=9	N=4	N=4
	Legal people's game	N=3	N=2	N=2
Learning from litigation	Unpreparedness	N=7	N=4	N=2
	Case feedback	N=10	N=3	N=2
	Blame culture	N=7	N=2	N=1
	Impact on physiotherapy profession	N=6	N=5	N=5
Support and training	Litigation training	N=17	N=10	N=10
	Improving support	N=15	N=6	N=3
	Professional body support	N=6	N=2	N=3
	Support compared to other health professions	N=11	N=9	N=2

4.3.1.1 Theme 1: 'Litigation effects'

'Litigation effects' describes the direct effects of litigation on a physiotherapists' health and wellbeing and encompasses the impact on physiotherapists' clinical practice.

Litigation effects - Sub-theme: Health and wellbeing

Physiotherapists described some of the physical impacts of the stress and worry on their mental and physical health over the period of their litigation case which most commonly lasted around 2 years.

> *"I felt sick, I couldn't sleep, I couldn't settle. But actually, after that I had to go on high blood pressure tablets for some time. I got gastric reflux which was really bad, it affected my appetite."* (P1, physiotherapist with experience)

Litigation effects – Sub-theme: Practicing in fear

Those with an experience or an awareness of litigation have described the impact of that on the way they managed patients, as they felt the need to practice in a defensive manner in order to avoid being cited in a legal claim.

> *"it's about, "How do we not get sued?" rather than, "Let's treat the patient using the very best of me and my knowledge and skills, and the very best evidence". We shouldn't really be thinking, "Okay, let's not get sued" first – which is a crying shame."* (P3, physiotherapist at risk)

Others discussed changes to their clinical practice such as through improving their documentation:

> *"I think it has changed my practice. I am a lot more aware of how I'm wording my notes and things like that, and the detail that I am going into with all the notes as well"* (P15, physiotherapist with experience)

Some physiotherapists discussed lowering their thresholds for sending patients for further investigations, as a result of litigation, due to the worry of missing a serious pathology.

> *"She said, "Well how has it changed your practice?" I said, "I scan everybody." My threshold to scan was so low because I was so worried about getting this wrong."* (P2, physiotherapist with experience)

One occasion was described where the sharing of information relating to a CES claim in the workplace led to increased referrals for MRI imaging:

> *"after a claim of CES was found… and it was a shared one with one of our large independent sector employers for MSK services in England, they almost sent everybody for an MRI. Anybody with, a set of symptoms, all of them were referred. And they actually snowed under the A&E unit… with physios referring people in for an MRI."* (P39, stakeholder professional body)

Even those physiotherapists who did not have their own personal experience of litigation often expressed their awareness of it and described impacts on their practice.

> *"I think I do over-assess, and I over-examine, and I over-document, and that puts on a lot of stress and anxiety [on me]."* (P3, physiotherapist at risk)

Several physiotherapists spoke about how the stress and anxiety of being involved in litigation had changed their clinical practice.

> *"… "Has it changed your practice?" I said, "Yes." She said, "Oh. Why?" I said, "Because I'm scared. I'm scared it's going to happen again. I don't ever want to go through this again." Just the anxiety of remembering it, just awful."* (P2, physiotherapist with experience)

For many, it had affected their enjoyment of their job and one physiotherapist discussed how litigation led to retirement and a second discussed the possibility of quitting their job. Others talked about colleagues who had left the profession as a result of litigation.

> *"within six months, I'd wanted to go part time, and if they weren't going to give me part time, I don't know what I would've done. There's a possibility that I would have had to quit" (P33, physiotherapist with experience)*

> *"I know physios who have given up. I know a physio that gave up because somebody has tried to sue her."* (P35, physiotherapist at risk)

4.3.1.2 Theme 2: It feels personal

'It feels personal' describes how most physiotherapists felt litigation was a personal attack on them and their ability to do their job and described feeling that the process was a personal criticism of their professional ability. Some began to realise that litigation was not personal but about the legal process. They described a perception of being 'swept up' in the legal process as one of several health professionals involved in the patient journey investigated en masse as part of the claim.

It feels personal – Sub-theme: Personal attack

Several physiotherapists with experience of litigation described feeling like litigation was a personal attack on their personal integrity and their ability to do their job:

> *"what it felt like was, "I tried to do everything I could for this patient. I bent over backwards for this patient," and then suddenly I'm faced with this litigation. It feels very, very, very personal."* (P2, physiotherapist with experience)

> *"It feels like this is a direct insult on my ability, on my integrity or my ability to do what I'm designed to do in terms of examining patients and dealing with patients. So it feels incredibly personal."* (P2, physiotherapist with experience)

Many of the physiotherapists and some stakeholders described how physiotherapists often take litigation personally and discussed this being a characteristic of the wider physiotherapy profession:

> *"You're there to help people. I think we take it very personally because we're in the job because we love helping people and it is a personal job. You care about the people you treat. And every patient matters. To physios, I believe every patient matters. And we are just so sensitive."* (P35, physiotherapist at risk)

> *"All I wanted to do was just give them a hug and say "It's not you. Please do not take it personally."* (P21, stakeholder legal)

It feels personal – Sub-theme: Swept up in the legal process

Physiotherapists can be cited in a complex litigation case regardless of whether they perceive that have been negligent or not. They described the realisation that if a case is pursued by a claimant, every clinician in the pathway will be investigated and one stakeholder described this as a 'forensic' level of scrutiny.

> *"we would obtain the medical records and then I would look at the medical records and I would do a chronology of care. So we weren't just looking for necessarily where the new enquirer thought things had gone wrong, we were looking where we thought things had gone wrong."* (P5, stakeholder legal)

> *"I became more aware that it's a legal process where the whole pathway is looked at and everybody is swept into it."* (P1, physiotherapist with experience)

Once physiotherapists understand this process, they realised that litigation was not a personal attack on them.

> *"To be able to say it was about process, it was about the pathway, it was about the delayed diagnosis, all of those things understanding what it is because then it becomes less personal."* (P2, physiotherapist with experience)

It feels personal – Sub-theme: 'Legal people's game'

Several participants described the legal process and how physiotherapists perceived that legal representatives did not understand the complexity of their job in trying to diagnose CES.

> *"The lawyers want black and white and they think it's black and white because they don't understand it [CES]."* (P11, physiotherapist with experience)

Physiotherapists often described CES cases as 'grey' cases, in the sense that they are not straightforward to diagnose.

> *"I think that it's very unusual that patients present with black-and-white symptoms. Patients – nine times out of ten – will have other co-morbidities or mental health issues, and/or lots of other things that add to the complexity and that help to add to the uncertainty within my daily job"* (P3, physiotherapist at risk)

This perception of the complexity of patient care was supported by other HCP who also had experience of litigation:

> *"this is what upsets me about the litigation, the legal teams - They just see it as so black and white. They don't understand. Unless you're that person, in that situation at that moment in time, you just can't understand what's going on in that moment or the emotions, the pressures, the responsibilities and the decision that will have been made at that time.*

> *There's never ever going to be any malice or anything like that. It's just so disheartening really."* (P4, stakeholder – HCP with litigation experience)

Physiotherapists also expressed experiences where solicitors described the legal process as sometimes being considered as a 'game' in the context of not taking it personally and reassuring them that if the claim was successful, it would be settled.

> *"[solicitor] "Don't worry. We'll settle out of court.""* (P1, physiotherapist with experience)

It appeared that some solicitors shared this viewpoint with the physiotherapist to reassure them.

> *"He [solicitor] was going, "You might as well stop crying. This is a game to me, you know." And he was lovely."* (P34, physiotherapist with experience)

4.3.1.3 Theme 3: Learning from litigation

'Learning from litigation' this theme emerged as most physiotherapists highlighted a reticence to talk about litigation and to share findings due to perceptions of a 'blame culture' and perceived stigma associated with the claim and also due to a lack of means by which to share learning more widely. This reticence to share their experiences could also be associated with physiotherapists feeling litigation is a personal attack on their professional competence. This theme also describes the lack of knowledge around the process and outcome of litigation.

Learning from litigation – Sub-theme: Unpreparedness

Physiotherapists' voiced feelings of their initial reaction to a litigation claim and throughout the course of the case. Physiotherapists unanimously described

feeling sheer shock and panic, worrying about the consequences the claim may have for their career and ultimately their ability to provide for their family.

> *"I think because I had not had any experience, or training as we said about it, it's quite a scary situation. You're worrying about, 'Am I going to get struck off? What have I done? What are the implications for it?' So, yes, there is a large fear there really."* (P15, physiotherapist with experience)

It was highlighted by most physiotherapists that the lack of knowledge about the process of litigation and the possible outcomes exacerbated the stress and anxiety they experienced.

> *"It was very stressful because of the wording that was used, that you have been negligent, and those are very strong words. So yes, I mean a whole lot of emotions, the fear, the worry, the doubt, the unknown I think, a big thing is the unknown, you don't know what I need to do next and what's going to happen, what's likely to happen but yes, it was very, very stressful, a lot of anxiety"* (P20, physiotherapist with experience)

Physiotherapists also expressed their confusion of where they should go for support with the litigation process, with the worry of ruining their reputation and who they were legally allowed to discuss their case with.

> *"So in that minute of opening the letter when your hands are shaking, what do you do? Can you speak to people about it or is this confidential?"* (P1, physiotherapist with experience)

Learning from litigation – Sub-theme: Blame culture

This stigma around litigation has been documented by physiotherapists on a personal level, as many physiotherapists have talked about feeling embarrassed, ashamed, and even blamed in their workplace for being cited in a claim.

> *"It was embarrassing and painful and all those things, really"* (P11, physiotherapist with experience)

> *"within physiotherapy, it's a blame culture, so you are to blame, and you have done something wrong until you have been proven that something is right."* (P3, physiotherapist at risk)

Some explained that how feedback about the claim was important. Adding that feedback should include both positive and negative experiences in order to be effective.

> *"We have a no-blame culture in work. We look at the whole system. We look at how we can improve things. And we want staff to be able to feel that we can share patients that have gone well and not gone well. And not feel like people are going to think that they're a rubbish physio because, you know, it's not the case."* (P38, physiotherapist with experience)

Learning from litigation – Sub-theme: Case feedback

Physiotherapists talked about what they learnt through being involved in litigation and how they can use their experiences to make positive changes going forward.

> *"a positive impact was that I fed back to the department about the case and what we had learnt from the case, and how we may be able to change sort of future practice, and I think we got a lot tighter with the documentation as a result."* (P15, physiotherapist with experience)

Some legal stakeholders reflected on how feedback from litigation cases helps to make improvements in care.

> *"[we undertake] what's known as a root cause analysis. So once the claim has finished, the outcomes are sent back to the service, so there'll be learning from it. So the managers can have a look and go, "Oh, there*

is a gap. We need to do something about that," so that they can stop it from happening again." (P21, stakeholder legal)

However, many physiotherapists were reticent to talk about litigation or share experiences internally because of the stigma attached to litigation.

"they're [organisations] just very much fearful that they don't want to share things because it looks bad on them" (P28, stakeholder legal)

Learning from litigation – Sub-theme: Impact on physiotherapy profession

Many physiotherapists and other stakeholders perceived CES litigation to be increasing within healthcare. With whiplash historically being highly litigious and previously costing the UK around £3.64 billion per annum, contributing to 76% of motor-insurance claims (Bannister et al., 2009), some participants were comparing CES and describing it as the 'new whiplash'.

"It's like the new whiplash." (P40, physiotherapist with experience)

Physiotherapists added that they think that litigation will only continue to increase due to first contact roles giving physiotherapists more responsibility in the context of complex, uncertain clinical presentations.

"I think the big thing that I probably learnt is I was unaware of how prevalent it [litigation] is at the moment. Since I've been involved in it [CES litigation], I'm aware that it isn't uncommon at all. And I think it's probably going to get more and more common given that physios are seeing more of this type of patient because the doctors are seeing less of it." (P40, physiotherapist with experience)

CES claims are often high value as claims take into account the care that is needed for the rest of the patient's life. Quite often CES can occur at a young age, with cases seen from the age of 25 and an average age of 48 years for the condition (Dhatt et al., 2011). The effects of CES can be long term and have the potential to affect the ability to work.

"cauda equina is probably the biggest case because they can be quite high value" (P24, stakeholder legal)

The increasing number of high value litigation claims such as CES claims was reported to have affected insurance premiums. A legal stakeholder suggested that CES litigation may pose a risk against physiotherapists' public liability insurance, as a single claim in the future could exceed their current cover of 7.5 million. They added that physiotherapists could see increases on their insurance premiums as a result.

4.3.1.4 Theme 4: Support and training

The 'Support and training' theme emerged as physiotherapists described the support needed for those going through litigation, including emotional support and having a safe place to talk about any worries relating to the claim. It also explores training that may be needed in relation to litigation during the physiotherapists career, including at what point in a physiotherapists career it may be appropriate to implement this training and what this could look like.

Support and training -Sub-theme: Support compared to other health professions

Many physiotherapists reflected on the opinions of their colleagues in other professions such as GP's and surgeons, in relation to litigation. They often described how people from these professions appeared less worried when involved in a litigation claim and did not seem to take it as personally as physiotherapists. Most physiotherapists perceived these differences as other professions having more awareness of litigation due to having clinical negligence training, and also that their undergraduate training highlights that the chances of them being involved in litigation is high and therefore they feel more prepared. Physiotherapists also described how these clinicians seem more aware of the legal processes and of the support they can receive from their employer or professional organisations and insurers, such as the General Medical Council (GMC) and Medical Defence Union (MDU).

"When I spoke to the orthopaedic surgeon, he wasn't worried at all. Part of that is because they do have that training and they do understand litigation. They see it as not a personal thing. They see it as just part of their job, this is what happens because of where we are, what we're doing. … but I had no understanding, no real concept of what would happen at all or what that process would be and how I would manage it, how I would personally manage it." (P2, physiotherapist with experience)

"With GPs, it's immediately, "Don't worry, because everything is fine, we are going to sort all this out, and this is how we are going to do it." (P3, physiotherapist at risk)

Conversely, physiotherapists described how they feel unprepared for litigation, and they were not aware of the legal process or what they needed to do when they found out they were involved in a claim.

Support and training – Sub-theme: Professional body support

Many physiotherapists referred to feeling there was a of lack of support from the Chartered Society of Physiotherapy (CSP), the professional body for physiotherapists. For most physiotherapists involved in litigation, their first point of contact for support was the CSP. However, it appears that most were unaware that the CSP are only involved in providing support for physiotherapists who are self-employed. Because of the lack of awareness of the role of the CSP, physiotherapists often felt dissatisfied by the support they received from the CSP.

"I have known colleagues who have gone to the Chartered Society [CSP], asking for support and help about different aspects [of litigation], and they have just not wanted to know." (P3, physiotherapist at risk)

"If you're a member of the CSP regardless of whether you're a private practitioner, independent practitioner or health service, you have the same rights and they have the same rights to support you." (P37, physiotherapist at risk)

On occasion, due to a lack of awareness of the CSP role in litigation, some physiotherapists appointed a solicitor at their own cost, to engage with the CSP to try to get support.

> *"So, this guy was writing official solicitor letters to the CSP and I was getting these bills for thousands of pounds for an hour's work."* (P20, physiotherapist with experience)

However, feedback from self-employed physiotherapists who were supported by the CSP, had been found to be positive.

> *"My understanding from the feedback [from self-employed physiotherapists] is that the support they receive is great … the service is there to support an [self-employed] individual who is normally, very normally shocked, really concerned and, often really panicking about what to do or what not to do. So, they are dealt with really quickly to provide that support, both from, if it's required, a legal team but also for support from the brokers team to share with them the likely process that will actually occur."* (P39, stakeholder professional body)

> *"I contacted the CSP and said, "What do I do?" And they said, "Well, we'll put you on to the legal team" the solicitor that I dealt with, she was really good."* (P35, physiotherapist at risk – non-CES claim)

Support and training – Sub-theme: Improving support

Going forward, physiotherapists discussed how they think improvements can be made to the support they received. Some mentioned a more individualised approach in their workplace, ensuring that physiotherapists feel they work in an environment where they feel well supported and able to talk about their worries about litigation.

"I mean, number one, you obviously, you need people to feel that they're in a no-blame culture, don't you? You need to feel that people are, feel safe within their employment" (P31, physiotherapist at risk)

Some talked about using training to make litigation processes and support more well known.

"I think that package of support should then lead to you knowing who to go and speak to. I think you need to have organisational transparency." (P6, physiotherapist with experience)

Others discussed how more support from their professional body could have been helpful for them.

"I guess I would have liked my professional body to be more supportive. I think that would have been really helpful. I guess a more formal process of support." (P2, physiotherapist with experience)

Many also talked about the need for emotional support such as debriefing, networking and buddy systems.

"I think a network, a confidence that you can just talk through, that's got your back, a shoulder to cry on, somebody that you can really trust and you can have a discussion with about it, I think that's really key." (P8, physiotherapist with experience)

There were similar discussions around implementing support helplines through physiotherapy organisations or places of work.

"I think you should have a designated person within the CSP that has some counselling background even has maybe some legal understanding to be able to have maybe a helpline available, so they could be able to do other aspects of the job." (P35, physiotherapist at risk)

Support and training – Sub-theme: Litigation training

Some physiotherapists described trying to gain their own training in relation to litigation by reaching out to their legal teams for advice and guidance due to their awareness that litigation may affect their practice.

> *"I also hear at the moment that medico-legal is the biggest rise for solicitors in terms of funding. If that's the case, it's only a matter of time before people start to sue us on a more regular basis for information, so we need to be ahead of that curve. We need training on what we can and cannot say and how we handle ourselves in these situations."* (P29, physiotherapist at risk)

The majority of physiotherapists who believed it would be beneficial for physiotherapists to be given some basic litigation training at undergraduate level.

> *"I think we need to link in with students and with institutes of higher education to prepare physios for the climate."* (P1, physiotherapist with experience)

However, some disagreed, saying that this may scare the physiotherapists and they may change career.

> *"you're going to frighten people and I know that you've got to be aware of these things but are we then creating more fear in the junior staff who are already quite fearful"* (P9, physiotherapist at risk)

Most suggested that as long as the training was put across in a supportive way so to not scare the students, it would be more beneficial for them to be prepared. Many physiotherapists also made reference to other medical professions for comparison.

> *"Well, that's not fair to not tell them just in case they're scared. Dentists are taught it's when and not if. I suspect doctors are. Dentists definitely*

are. We need to be telling these physios about the reality because also it's important that they understand the experience that they need." (P1, physiotherapist with experience)

The general consensus was that there should be some form of litigation training in students' final year of undergraduate level.

"I think it probably would be a scary thing at undergraduate level. I think it would probably be a lot scarier if you're going into it fresh when there's a case involving you. I know I would much rather be taught how to document things properly and have that awareness at an undergraduate level in that safe environment, rather than when the horse has already bolted, and you're being cited in a claim against you. I think that's going to be a lot scarier." (P15, physiotherapist with experience)

It was suggested that further litigation training could be implemented at postgraduate level or at different stages along their professional career by their employer.

"I think that the postgrad training needs to be there. I think it will come in the advanced practice work that's going on. I think it will come in the first contact practitioner road maps. … I think it's at different levels, different stages along the professional journey really." (P1, physiotherapist with experience)

Many talked about the potential role for the CSP and the professional networks, such as the MLACP, in the training.

"I think the CSP could kind of have some sort of role, like, an e-learning package" (P16, physiotherapist at risk)

Others made suggestions regarding what the litigation training could include.

"what people get sued for, the process of it and how to stop it happening and kind of a bit more on indemnity." (P19, stakeholder other healthcare professional)

4.4 Discussion

4.4.1 Virtual research methods

The current study was conducted during the height of the Covid-19 pandemic. Therefore, to ensure researcher and participant safety, virtual interviews were conducted. This also allowed increased feasibility for healthcare professionals to be able to participate in the study by eradicating travel time and allowing them to complete the interview from anywhere with minimal disruption to their day at a time of increased clinical pressures (Santhosh, Rojas and Lyons, 2021). This allowed participants from across all devolved nations of the UK to participate in this research, which may not have otherwise been feasible. Furthermore, this technique allowed participants to choose an interview location they felt was most appropriate and comfortable for them. It has been reported that participants may feel more comfortable talking about a personal topic in a place of their own choosing (Gray *et al.*, 2020). Online interviews can also allow participants to easily leave the interview at any time, should they wish to do so, as exiting an interview virtually may be less intimidating compared to leaving an in-person interview in an unfamiliar environment (Gray *et al.*, 2020). Participants are able to participate from their own convenient space which may not be possible in-person, furthermore the video element of this platform ensures the personability is not lost during the interview, as participants may still feel personally connected with their interviewer (Gray *et al.*, 2020).

In the event of needing to conduct the interviews virtually, virtual techniques involving synchronous video exchanges through videoconferencing platforms allows researchers to build rapport with their interviewees, which may not be possible using other virtual methods such as messenger facilities or audio only calls (Roberts, Pavlakis and Richards, 2021). Although participant observations were not formally recorded as part of the current study, both participants and interviewer's facial emotions and expressions contributed to the personability of interviews, allowing the interviewer to gain rapport and make the interviewer

feel at ease and able to express their opinions which were often very personal and sometimes distressing reflections.

Most interviews were unaffected by any connectivity issues, some were interrupted by Wi-Fi challenges, in some cases forgoing the video element was enough to ensure clear audio capture, other interviews were changed to an ordinary phone call mid-interview. While these strategies ensured that clear audio was maintained for the participant, interviewer and audio recording, the disjointed nature of these parts of the interview disrupted the natural flow of the conversation which could have had an impact on the quality of the data collected. Furthermore, losing the visual element of the interview could impact the personability for the remainder of the interview. Conversely, experiencing connectivity issues could have an unintended advantage of improving the relationship between the researcher and participant as they work collectively to create a solution (Archibald *et al.*, 2019).

For interviewers, pacing of questions was challenging on occasions while using Microsoft Teams as there were occasions when crosstalk with the interviewee occurred because of the audio quality, connectivity lag times and/or speech patterns. This could have also impacted the quality of data due to the disruption during the interview, on these occasions the interviewer would apologise and ask the interviewee to continue. However, throughout the interviewing process, researchers reflected and improved on these skills during their reflexivity meetings, with interviewers agreeing to pause, and wait an additional few seconds to ensure a break or silence cued the following question or prompt.

Having a second interviewer present during interviews was beneficial for consistency, analysis and reflexivity. The second interviewer was able to experience the interview first-hand without influencing the data collected (as they had their microphone and camera turned off). This allowed them to reflect on the meaning of the data when analysing the data and creating themes, allowing a secondary perspective of how the narrative was intended by the participant. Furthermore, the secondary interviewer was able to comment on the interview techniques used and highlight any areas of improvement for the primary interviewer, that they may not have recognised. For example, the

interviewer occasionally made remarks that agreed with the participants opinions to gain rapport and to allow ease of conversation. For example:

“It does sound like quite a lot of responsibility and a lot of pressure.”

However, these remarks could influence the participants narrative thereafter, therefore, to improve on this, more neutral remarks were subsequently used. This technique also allowed for consistency and comparison of the interview techniques across interviewers, to learn from each other and to ensure interviews thereafter were conducted as consistently as possible. This was particularly helpful to the researcher, as a PhD student, it allowed learning of interview techniques from more experienced researchers. For example, the researcher learnt how to use neutral comments and probes through reflecting on the techniques of the other interviewers, to reduce researcher influence on the data. Using responses such as:

“That’s really interesting, could you tell me a bit more about that?”

4.4.2 Participant sampling and recruitment

A total of N=40 participants were interviewed, this number was obtained due to the holistic nature of this study, as participants were from different backgrounds, reflecting on their experiences of the topic. Physiotherapists with an experience of CES litigation were the main population for the current study, and this group had the largest number of participants (N=17). The participant group ‘physiotherapists at risk of CES litigation’ was identified as some physiotherapists felt they had a lot to contribute to this topic area as they had been involved in litigation cases for other conditions or had been involved in CES patient journeys that could have resulted in them being involved in a litigation claim. Through interviewing this group of participants, the wider impact of CES litigation on the physiotherapy profession was established and it was revealed that impacts of litigation are not limited to those clinicians who have been through the litigation process. The stakeholder group was an important group as these participants were often involved in the legal process and were able to give information on legal requirements, timescales, and their opinions on

how physiotherapists respond when involved in these claims from their perspective. Other stakeholders were other healthcare professionals who have been involved in legal claims, these participants allowed a comparison to be created between the physiotherapy profession and other clinical professions, to establish if lessons can be learnt from processes, support, and attitudes towards litigation in their professions. Participants in the stakeholder group who were representing healthcare professional bodies were able to describe their processes and involvement in the legal process; and clinical leads were able to reflect on the members of their team who had been involved in litigation regarding impact on these individuals and the support available to them.

Data saturation was used to establish the point at which enough participants had been recruited. Data saturation has been described as the point at which collection of further data adds little to no additional information in relation to the research question and the best practice of this is interviewing until saturation (Guest, Nameyid and Chen, 2020). However, although data saturation has been described as a principle that “meets with the ontological and epistemological foundations of qualitative research” (Constantinou, Georgiou and Perdikogianni, 2017), it is likely to be almost impossible to describe what will count as saturation in advance of analysis, and therefore can be problematic in interpretative methods of qualitative research as coding will not reach a fixed end point (Braun and Clarke, 2021). During the current research, the researcher made an interpretative judgement regarding when was appropriate to stop coding and move to theme generation, and then to move to mapping of themes, based on the purpose and goals of the analysis (Braun and Clarke, 2021). Furthermore, recruitment estimations were calculated a priori to guide these decisions, (section 4.2.1) based on previous research of a similar nature (Robertson and Thomson, 2014). Given the multi-faceted and holistic nature of the interviews in the current study, a higher number of participants was needed compared to this similar literature, to reach data saturation. Although calculating a sample size a priori may be problematic, there is a practical need to determine sample size in advance. Therefore, the researcher anticipated the number of participants which may generate rich data, through reflecting on various aspects including: the research question, data collection methods, diversity within the population, the depth of data likely to be generated

from each participant and the pragmatic constraints of the research (Braun and Clarke, 2021).

Probability sampling involving random sampling techniques in which each member of the target population has an equal chance of being selected to be a participant, is often hailed for having a low risk of bias (Stratton, 2021). Non-probability sampling methods do not allow equal chance for each member of a target population to participate in a study, participants are either selected by the researcher (purposeful sampling), are referred to the researcher (snowball sampling), or self-select to participate (convenience sampling) (Stratton, 2021). Convenience sampling technique is most often used in quantitative studies while purposive sampling is typically used in qualitative studies (Etikan, Abubakar Musa and Sunusi Alkassim, 2016).

Both purposive and snowball sampling were deemed most appropriate to answer the aims of the current study. Purposive sampling was used to ensure the sample reflected the experiences of physiotherapists who had experience of litigation and to ensure an appropriate group of stakeholders were recruited with knowledge and experiences related to this topic area. Snowball sampling was used to ensure that the sample captured a wide range of different perspectives through asking interviewees to help identify other physiotherapists with experience and stakeholders who may have provided a different view. The sampling techniques used, were aligned with the interpretivist stance of the current study, as interpretivists seek to capture “the multiple perspectives that are inherent in most human endeavours” (Willis, Jost and Nilakanta, 2007, p181).

When using purposive sampling the researcher chooses participants due to the qualities the participant’s possess, the researcher decides what needs to be known and tries to find participants who are willing and able to provide the information through their knowledge or experience (Etikan, Abubakar Musa and Sunusi Alkassim, 2016). Purposive sampling is often used in qualitative research to ensure information-rich data is collected, through selecting participants that are well-informed with the phenomenon of interest, willing to participate, and the able to communicate their experiences and opinions in an

articulate, and reflective way. This ensures the participants selected are best placed to assist with the research (Etikan, Abubakar Musa and Sunusi Alkassim, 2016).

Snowball sampling was used throughout the recruitment of participants, as initial suitable contacts, sometimes referred to as ‘seeds’, were invited to take part in the study; these participants advised on other appropriate contacts with experiences or opinions on the current topic area who were likely willing to also participate (Parker, Scott and Geddes, 2019). Snowball sampling is open to selection bias as the initial seeds come from the researchers contacts (Parker, Scott and Geddes, 2019), although in the current study this bias was minimised as initial seeds were identified through contacts of a group of researchers, rather than one individual. Furthermore, as snowball sampling is not random, it is difficult to establish the point of data saturation as it is not possible to know if new information could be gained from a random sample (Sadler *et al.*, 2010). However, due to the specific nature of the target population for the current study purposive and snowball sampling were considered the optimal methods for recruitment as it was designed to overcome many recruitment challenges related to inviting difficult-to-reach communities to participate in research studies (Sadler *et al.*, 2010). Participants are identified based on their meeting of the research criteria and their likelihood of willingness to participate. Furthermore, participants who are given information about a research study through one of their contacts may be more likely to participate in research where they feel vulnerable rather than if they were contacted through a random sampling method. Snowball sampling is often used when recruiting a very specific populations of which there may be low numbers, they may be geographically dispersed, be sensitive or vulnerable and require anonymity in order to participate (Parker, Scott and Geddes, 2019).

4.4.3 Discussion of themes

This study explored the experiences of physiotherapists with experience of litigation. Four key themes were identified: ‘Litigation effects’, ‘It’s feels personal’, ‘Learning from litigation’ and ‘Support and training.’ In relation to litigation effects, the current study found that litigation can have profound effects on physiotherapists’ health and wellbeing having both mental and physical

implications. Impacts on their health were similar to those seen in midwives who are involved in litigation and in some cases led them to consider leaving the profession (Robertson and Thomson, 2014). The term ‘second victim’ acknowledges the significant impact on the healthcare professional both professionally and personally, including anxiety, distress, acute stress disorder, suicidal ideation, reduced professional confidence and making defensive changes to practice (Robertson and Thomson, 2014; The Chartered Society of Physiotherapy, 2021). In turn, this can lead to sickness absence, burnout, and physiotherapists leaving the profession (The Chartered Society of Physiotherapy, 2021). The impacts of litigation on physiotherapists’ clinical practice were also comparable to those seen in other health professions with defensive medicine being practiced, whereby interventions were being undertaken not wholly based on best practice, but instead to guard the clinician against future litigation claims (Robertson and Thomson, 2016).

4.4.3.1 Litigation effects

Physiotherapists often described how litigation had negative impacts on their health and wellbeing, commonly stress and anxiety, which occasionally led to physical symptoms. The physiotherapists described the same litigation effects as those is other professions, such as midwifery, with litigation causing loss of confidence, self-doubt, and absence from work (Robertson & Thomson, 2016). Furthermore, many of the emotions and physical symptoms from the nursing profession (section 4.2.1 figures 4.2 and 4.3) were described by the physiotherapists such as embarrassment, loss of confidence, nausea, fatigue, and sleep difficulties (Scott, 2015). Physiotherapists also described the impact on their clinical career, with many describing that they would treat patients based on avoiding litigation following their litigation experience. As stated previously (section 4.2.1) defensive practice has been observed in other health professions, such as medics, and this deviation from what may be best practice to reduce the risk of litigation (Ortashi et al., 2013), is not advantageous to the patient or clinician.

4.4.3.2 *It feels personal*

Some participants described how they had become involved in litigation despite them feeling that they had done their best for the patient. This could be contributing to the worry associated with litigation, as it has been previously reported that physiotherapists have a fear of missing any details in their clinical notes with some physiotherapists believing there may be negative consequences such as risk of litigation, despite their hard work to avoid missing anything (Paling and Hebron, 2021). The current qualitative study findings show that physiotherapists often took litigation personally and felt it was a personal attack on their competence and ability to do their job. This finding is consistent with that found in health professions such as midwifery, as midwives involved in litigation often experienced similar negative effects on their health and wellbeing, including feeling personally attacked (Robertson and Thomson, 2014). Some physiotherapists in this study became aware that litigation was not personal to them as they went through the legal process. They realised that they were involved in a claim due to investigations of all health professionals involved in the patient's journey. Therefore, with more knowledge of the legal process, this could help physiotherapists to reduce the feelings of litigation being a personal attack on them, thus may mitigate some of the impacts on their health and wellbeing.

4.4.3.3 *Learning from litigation*

The current study found that litigation often made physiotherapists feel embarrassed and blamed in the workplace. A blame culture was similarly described across the midwifery and medic professions comparable with that described by physiotherapists (Ortashi *et al.*, 2013; Robertson and Thomson, 2014, 2016). The current findings and those of others (Catino, 2009; Robertson and Thomson, 2016), suggest that reducing this blame across professions would lead to more openness and discussion around litigation in the workplace. This is important to allow learning from litigation to occur.

Findings from the current study highlight a lack of sharing information in relation to legal claims, this was often linked with a reticence to share experiences due to the stigma associated with litigation and the feeling of a blame culture within the profession. Furthermore, physiotherapists have stated they have little

knowledge of the legal process and who they are able discuss their claim with, which may also contribute to this lack of sharing. It is recommended that litigation cases are shared in the workplace so that lessons can be learned, and mistakes are not repeated (NHS Resolution, 2021d). NHS Resolution and the Getting It Right First Time (GIRFT) report highlighted the importance that learning from litigation claims can have on improving patient safety and have released a guide for structuring how learning from claims can occur (Machin *et al.*, 2021). The guide includes a minimum dataset which should be recorded for all claims and encourages learning on a local and national level. It discusses the role of NHS Resolution in the form of claims handlers for local trusts and online learning materials they will provide, it also encourages trusts to use panel law firms to get feedback from claims. The learning from litigation guide encourages quarterly reviews of claims and encourages claims discussion in departmental meetings in order to raise awareness of claims to those staff who have not been involved. It highlights the improvements that can occur as a result of this learning which concur with current findings (Machin *et al.*, 2021).

4.4.3.4 Support and training

The current study revealed that throughout the litigation process there are opportunities for learning that could be used to make positive changes going forward. The current findings show that physiotherapists felt unprepared for litigation and often did not understand the implications of litigation and where to go for support. Physiotherapists often learn more about this process throughout their own experience of a claim, however making improvements to the training and support available could help physiotherapists feel more prepared in the event of a claim. This finding appears comparable with that of doctors who often have an incomplete understanding of the impacts of the legal system on their profession, with this information often only being learned by those who have experienced legal issues first hand (Ferorelli *et al.*, 2021).

The current study found that when physiotherapists were notified that they were involved in a claim, they generally contacted the CSP to get support and information on the legal process. However, this support depends on employment status; with employed physiotherapists receiving support from their employer, and self-employed physiotherapists receiving support from the CSP

(Yeowell, Leech, Greenhalgh, *et al.*, 2022). The current findings suggest that when employed physiotherapists contacted the CSP, the CSP did not provide this full explanation as to their role in supporting them through the litigation process. This lack of clarity resulted in the physiotherapists feeling the CSP were unhelpful and unsupportive. In contrast, it was highlighted that the support provided by the CSP to self-employed physiotherapists was positive. Therefore, whilst the CSP appear to be providing a good level of support to self-employed physiotherapists, as the professional body for physiotherapy who themselves highlight that one the most valuable aspects of being a member or the CSP is legal advice (The Chartered Society of Physiotherapy, 2019b), more information needs to be provided to employed physiotherapists regarding where they should seek litigation support. Additionally, having organisational or governing body support in the form of a buddy system, helplines and contacts who can give emotional support as well as advice on the appropriate legal pathways was recommended. In recognition of the impact that litigation can have on the health care professional involved, an NIHR funded UK website has been developed as a resource and to provide support (Second Victim Support, accessed 16 December 2021). It signposts to sources of support available, including profession specific support, however, notable by is absence is physiotherapy. Work needs to be done to include physiotherapy on this website and to link this better to the CSP website.

Although in the current study there was some debate as to when was most appropriate time to implement litigation training, the consensus was that there should be some inclusion of litigation in the pre-registration physiotherapy curriculum, and this should be built upon at postgraduate level. Participants felt that this should be in the form of a brief overview and should prepare students for their working roles. However, this should not be in too much detail, as this would not be appropriate for their stage of learning as they are yet to take on a physiotherapy role and to ensure students do not become overwhelmed or scared and potentially decide to change their career path. Although this does not mean junior physiotherapists will not be involved in litigation claims, and therefore the consensus was that they should be prepared for that when they go into their career. Participants suggested it would then be more appropriate to provide litigation training at various stages of a physiotherapists career, tailored

to their role. For example, those physiotherapists going into advanced practice would have more thorough and detailed litigation training compared to a junior physiotherapist. This is supported by work recently undertaken by The Academy of Medical Royal Colleges (2021) who have developed a National Patient Safety syllabus to improve patient safety in the NHS that could be incorporated into undergraduate and postgraduate healthcare education and continuing professional development.

Many physiotherapists described the complex nature of diagnosing CES. Therefore, it would also be appropriate for training to include learning how to manage complex clinical scenarios where there is uncertainty. Knowing how to take safe and effective action in complex settings with uncertainty is fundamental for patient safety and high-quality care (Ilgen *et al.*, 2019). However, this can be difficult for clinicians who consider certainty to be a necessary precursor for action. Learning how to work comfortably during these uncertain times offers an important opportunity to facilitate development of clinical reasoning (Ilgen *et al.*, 2019). This is an important skill for clinicians assessing patients with suspected CES. The clinical consequence of early uncertainty is often delayed diagnosis and managing uncertainty requires in-depth clinical knowledge and robust communication skills, including the use of safety netting and watchful waiting within physiotherapy consultations (discussed in section 1.1.2) (Greenhalgh *et al.*, 2020). Some concepts of dealing with uncertainty are included in postgraduate curriculums for medics and GPs (Cooper *et al.*, 2022). Some of the techniques they describe to navigate these techniques include core clinical concepts for managing uncertainty, such as using time as a tool, therapeutic examination and safety netting (Cooper *et al.*, 2022). These elements should be considered for inclusion in physiotherapy training to improve decision making and improve clinician confidence in uncertain clinical scenarios.

By improving litigation training and support for physiotherapists, this may help reduce the worry and uncertainty for those physiotherapists who do become involved in a claim, as they should have the knowledge of where to go for support and what is involved in a claims process. This knowledge should also ensure physiotherapists do not feel litigation is a personal attack, as they would

have better knowledge of the claims process. Furthermore, improving support in the workplace and sharing experiences could help physiotherapists talk more openly about litigation and learn how litigation could be avoided in future. This could help to reduce the stigma attached to litigation in the physiotherapy profession and help to reduce the number of claims and ensure patient safety.

4.4.4 Trustworthiness and reflexivity

4.4.4.1 Researcher positionality

Positionality depicts an individual's view of the world and their position in relation to social and political aspects of research, including their beliefs about social reality, knowledge, and the environment. These beliefs are sometimes described as the researchers 'world view' or 'where they are coming from' and are influenced by factors such as the researchers political views, religion or faith, gender, sexuality, historical and geographical location, ethnicity, race, social class, status and their abilities or disabilities (Sikes, 2004; Gary and Holmes, 2020).

Another form of researcher positionality is known as insider-outsider positionality. "Insiders" have been defined as "members of specified groups and collectives or occupants of specified social statuses", while outsiders are described as "non-members" (Merton, 1972). An insider is someone whose characteristics such as gender, race, skin-color, class, sexual orientation, gives them a 'lived familiarity' and prior knowledge of the participant group. An outsider is a someone who does not have any prior knowledge of the participant group (Gary and Holmes, 2020).

For the current study, the researcher was female, qualified to master's level and working as an academic researcher at the time of the qualitative study. The researcher was not a qualified physiotherapist by background but had a similar professional background as a qualified sports therapist who had worked previously in a clinical environment, assessing, and treating musculoskeletal injuries. Therefore, the researcher may be described as an outsider, as they were not a member of the same group. However, the researcher may be largely described as an insider, coming from a similar background as many of the

physiotherapists interviewed in terms of ethnicity and socio-economic status, having a professional background and some prior knowledge of a physiotherapist's role. This mixed orientation was advantageous in some aspects of the study, including easier access to the culture being studied, as the researcher is regarded recognised as a healthcare professional, the ability to ask more insightful questions (due to a level of a priori knowledge), reduced uncertainty as any potential 'culture shock' is removed and the researcher is better able to understand the language, and non-verbal cues from participants (Gary and Holmes, 2020). Furthermore, as the researcher was not a physiotherapist by background the researcher was not knowingly biased, or overly understanding to the culture, the researcher was not too familiar with the culture that they were able to raise questions that may be more insignificant as an insider but provided further clarity. For example:

"Within that clinical aspect of your role, XXX do you have access to things like radiological investigations and are you able to refer on to different specialities as well?"

Participants may not have assumed that the researchers understandings were the same as their own or that information may be 'obvious' to the researcher, as they were not an insider, therefore participants may have better explained their experiences (Gary and Holmes, 2020). A disadvantage to the researcher's positionality was the researcher may have asked questions which would be inherently known by a qualified physiotherapist, or the researcher may have been less familiar with some terminology, in terms of workplace and pathway knowledge. Any lack of understanding by the researcher was clarified during the interview by asking the participant to elaborate further, which allowed a more concrete and balanced understanding by the researcher. However, this may have affected the flow of conversation as participants may spend time elaborating on a previous point rather than focussing on their following thoughts. Alternatively, any further lack of clarity was mitigated through reflexive meetings with the other interviewers who were all from a physiotherapy background.

4.4.4.2 Reflexivity

Fundamental to the trustworthiness of the data is reflexivity. Reflexivity has been described as “a set of continuous, collaborative, and multifaceted practices through which researchers self-consciously critique, appraise, and evaluate how their subjectivity and context influence the research processes.” (Olmos-Vega *et al.*, 2022). Reflexivity techniques have been described and integrated with all aspects of the research process and examples are given throughout the rest of this section.

After themes emerged from the data, member checking was used as participants were sent a copy of the emergent findings to ensure that they accurately reflected their views, increasing the credibility of the findings (Thomas, 2016; Cavaco *et al.*, 2020). This technique was particularly important in the current study as interviews were conducted in order to represent participants’ experiences and perspectives; member checking was used as a validation technique to ensure that participants concur that the research findings formed by the researcher accurately represent participants experiences (Thomas, 2016). Furthermore, member checking contributes to enhanced reflexivity for the researcher, as it allows the opportunity to highlight any preconceptions or biases that may have affected the write up of research findings (Thomas, 2016).

Contacting participants following their interview has sometimes been perceived as intrusive as they may feel obliged to spend additional time reviewing research findings which could be seen as ethically inappropriate if interviewees did not give consent to be contacted again (Thomas, 2016). In the current study, participants gave their approval during the interview to be contacted following the interview as a form of member checking. Participants expressed a keen interest in this and were enthusiastic to discover the research findings. Participants were sent emergent themes rather than, for example, copies of their own transcripts, as member checking was completed to ensure the themes were accurately constructed by the researcher rather than to check nuances of participants individual transcripts. Furthermore, this summary allowed for efficient checking by the participants and therefore is likely to have increased the number of responses attained, by reducing inconvenience for the

participant. All participants who responded to the member checking confirmed that the preliminary themes and findings accurately reflected some, or all of their experiences. Although not all themes applied to every participant, those that did apply to individual participants were accurately represented by the data synthesis, therefore confirming that participant experiences were accurately interpreted by the researcher.

Clinical researchers should monitor their interviewing technique, critically appraising audio recordings of their interviews, including asking others for their views on their technique. The interviewer should take note of how directive they are, assessing whether they are asking leading questions, if their cues are being picked up by the interviewee and if they are allowing the interviewee enough time to respond to questions (Britten, 1995). These techniques were implemented through listening to the audio-recordings of interviews and discussing emerging themes and interviewing techniques with all interviewers, on a weekly basis. This allowed the analysis of the data to be reflexive and feed into the interviews that followed to make the data richer. Furthermore, it allowed the researcher to assess the way interviews were conducted, how questions were being asked to ensure minimal researcher bias on results. Whyte (1982) created a six-point directiveness scale to help novice researchers assess their interviewing technique with number one being least directive and 6 being most directive:

1. Making encouraging noises
2. Reflecting on remarks made by the informant
3. Probing on the last remark by the informant
4. Probing an idea preceding the last remark by the informant
5. Probing an idea expressed earlier in the interview
6. Introducing a new topic

Whilst listening to the interview audio-recordings, these directive techniques were considered. For example, when assessing interview technique, the researcher reflected on how topics were introduced to keep the interview on-topic and to flow well, ensuring any researcher remarks or probes were not leading questions and did not impact the participants narrative. Non-directiveness thought to be optimal, but maintaining an appropriate level of directiveness ensures interviewers maintain control. Strategies for maintaining

control include knowing what it is you want to find out, asking the right questions to get the information you need and giving appropriate verbal and non-verbal feedback (Patton, 1987). These reflexive techniques were used to assess interview quality and to improve data collection throughout conducting the current interviews. For example, at points during the current in-depth interviews, interviewers can become so interested in the participants' story and experiences, that interviews could easily go off-piste. Therefore, to avoid this, the researcher kept in mind the research objectives throughout, and guided the participant based on these.

As stated previously (sections 4.2.1 and 4.2.3), virtual interviews were used in the current study to ensure participant and researcher safety due to the COVID-19 pandemic. Some research states PhD students and early career researchers are limited in gaining first-hand experience of the fieldwork for data collections and field observation when using these virtual methods (Sah, Singh and Sah, 2020). However, some argue that conducting virtual fieldwork is more challenging and provides the skills for future research, as the use of virtual methods and technology in research is likely to increase following the pandemic (Sah, Singh and Sah, 2020). Other factors to consider when using virtual interview methods is sensitive topic areas with vulnerable participants, as participants may be distressed or upset during the interview. However, the use of video conferencing allows researchers to watch participants' expressions and body language, which allows them to be reflexive in this situation (Sah, Singh and Sah, 2020).

In the current study, approaches used to ensure participants felt comfortable included allowing the participant to lead the conversation, ensuring they had plenty of time to speak and did not feel rushed and monitoring the conversation and their body language. Participants were reassured from the outset of the interview that they could stop the interview or take a break at any time throughout, they were reminded of this during any sensitive questions, for example when discussing the personal effects of litigation. The narrative from participant's transcripts suggest that participants felt comfortable with the interviewer and were able to be honest about sensitive topics.

Good interview questions should be open ended, neutral, sensitive, and clear to the interviewee (Patton, 1987). These techniques were used in order to achieve high quality data. This was achieved through asking questions such as:

“Can you tell me more about that?”

It is crucial that interviewers check they have understood respondents' narrative as it was intended, especially when interviewing clinicians when terminology is used that could be unfamiliar; this is particularly important if there is obvious potential for misunderstanding, for example, when a clinician interviews someone unfamiliar with medical terminology (Britten, 1995). This technique was used in the current study through repeating statements back to participants if they were open to interpretation of the researcher, to ensure statements had been understood as they were intended. For example, using the following question:

“So when you say XXX, what do you mean by that?”

During the analysis of qualitative data, NVivo software was used. NVivo allows researchers to analyse text, image, and videos and to code and categorise various data formats, minimising researcher bias (Feng and Behar-Horenstein, 2019). It allows researchers to demographically categorise transcripts as well as creating codes and allowing word frequency analysis, showing how many times a term has been used and in which transcripts the term occurs (Feng and Behar-Horenstein, 2019). This allows researchers to easily check for any terms relating to certain themes. Using this software enabled ease of comparison between potential themes and subthemes and helped to reduce bias during analysis. For example, after completing the interviews, some narrative resonated more with the researcher than others, leading to the belief that this view was highly prevalent across participants. However, through using NVivo, the software highlighted the number of quotes related to each subtheme, and most importantly, the number of transcripts these quotes originated from. This allowed the researcher to re-evaluate sub-themes, as in some cases there was insufficient data for a sub-theme to be created as only one or two participants had contributed to the narrative.

4.4.5 Strengths and limitations

In qualitative research, recruitment of over N=30 participants is deemed to be large for in-depth interviews (Boddy, 2016). However, a large sample was warranted in the current study to allow recruitment of those outside the target population (physiotherapists with experience of CES litigation) to be recruited. Recruiting other physiotherapists (at risk of litigation) and stakeholders, allowed a holistic approach to data collection, to add depth to the data and provide a complete picture of the topic area investigated. Furthermore, the number of participants recruited is thought to be appropriate, as data saturation was achieved (Boddy, 2016).

The use of virtual interviews meant some participants were affected by connectivity issues, which disrupted the natural flow of the conversation. This could have had an impact on the quality of the data collected, as the interviewer or participant may have lost their natural train of thought, as they may have been distracted while resolving the connectivity issues. Furthermore, on occasion there was crosstalk with the interviewee due to connectivity lag times and/or speech patterns. Again, this could have disrupted the flow of conversation and the quality of data. However, researcher skills in dealing with these scenarios improved throughout the study as solutions were found during reflexive meetings, based on anything the interviewer could control. For example, allowing pause time between questions. Virtual interview techniques were optimal for the current study to ensure researcher and participant safety during the pandemic. They also allowed increased feasibility for participants, who likely would not have been able to attend in-person due to the added travel time.

As interviews were conducted by 4 interviewers, there could have been differences in interview technique and therefore, variances in data collection between participants which could have influenced the data collected. However, this was minimised by ensuring interviews had a secondary interviewer, listening to audio-recordings of all interviews for comparison, and regular reflexive meetings with other interviewers. These techniques ensured

consistency and enabled interviewers to reflect on and improve on interview techniques used.

4.5 Chapter conclusion

The overall aim of the current thesis was to explore the experiences of UK physiotherapists in relation to CES and litigation to help support them in their role and ensure their health and wellbeing. The current study has answered thesis objectives 3-5:

3. To understand the experiences of physiotherapists involved in CES litigation cases
4. To understand the support needs of physiotherapists involved in CES litigation cases
5. To investigate the potential training needs for physiotherapists in relation to CES litigation

The current study answered the 3 objectives above using qualitative interviews. This study found that litigation impacted on physiotherapists' physical health and their mental wellbeing and may lead them to practice more defensively. Physiotherapists felt litigation was a personal attack on them and their ability to do their job. Perceptions of a 'blame culture' and perceived stigma associated with the claim, led to a lack of sharing and learning in relation to litigation. Physiotherapists were unsure who they should contact when they found out they were cited in a claim or the support available to them. The need for emotional support for those going through a legal claim was underlined. The need for training was highlighted to understand the process of litigation and range of potential outcomes, which should be introduced during undergraduate training and built on during the physiotherapists career.

The following study (chapter 5) will validate the findings from the current study in relation to the three objectives above, using a UK wide online survey to evaluate if the current findings can be more widely applied to the UK physiotherapy population.

4.6 Recommendations

- Resources for supporting physiotherapists should be created to inform physiotherapists of the legal process and to signpost them to the support available to them. This could be provided on the CSP website or through their employer.
- Learning from litigation is recommended. This could be facilitated through regulatory bodies, governing bodies and employers sharing information relating to litigation claims, both locally and nationally. This could be implemented as a form of training throughout the NHS, sharing information from claims and providing training based on learning from these claims, within trusts, between trusts, regionally and nationally. Other physiotherapy employers could also share their claims information regionally and nationally if they are a large organisation. The CSP could facilitate this training and learning from litigation for self-employed members.

5. National survey

5.1 Introduction

The previous chapter discussed the qualitative study, conducted to gather in-depth data relating to physiotherapists experiences of CES claims. The current chapter presents the fourth research study of this thesis, the national survey, see figure 5.1. The first part of this chapter will address the background and aims of the current study, including how this study will build on the previous findings. The methods section describes how the survey was created, distributed and analysed. The results section includes numerical analysis (presented as statistics and percentages) of the survey responses collected. The chapter will end with a discussion of what the current results indicate in the overall context of this thesis, and a chapter conclusion.

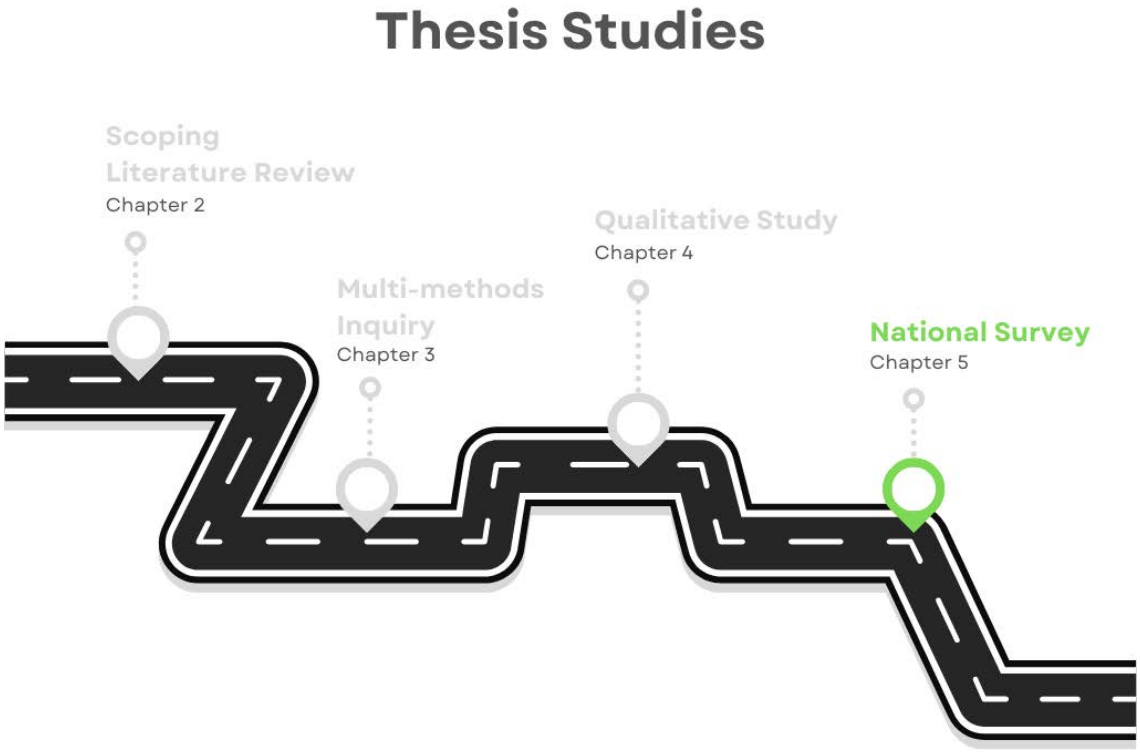

Figure 5.1 National survey

The extent of CES claims involving UK physiotherapists has been reported in chapters 2 and 3 however, this is thought to be an underestimate at 51 (between 2009-2021) due to deficiencies in current reporting methods (Yeowell,

Leech, Greenhalgh, *et al.*, 2022). Therefore, further investigation is needed to determine the true extent of these claims. A lack of information regarding the legal process for physiotherapists was previously found (Leech *et al.*, 2021), which suggests there may be areas for improvement with regards to supporting those physiotherapists going through this process. Due to the lack information available in the public domain, physiotherapists involved in litigation claims may be unsure where to find appropriate support.

The Patient Safety Incident Response Framework (NHS England, 2020) states that in order for healthcare staff to be supported, they should understand why incidents are investigated and the impact of this, furthermore they should have access to support. In other healthcare professions such as midwifery, the impact of litigation has been reported to cause physical and mental ill-health (Robertson and Thomson, 2014). Furthermore, in other professions there was unfamiliarity with the legal process regarding elements such as writing statements and attending case conferences (Robertson and Thomson, 2014).

In health professions such as radiology, fears during long drawn-out legal proceedings in relation to malpractice has been described as ‘malpractice stress syndrome’ which involves psychological reactions including anxiety and anger, and feelings of helplessness, disappointment, distress, humiliation, and guilt (Cannavale *et al.*, 2013). The term ‘second victim’ describes a healthcare employee who has experienced personal or professional impact related to a patient safety incident (Second Victim Support, accessed November 2022). The CSP have acknowledged that physiotherapists involved in patient safety incidents could be ‘second victims’, and that their physical and mental wellbeing could be affected, as well as having an impact on their clinical practice, including reduced professional confidence and the adoption of defensive practice (The Chartered Society of Physiotherapy, 2021).

The national survey reported in this chapter, is the first UK-wide survey that explored the extent and impact of litigation on the physiotherapy profession. As previous chapters have investigated the extent of CES claims for UK physiotherapists (chapters 2 and 3) and the impact of CES litigation on UK physiotherapists including investigating their experiences and their support and

training needs (chapter 4). As stated previously (section 1.6.4), the current chapter investigates litigation for the whole UK physiotherapy profession, including all grades and specialities, and participants were not restricted to those who had experience of CES litigation. This allowed evaluation of whether the previous findings (chapter 4) were applicable to CES litigation and more broadly, to other types of litigation claims nationally. The survey investigated extent of litigation in the profession, allowing analysis of what percentage of physiotherapy litigation is related to CES, and the impact of litigation.

5.1.2 Aims and objectives

The aim of the national survey was to validate findings from chapter 5 in relation to the UK physiotherapists' experiences of CES litigation and their potential support and training needs.

The objectives were to:

1. Investigate the extent of litigation cases amongst UK physiotherapists
2. Understand the experiences UK physiotherapists in relation to litigation
3. Understand the support needs of UK physiotherapists
4. Explore the potential training needs for UK physiotherapists in relation to litigation

5.2 Methods

5.2.1 Design

A cross-sectional survey design was employed to investigate physiotherapists experiences and views of litigation within the profession. Checklists often used in the reporting of surveys include The Checklist for Reporting Results of Internet E-Surveys (CHERRIES), created for web-based surveys (Eysenbach, 2004) and The SUrvey Reporting GuidelinE (SURGE), which was created primarily for self-administered, postal surveys (Grimshaw, 2014). However, it has been found that many authors failed to report on all items included in these checklists and the creation of an updated single comprehensive checklist was recommended (Turk *et al.*, 2018). Furthermore, neither CHERRIES nor SURGE included a delphi exercise during their creation, CHERRIES also lacked a comprehensive literature review (Sharma *et al.*, 2021). The checklist for reporting of survey studies (CROSS) was developed as a universal checklist for

both web-based and non-web based surveys as a single comprehensive checklist for surveys which addresses the inconsistencies in the reporting of survey studies (Sharma *et al.*, 2021). The CROSS checklist was used for the current survey which was developed through an in-depth literature review and a three round Delphi process. It includes 19 sections with 40 items, section topic titles include: title and abstract, introduction, methods, results, discussion and other (Sharma *et al.*, 2021).

The survey included an introductory page with details of the research, participant information including why the survey was being conducted, ethical approval and consent information (Ball, 2019). See appendix 9 for full survey. For online surveys, response submission is commonly used to signify the participant consenting to their data being used (Ball, 2019).

5.2.2 Sample

The survey was open to all qualified physiotherapists who have practiced physiotherapy in the UK, this includes those currently practicing, those who have retired or have previously practiced in the UK. The number of physiotherapists in the UK in 2021 was approximately 78,000 (Statista, 2021). Therefore, this was considered the size of the population. The minimum sample size (N=383) was calculated a-priori using an online sample size calculator (Raosoft, 2004). Assuming a normal distribution, with a margin of 5% and confidence interval 95%, (Taherdoost, 2016).

The link to the survey was distributed through various methods, table 5.1.

Table 5.1 Survey distribution methods

Method	Description
Twitter posts	A series of four tweets were posted on a twitter account dedicated to the current research. Tweet dates and descriptions are as follows: 1. 22/11/2021 – Inviting all UK physiotherapists to complete the survey 2. 13/02/2021 – Thank you to those who had completed, asked to please continue to share the link 3. 13/01/2021 – Tagged CSP regions that were under-represented from preliminary data collected, asking to share link in their areas 4. 28/01/2021 – Last few days before survey ends, asked to please complete if they haven't already
Personal and professional networks	The research team contacted friends and colleagues throughout the UK who were eligible to participate and provided details of the survey and the link. Some of these were individuals such as friends and others were groups for example, postgraduate students, university staff. They were also asked to invite other eligible participants to complete the survey.
Snowball sampling	1. Asking anyone in the research team's networks to spread the word to their friends and colleagues in the profession 2. Twitter posts encouraged UK physiotherapists to share the survey link with their connections 3. At conferences and events, the research team asked attendees to take part and to pass the link onto other UK physiotherapists
Conferences and networking events	A slide was created that the research team presented at the end of any conferences and teaching days (N=2) that were attended while the survey was open, this included brief details of the survey and the link to participate

5.2.3 Survey tool

The survey was created using Online Surveys (Online surveys, 2022) and a convenience sampling method was used. Survey questions were developed based on findings from the previous chapters (chapters 2, 3 and 4) and the expertise of the research team including the Critical Friend Group (CFG) members (Leech *et al.*, 2021; Yeowell, Leech, Greenhalgh, *et al.*, 2022).

All survey questions were closed, multiple choice questions and all questions were compulsory to complete to avoid missing data. Closed questions are ideal for online surveys as they ensure standardised responses, take participant's

less time to complete, and are easier to analyse (Story and Tait, 2019). Research suggests free-text survey responses rarely produce rich enough data to attain sincerity, credibility and quality; for data to be “rich,” it must provide ‘context, personal meaning, emotional and social nuances, and layers of detail’ (LaDonna, Taylor and Lingard, 2018). Often, healthcare practitioners do not usually provide sufficient narrative in the allotted space that provides context and richness (LaDonna, Taylor and Lingard, 2018). Furthermore, the current study was not looking to collect ‘rich’ data, as this was completed in the qualitative study (chapter 4), the current study was looking to validate these previous findings. As there were no free text questions, all questions included an ‘other’ option, to ensure that participants were not forced to choose a multiple choice answer that did not fit their experiences. Giving this type of option is also important in case participants do not know the answer to, or fully understand the question (Ball, 2019).

There was a total of 35 questions in the survey, however participants did not complete all questions as skip-logic was used to route respondents to questions applicable to them based on their responses to previous questions (Sue and Ritter, 2012). For example, there was a set of questions for those without litigation experience and there was another set for those who did have an experience of a legal claim. Furthermore, other questions were only made available to participants based on their previous selections. For example, participants were asked about their employment as part of the demographic questions, they were then asked about their role in that employment so there were separate questions about their role as:

- an NHS physiotherapist
- a non-NHS employed physiotherapist
- a self-employed physiotherapist

Participants would only complete one of these questions based on their previous answer. As skip logic was used in the survey, there were no numbers on the questions as this could cause confusion for participants. For some questions, terms such as ‘defensive practice’ were used. In these instances, examples of actions related to these categories were included to minimise misinterpretations by participants. For example:

- Defensive practice - e*.g. more detailed note taking*

- Lower thresholds for referral - e*.g. to other departments/ for investigations*
- Improved access to investigations - *e.g. 24-hour access to MRI locally*

5.2.4 Pilot testing

Question validation aims to confirm that the survey questions capture the anticipated data and that questions are not interpreted differently by researchers and participants; this is a crucial step before launching a survey that is often overlooked in online research (Ball, 2019). Therefore, questions were pre-piloted by the four members of the research team. The online survey was then piloted by four physiotherapists from various backgrounds:

- An NHS employed physiotherapist
- A self-employed physiotherapist
- A non-clinical physiotherapist
- A retired physiotherapist

The pilot participants were reflective of participants in relation to the target population. This ensured questions were applicable, understandable and that the survey skip logic worked correctly. The survey asked physiotherapists to select the employment category in which they spent most of their time if they worked across different sectors. Moreover, those physiotherapists who had experience of litigation were asked to answer questions in relation to the claim which affected them the most if they had experience of more than one claim. This was to avoid confusion and ensure ease and efficient completion of the survey (see appendix 8 for full blank survey).

Alterations were made to the survey based on the feedback given from the pilot participants, including grammar changes to some questions and one mechanical adjustment to the number of options participants were able to choose. Feedback was also taken regarding the time taken to complete the survey, which took pilot participants between 5-10 minutes to complete.

5.2.5 Eligibility criteria

Eligibility criteria was confirmed by a checkbox at the beginning of the survey, asking participants ‘Are you a qualified Physiotherapist who has worked in the UK?’. Those who did not meet the eligibility criteria were diverted to a final page where they were thanked for their interest and informed that they were not eligible to take part.

5.2.6 Analysis

Descriptive analysis was completed on all data in order to compare survey responses between participants. There was no missing data as all questions were compulsory to answer and survey responses were only collected once the participant clicked the ‘finish’ button at the end of the survey.

5.3 Results

The current results section presents figures as total numbers, percentages and numbers and percentages interchangeably where appropriate, throughout this section. Total numbers are used, for example, when reporting the number of claims. Percentages are used when describing results relative to a population, for example, demographic data. Numbers and percentages are used when describing the outcome or category of claims, as the total number of claims in each category is key information and the percentage data allows ease of comparison across the various possible categories.

A total of 688 survey responses were collected, which exceeded the minimum sample size calculated a priori (N=383). Therefore, the current sample achieved means the margin of error accepted is lower at 4% and the confidence level is higher at 96% (Raosoft, 2004) than the a priori sample size calculation.

Bar charts in the current results section display a maximum of five options, this was decided as many questions had a lot of answer options, due to their exhaustive nature as no free text boxes were used. This enabled the most popular options to be presented clearly. Appendix 10 shows the survey responses in their entirety.

5.3.1 Demographic data

Of the 688 responses, 73% of participants were female, 26% were male and <1% preferred not to say. See table 5.2 for detailed demographic data.

Table 5.2 Demographic Employment Data

Employment		Role		Area of practice	Years qualified
NHS	N=507 (74%)	AFC Band 8	N=180 (36%)	Neuromusculoskeletal N=408 (62%) Other N=143 (22%) Neurology N=41 (6%) Respiratory N=20 (3%) Paediatrics N=19 (3%) Women's health N=14 (2%) Oncology N=4 (1%) Learning difficulties N=4 (1%) Cardiovascular N=3 (<1%) Mental health N=2 (<1%) Burns N=1 (<1%) Cystic fibrosis N=1 (<1%) Transplants N=1 (<1%)	>20 years N=306 (44%) 16-20 years N=121 (18%) 11-15 years N=112 (16%) 0-5 years N=76 (11%) 6-10 years N=73 (11%)
		AFC Band 7	N=172 (34%)		
		AFC Band 6	N=129 (25%)		
		AFC Band 5	N=24 (5%)		
		Other	N=2 (<1%)		
Non-NHS	N=82 (12%)	Senior physiotherapist	N=32 (39%)		
		Manager / Head of service	N=15 (18%)		
		Advanced practice physiotherapist	N=12 (15%)		
		Other	N=10 (12%)		
		First contact practitioner	N=7 (9%)		
		Junior physiotherapist	N=4 (5%)		
		Consultant physiotherapist	N=2 (2%)		
Self-employed	N=72 (10%)	Private practitioner	N=37 (51%)		
		Private practice owner	N=33 (46%)		
		Other	N=2 (3%)		
Non-clinical	N=25 (4%)				
Retired	N=2 (<1%)				

Most respondents were from England (76%), followed by Wales (12%), Scotland (7%) and Northern Ireland (5%) (figure 5.2).

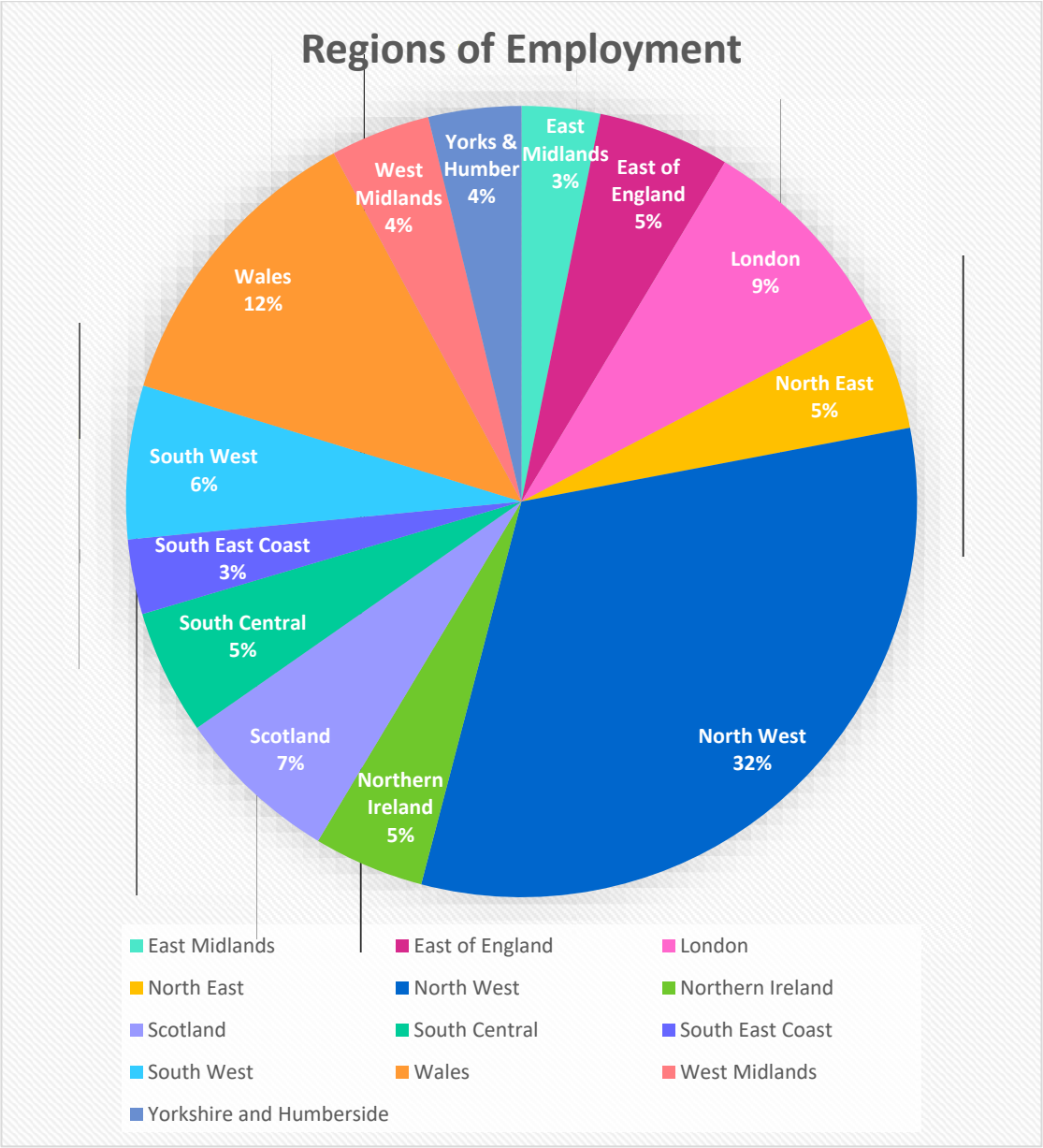

Figure 5.2 Regions of participants' employment

5.3.2 Extent of litigation for UK physiotherapists (objective 1)

The majority of respondents had not been involved in litigation (90%), however 10% participants had been personally involved in litigation (cited in a case). A total of N=128 claims were reported in the current survey.

Participants who had been involved (cited) in a litigation claim, had most commonly been involved in one claim (75%) followed by 2-3 (17%). Some participants (8%) had been involved in ≥4 claims.

Claims were most often settled out of court (49 claims, 38%) dropped (31 claims, 24%), and relatively few claims went to court proceedings (16

claims, 13%). However, 20% of physiotherapists were not informed of the outcome of the claim (25 claims).

Claims that participants were cited in were most commonly related to neuromusculoskeletal conditions (N=53, 74%) or other (N=14, 19%). Those in the neuromusculoskeletal category were most commonly related to other (N=27, 51%), Cauda Equina Syndrome (N=12, 23%) or undiagnosed fractures (N=6, 11%).

Participants roles at the time they were involved in the litigation case was fairly evenly spread between private practitioner (29%), advanced practice physiotherapist (21%), junior physiotherapist (21%) and other (18%). Participants' level of experience at the time they were involved in the litigation case was also fairly evenly spread between 0-5 years (24%), 6-10 years (18%), 11-15 years (17%), 16-20 years (22%) and >20 years (19%).

5.3.3 Experiences and opinions of UK physiotherapists in relation to litigation (objective 2)

Participants involved in a litigation claim(s) were also asked about if or how the claim had affected them both personally and professionally. Based on the statement, *'There was an impact on me personally as a result of litigation'*, 64% of respondents agreed or strongly agreed and 29% disagreed or strongly disagreed. See table 5.3 displaying spread of responses to the statement.

With regards to the statement, '*There was an impact on me professionally as a result of litigation*', physiotherapist's opinions were divided with a total of 50% agreeing or strongly agreeing and 46% disagreeing or strongly disagreeing. See table 5.3 displaying spread of responses to the statement.

Table 5.3 Distribution of responses to statements

Strongly Disagree	*'There was an impact on me personally as a result of litigation'*							Strongly Agree
1	2	3	4	5	6	7	8	9
N=7, 10%	N=7, 10%	N=6, 8%	N=1, 1%	N=5, 7%	N=3, 4%	N=6, 8%	N=9, 13%	N=28, 39%
Strongly Disagree	*'There was an impact on me professionally as a result of litigation'*							Strongly Agree
1	2	3	4	5	6	7	8	9
N=13, 18%	N=9, 13%	N=8, 11%	N=3, 4%	N=3, 4%	N=4, 6%	N=8, 11%	N=9, 13%	N=15, 21%

In terms of personal effects of litigation on the participants, the majority stated it caused them stress (76%), worry and anxiety (67%) and low mood and /or depression (33%). A total of 11% of participants stated there was no effect on them personally.

Participants more commonly selected mental wellbeing effects (N=127) followed by behavioural effects (N=114) and then physical health effects (N=19). There were more behavioural options listed than other categories. This data is presented as the number of responses for each option, as it was a multi answer question, therefore percentages are more than 100% totals. Please see figure 5.3 for the full spread of results for this question.

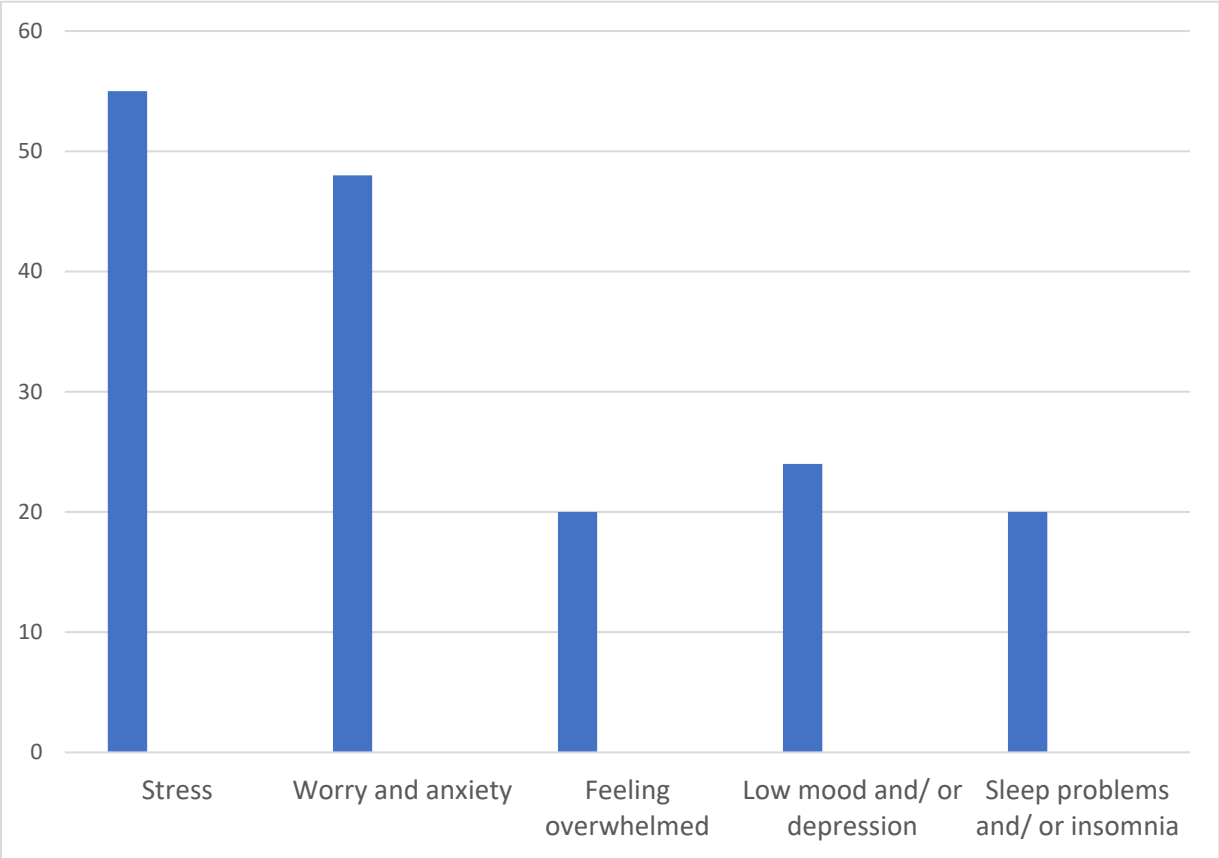

Figure 5.3 Spread of results regarding personal effects of litigation
(multi answer question – participants could select more than one option)

The most common effect on participants professionally as a result of litigation was defensive practice e.g., more detailed note taking, lower threshold for referral to another department or to order investigations (68%), the next most common answer was 'no effect on me professionally' (22%). See figure 5.4 for the full distribution of responses to the question.

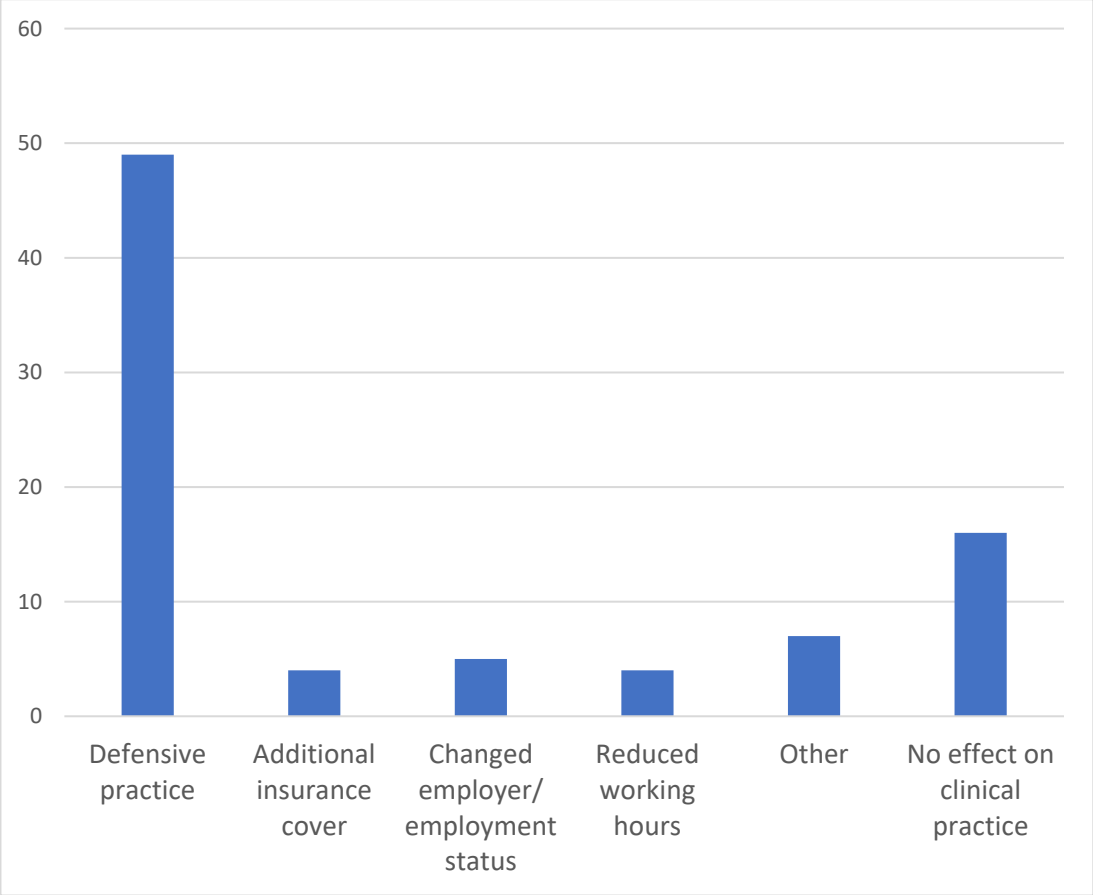

Figure 5.4 Spread of results regarding professional effects of litigation *(multi answer question – participants could select more than one option; the top 6 results were displayed as two options had the same number of responses)*

Participants were asked what they think the key learning points were for their employer/practice as a result of the participant being involved in a claim. The most common responses were better knowledge of the litigation process (47%) and changes to note taking (42%). See figure 5.5 for the full distribution of responses to the question.

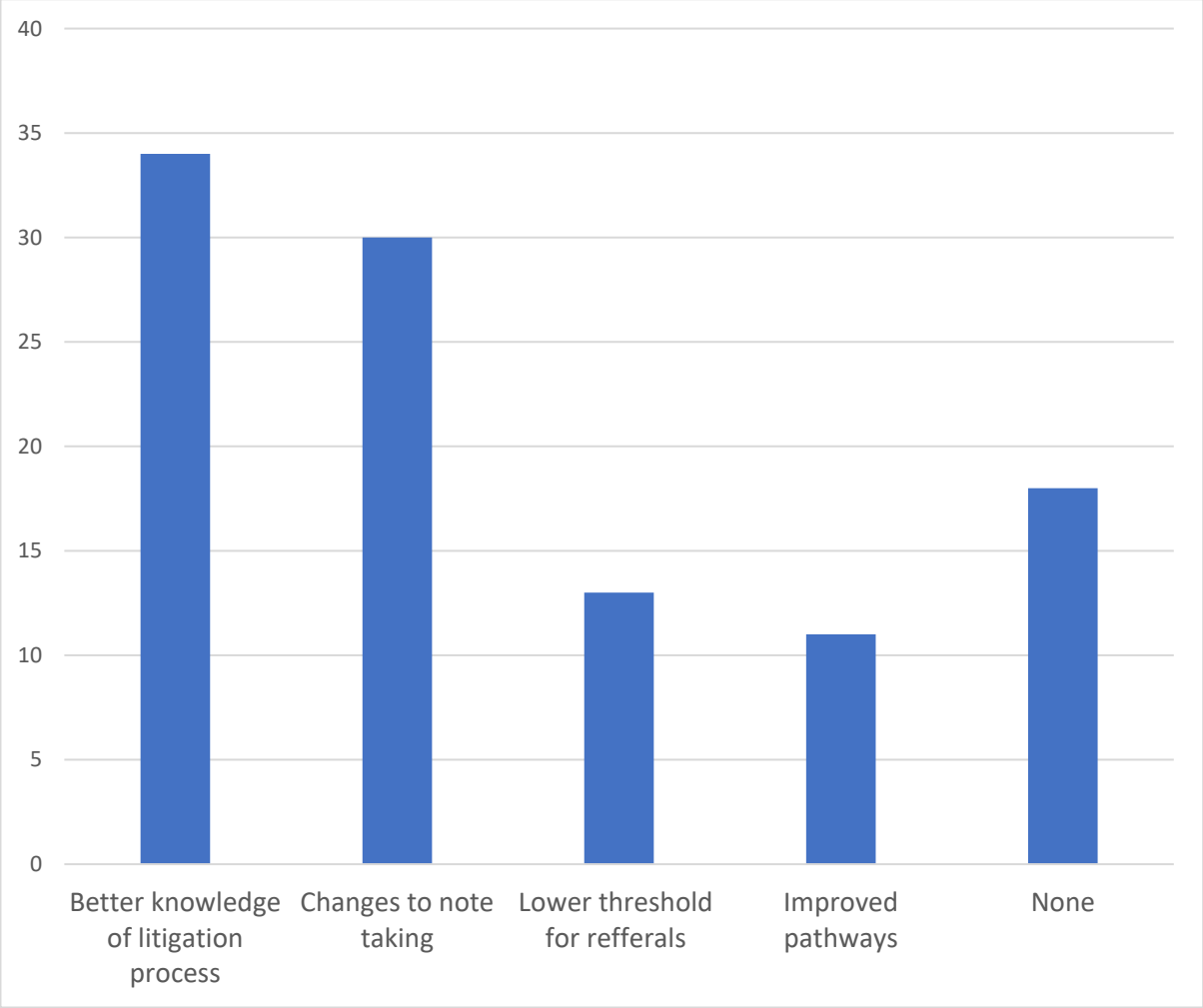

Figure 5.5 Spread of results showing key learning points were for employer/practice (multi answer question – participants could select more than one option)

As a result of their litigation experience, participants most often stated they made changes to their note taking (56%) and had better knowledge of the litigation process (50%). Many also reported they had a lower threshold for referrals (29%), made changes to clinical practice (29%) and make use of peer support available (21%).

The following results are based on responses from participants with no experience of litigation. Those who had not been directly involved in litigation, were often aware that litigation could affect their career (94%). Those physiotherapists who had an awareness of litigation, most often stated this awareness had no effect on them personally (48%), however many physiotherapists stated this awareness caused them stress (42%) or

worry and anxiety (37%). Please see figure 5.6 showing the distribution of responses in relation to personal effects of awareness of litigation.

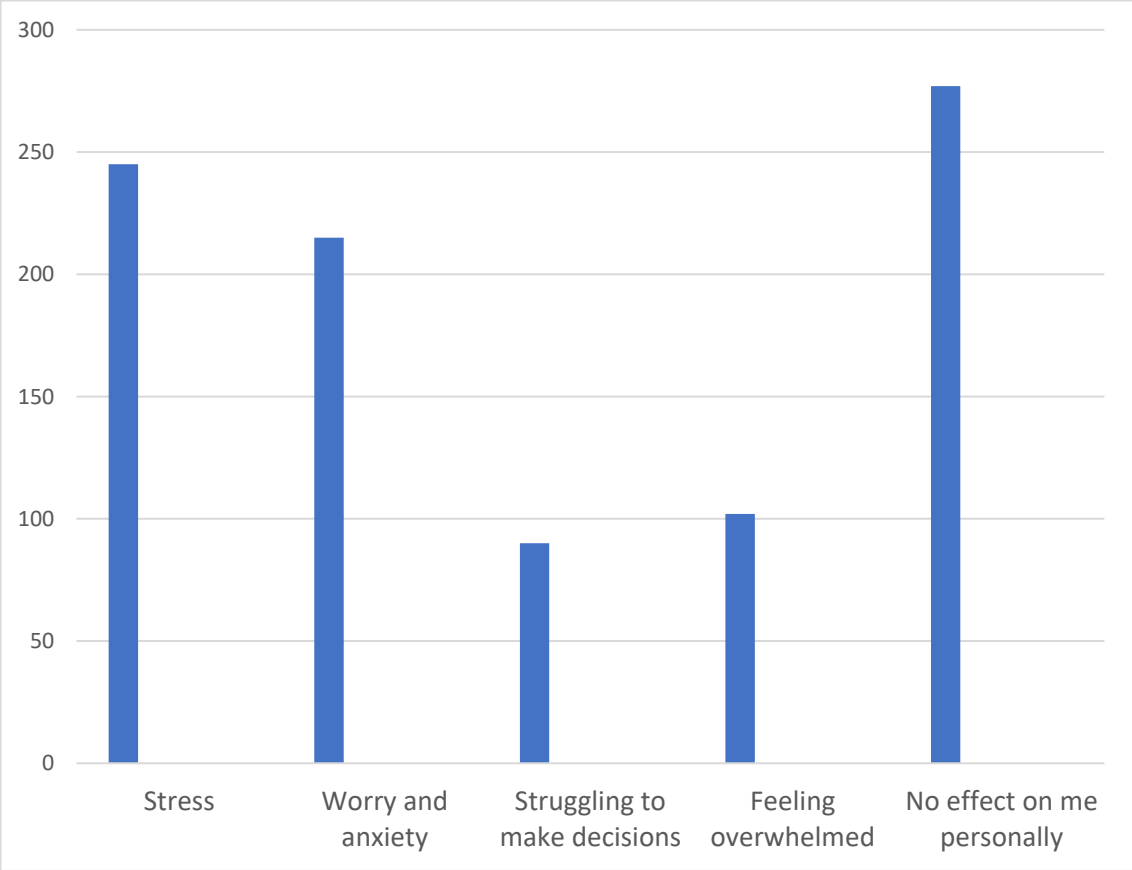

Figure 5.6 Personal effects of awareness of litigation (multi answer question – participants could select more than one option)

In terms of effects on their clinical practice, most participants with an awareness of litigation said they practiced more defensively, (for example, more detailed note taking, lower threshold for referral to another department/ to order investigations) due to their awareness of litigation (69%). Around a quarter of those with an awareness of litigation said it had no effect on their clinical practice (26%). Please see figure 5.7 for full list of effects on clinical practice.

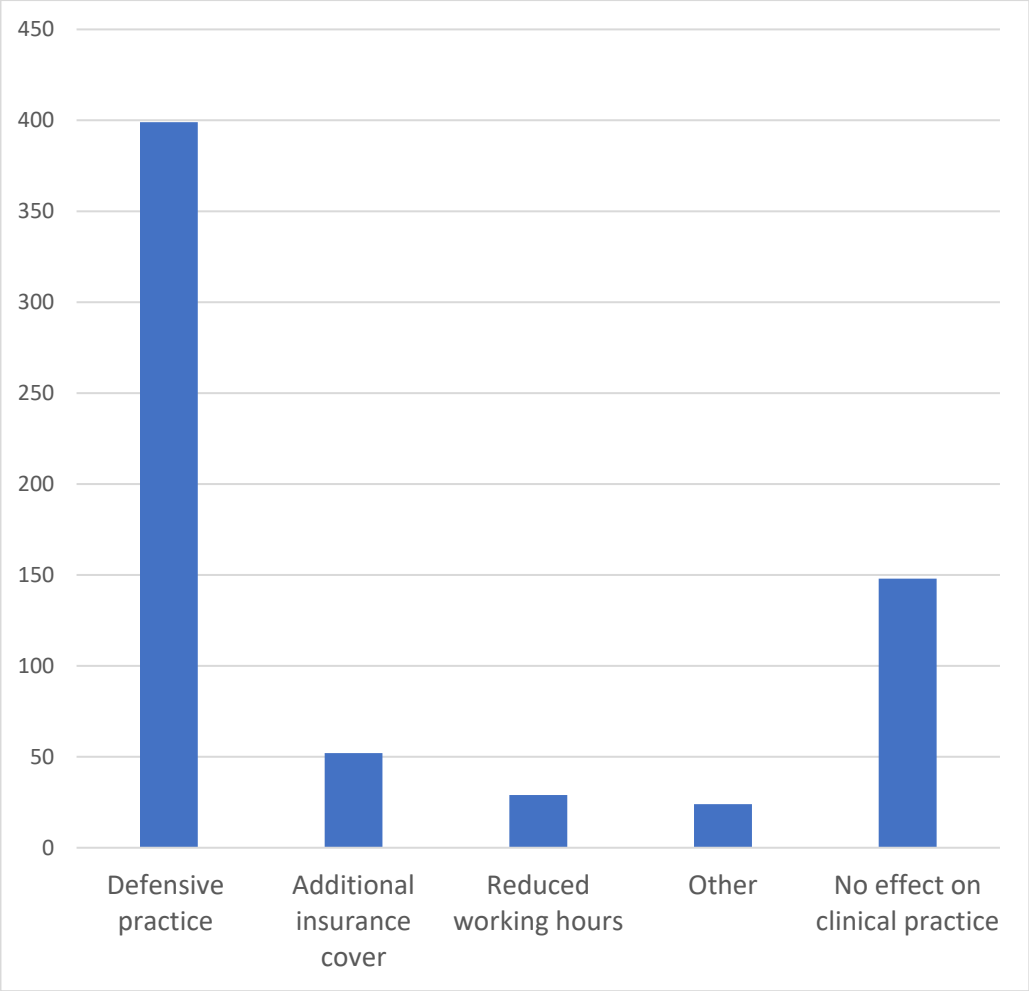

Figure 5.7 Effects of awareness of litigation on clinical practice (multi answer question – participants could select more than one option)

5.3.1 Support needs of physiotherapists (objective 3)

All survey participants (with and without litigation experience), answered questions relating to support needs. The majority (70%) of participants said they would know where to go for support with the legal process if they found out they were involved in litigation. However, most respondents (57%) said they would contact the CSP for initial support, of these 16% were self-employed. The second most common answer was their employer (39%). For emotional support, most respondents would turn to their family and friends (78%) and their line manager (66%), followed by peer support (60%) and the CSP (39%).

For those involved in litigation, it was most commonly (65%) reported that they knew where to go for support with the legal process when they found out they were involved in a claim. Most of these participants said they contacted their

employer (57%) for initial support in the legal process, the CSP was the second most popular contact for support (33%) (participants were able to select more than one option). In terms of emotional support, the majority of physiotherapists received support from family and friends (36%), peer support (35%), received no support (32%) or got support from their line manager (31%).

Based on the statement *'The level of support with the legal process I received was satisfactory',* 46% of respondents disagreed or strongly disagreed with this statement compared to 42% who agreed/strongly agreed. See table 5.4 displaying spread of responses to the statement.

Table 5.4 Distribution of responses to statements

Strongly Disagree	'*The level of support with the legal process I received was satisfactory'*							Strongly Agree
1	2	3	4	5	6	7	8	9
N=13, 18%	N=10, 14%	N=9, 13%	N=1, 1%	N=9, 13%	N=2, 3%	N=12, 17%	N=3, 4%	N=13, 18%
Strongly Disagree	'*It would be helpful having a debrief with an independent professional to discuss the case confidentially*'							Strongly Agree
1	2	3	4	5	6	7	8	9
N=5, 7%	N=1, 1%	N=7, 10%	N=1, 1%	N=8, 11%	N=4, 6%	N=8, 11%	N=6, 8%	N=32, 44%

In the interest of improving support for physiotherapists going through legal claims, participants with experience of being involved in a claim were asked if they agreed or disagreed to the statement, '*It would be helpful having a debrief with an independent professional to discuss the case confidentially*'. The majority of physiotherapist's agreed with 69% were on agreeing or strongly agreeing. A total of 19% of respondents were on the disagreed or strongly disagreed. See table 5.4 displaying spread of responses to the statement.

The majority of participants (91%), said it would be useful to have more resources available for support with the litigation process. The most preferred type of resource was online support information (91%) followed by information over the phone (30%). Participants most commonly thought these resources should be on the CSP website (90%) followed by their employers' website (46%).

5.3.2 Potential training needs for physiotherapists in relation to litigation (objective 4)

All survey participants (with and without litigation experience), answered questions relating to training needs. With regard to litigation training for physiotherapists, the majority of physiotherapists said that training should be mandatory (78%). Most participants thought the CSP should be responsible for overseeing the training (58%), followed by their employer as a condition of employment (49%) and the HCPC as a condition of registration (41%). Participants thought litigation training should be available at both undergraduate level (77%) and postgraduate level (68%).

5.4 Discussion

This chapter investigated the extent of litigation cases amongst UK physiotherapists and explored the experiences of UK physiotherapists in relation to litigation, on a national scale. Furthermore, this study investigated the support and potential training needs for physiotherapists in relation to litigation.

5.4.1 Demographics

The survey sample had a high level of confidence (96%) and a low margin of error (4%), which means there is 96% certainty results represent the opinions of the target population. The majority of participants were female (73%) and employed by the NHS (74%), this reflects the demographics of the physiotherapy profession with 76% of physiotherapists being female (HCPC, 2018a) and 70% of physiotherapists working in the NHS (The Chartered Society of Physiotherapy, 2017b). If a sample is representative, it should mirror the characteristics of the broader population, this ensures generalisability and reduces effects of sample bias (Story and Tait, 2019). Most participants worked in the neuromusculoskeletal area of practice, this is expected as musculoskeletal is the largest area of practice in physiotherapy (Southorn, 2010). At the time of survey, most participants had many years of experience in physiotherapy, with most being qualified over 20 years (44%). This corresponded to participant job roles, with most being employed in senior NHS

roles (69% in NHS AFC band 7 and above) or a senior physiotherapist in a non-NHS organisation (39%).

A total of N=128 claims were reported in the current survey. In 20% of claims, the physiotherapist was not informed of the outcome of the claim. By not being informed of the outcome of the claim, this could cause the physiotherapist involved undue stress and anxiety as they may believe the case is ongoing and do not have closure on the events relating to the claim. This could be contributing to the personal impacts of litigation cases for UK physiotherapists.

5.4.2 Claims data

Claims that participants were cited in were most commonly related to neuromusculoskeletal conditions (74% of claims) and of these, 12 claims were related to CES. When participants were asked about their role at the time of the claim (that had most effect on them if they were involved in more than one), 21% were advanced practice physiotherapists, 29% were private practitioner physiotherapists and 21% were junior physiotherapists. This shows that although most respondents were more senior physiotherapists at the time of survey, many were involved in claims as junior physiotherapists. Junior physiotherapists may have been involved in claims due to inexperience, as they may be involved in assessing or treating patients with conditions outside of their scope of competency. It has been stated that health care practitioners should only ever act within their scope of competence, as if the practitioner undertakes a procedure that is outside of their scope of competence they have a duty of care towards the patient to perform that procedure with skill and care (Buttress and Marangon, 2008). Furthermore, this scenario may also mean the healthcare professional is breaching their professional duties, for example, the professional code of conduct for nurses states that a nurse is obliged to seek help from a competent practitioner in any scenario in which they would need to practice beyond their level of competence or outside their area of registration (Buttress and Marangon, 2008). Similarly, the HCPC standards of proficiency for physiotherapists defines scope of practice as “the area or areas of your profession in which you have the knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets our standards and does not pose any danger to the public or to yourself.”. The standards state “As long as

you make sure that you are practicing safely and effectively within your given scope of practice and do not practice in the areas where you are not proficient to do so, this will not be a problem. If you want to move outside of your scope of practice, you should be certain that you are capable of working lawfully, safely and effectively. This means that you need to exercise personal judgement by undertaking any necessary training or gaining experience, before moving into a new area of practice." (HCPC, 2018b).

Advanced physiotherapists may be at risk of being involved in a litigation claim due to their increased responsibility, accountability and likelihood of seeing undifferentiated diagnoses (Finucane *et al.*, 2022). Senior physiotherapists are more likely to be at risk of litigation for these reasons and therefore are more likely to have an awareness or an opinion on litigation, regardless of whether they have their own experience of it due to this autonomy.

5.4.3 Litigation effects

Most physiotherapists with an experience of litigation stated it caused them stress (76%), worry and anxiety (67%) and low mood and /or depression (33%). This highlights the impacts on physiotherapists involved in these claims. Other health professions have also highlighted issues such as stress as a consequence of litigation and how this can also lead to needing time off work (Robertson and Thomson, 2016). Opinions of survey participants were divided as to whether litigation impacted participants' clinical practice. However, for those affected, the most common impact was defensive practice, which again mirrors that of the responses from those with an awareness of litigation. While some elements of defensive practice have negative impacts such as costs to the NHS and burden to the patient, some elements such as more detailed note taking and improvements in follow up can be positive elements of defensive practice (O'Connell, 2021). In this study, 56% of participants with litigation experience cited changes to their note taking as a learning point from their involvement. Improving documentation was also found as an element of defensive practice as an effect of litigation for midwives (Robertson and Thomson, 2016). However, there was debate over whether increasing the amount written actually improved the quality of documentation while also considering the time constraints on these health professionals; therefore they

advised keeping records clear and relevant to practice and highlighted the continuing challenge for midwives reaching the correct balance between relevance and the time taken to write the notes (Robertson and Thomson, 2016).

Of those participants with no experience of litigation, 94% said they had an awareness that litigation could affect their career. Although many participants said this awareness had no effect on them personally, 42% stated it caused them stress and 37% said it caused them worry and anxiety. Furthermore, the majority of physiotherapists with an awareness of litigation (69%) said that their awareness caused them to practice more defensively. For example, they would have more detailed note taking, lower thresholds for referral to another department/ to order investigations. This shows the extensive impact that litigation is having on clinical practice in physiotherapy. This is comparable to other health professions, with over half of the doctors (59%) surveyed in previous research practicing defensively (Ortashi *et al.*, 2013). With lower thresholds for referral, patients could be sent for unnecessary investigations. These unnecessary investigations, appointments and additional interventions are costly and may not lessen patient worries (Finucane *et al.*, 2022). This is not only a burden for the patient but can have negative health impacts in the case of unnecessary imaging. Furthermore it is thought that the cost of defensive practice to the NHS is high and this could be a major contributor to NHS budget deficits (Ortashi *et al.*, 2013).

5.4.4 Support and training

A key finding from the current study shows that most physiotherapists believe they know who to contact for support if they become involved in a litigation case, however this was often the wrong place to contact as support is based on the physiotherapist's employment. Most participants said they would contact the CSP in the event they become involved in litigation, however the CSP only provide support for those physiotherapists who are self-employed (Yeowell, Leech, Greenhalgh, *et al.*, 2022). Therefore, given that the majority of the participants in the current study were employed (86%), most of these participants should contact their employer for support if they become involved in a legal claim. Since the research associated with the current thesis has been

conducted, the CSP have updated some of their website information pages in relation to physiotherapists insurance and who is covered (The Chartered Society of Physiotherapy, 2022). The CSP acknowledge that their insurance policies are often misunderstood by members “The CSP PLI scheme is one of the benefits that is highly valued by our members, but it is also one that is poorly understood.”. Furthermore, it states “Where members are employed in advanced practice roles, their employer provides the indemnity for all of the role.” (The Chartered Society of Physiotherapy, 2022). As clarification improves from physiotherapists’ employers and the CSP, physiotherapists should be aware of who to contact in the event of a claim being brought against them. Continuing to make improvements to information available on these webpages could also improve support for physiotherapists as there is a clear consensus that it would be useful for physiotherapists to have more resources available for support with the litigation process.

With regards to litigation training, physiotherapists believe mandatory training should be available at both undergraduate and postgraduate levels. This seems appropriate given that 24% of physiotherapists involved in a legal claim had 0-5 years’ experience in their role at the time of litigation. This would allow physiotherapists to have some litigation related training from the outset of their career. Having training at the postgraduate level allows more in-depth training to occur later in the physiotherapists career when they may be transitioning to more autonomous roles. This training could be implemented by the CSP or employer to help prepare physiotherapists for potential litigation throughout their career. Furthermore, physiotherapists with an experience of litigation stated it would be helpful to have a debrief with an independent professional to discuss their case confidentially. The qualitative study (chapter 4) highlighted that it would be useful to have a form of buddy system or helpline to provide physiotherapist with a contacts who can provide confidential support (section 4.4.3.4). The MDU offer a peer support network for members going through a complaint or investigation, they offer confidential support and reassurance from fellow medical professionals who have had first-hand experience of the process themselves (MDU, 2023). Although MDU membership is available to physiotherapists, this is not well advertised and currently, support is aimed at other health professions. Further consideration of how this could be

implemented in physiotherapy and who would be responsible for overseeing this is needed, to ensure physiotherapists have the same standards of support as other health professionals.

5.4.5 Strengths and limitations

This is the first UK-wide national survey that explores the impacts of litigation on the physiotherapy profession. Furthermore, the current survey captured a substantial sample size far greater than the minimum sample determined a priori. With a larger sample, the margin of error is reduced, however this occurs at a decreasing rate due to diminishing returns (Taherdoost, 2017; Story and Tait, 2019). When margins of error are reduced to less than 4%, the number of participants required increases disproportionally. This is a valuable consideration when balancing precision of data with the practicality of surveying large numbers of subjects (Story and Tait, 2019). Therefore, obtaining a larger sample in the current survey could have further decreased the chance of sampling errors, though the benefits of this would be marginal. As the survey was anonymous, there was no way to ensure participants did not complete the survey multiple times. However, due to the time pressured roles of UK physiotherapists, it is unlikely that participants would have attempted to complete the survey more than once.

No open text questions were included in the survey, this means participants needed to select pre-determined options. This design was most appropriate for the number of potential participants being large due to the target population (~78,000), meaning it would not be feasible to collect and analyse free text answers. Furthermore, using multiple choice answers allowed ease of completion for participants. The disadvantage of using closed questions is that they can sometimes be difficult to write as response options need to be exhaustive and mutually exclusive (distinct from each other) (Story and Tait, 2019). Including every possible option can result in overly long lists of responses that can cause survey fatigue and non-response, however using an ‘other’ response option with an additional open text box such as ‘please describe/specify’ could ensure a reasonable number of response options while avoiding missing important data (Story and Tait, 2019). In the current study, 19% of all claims were related to ‘other’ and 51% of claims in the

neuromusculoskeletal category were related to ‘other’ conditions. The multiple-choice options provided for all questions of the survey were based on robust research including, a scoping literature review, multi-methods inquiry, and a series of qualitative interviews. Furthermore, the survey was piloted appropriately. However, despite being as robust as possible, a large number of the claims reported are in areas unknown at this time as they were reported in the ‘other’ category. These claims could have been health and safety related such as slips, trips and falls or sports injury claims which were not included in the options list. These could have been some of the categories of claims captured in the ‘other’ category, this is an area for further research. Although no free text boxes were used in the current study due to feasibility of appropriate analysis and to ensure ease of completion for participants, this could have been useful in this instance to capture this missing data.

In relation to the extent of litigation claims, participants were initially asked how many claims they had been involved in, for this question three options were provided (1 claim, 2-3 claims or ≥4 claims). These options were chosen based on the previous data collected (chapters 2, 3 and 4), as physiotherapists tended to be involved in low numbers of claims most commonly. Furthermore, as stated previously, no open text boxes were used to allow ease of completion and appropriate analysis. However, in order to get a more accurate number of how many claims physiotherapists have been involved in, a drop-down box of numbers or an open text box could have been used.

5.5 Conclusion

The aim of the current chapter was to validate the findings from the previous chapters (chapters 2, 3 and 4) in relation to extent of clinical negligence claims in physiotherapy, the experiences of physiotherapists in relation to litigation claims and the support and training needs of physiotherapists involved in litigation claims. A total of 10% of physiotherapists in the UK have been involved in litigation. Causa Equina Syndrome claims made up 9% of all claims recorded in the current survey and 23% of claims in the neuromusculoskeletal category. Having experience or an awareness of litigation affects physiotherapists mental wellbeing and clinical practice. Support with litigation

cases should be improved for physiotherapists through resources implemented by the CSP or their employer and training in relation to the legal process should be mandatory. Litigation is a highly stressful experience for those who experience it and is a source of concern for many others and can lead to changes in clinical practice.

The findings from the current chapter correspond with previous findings in relation to the experiences of physiotherapists in relation to litigation and the impacts this has on their personal lives and professional practice. The current study validates the support and training needs of physiotherapists in relation to litigation, on a national level. This ensures recommendations from the current research are accurate which could improve practice in the future.

5.6 Recommendations

- Physiotherapists should have access to confidential support if they become involved in litigation. It is recommended that physiotherapists involved in litigation have access to a debrief service with an independent professional to discuss their case confidentially, to provide them with support. This could be a helpline for physiotherapists to have a confidential support from other clinicians who have experienced legal claims.
- Training should begin with some basic litigation information for physiotherapists at undergraduate level, delivered by universities. Further, more advanced training should then be available as physiotherapists begin and advance through their clinical careers. This could be overseen by the CSP as a condition of membership and by employers as a condition of employment.

6. Overall discussion

This chapter presents the discussion of the key findings from across the whole thesis. The latter part of this chapter will discuss the implications of the findings.

6.1 Discussion of thesis findings

6.1.1 Impact of litigation

It was previously found that other health professions involved in litigation cases can experience stress, health issues and negative impacts on their clinical practice (Robertson and Thomson, 2016). The research presented in this thesis found that being involved in a litigation claim commonly causes negative health impacts such as stress and anxiety, for UK physiotherapists. Work related stresses such as these can cause negative effects on health care providers' quality of care delivery, efficiency, and overall quality of life. Therefore, it is crucial to identify and mitigate these factors in order to protect the mental health and well-being of healthcare workers (Søvold *et al.*, 2021).

Highlighting these negative effects of litigation confirms that changes need to be made as these impacts are harmful to clinicians impacting both their personal and professional lives, causing sickness, burnout, reduced job satisfaction or causing physiotherapists to leave the profession (Scott, 2015; The Chartered Society of Physiotherapy, 2021). Furthermore, physiotherapists may need time off work due to mental and physical impacts of litigation or they may decide to leave profession entirely. Retention of physiotherapists in FCP roles has been recently highlighted as an issue, as some FCPs are leaving these roles due to these negative impacts on their health and wellbeing (Ingram, Stenner and May, 2023). This means there is a loss of talent to the profession, and it may put strain on teams of physiotherapy staff who may be working with reduced numbers. Loss of physiotherapy staff could cause further issues as FCP roles were reported to be advantageous in freeing up GP appointments, reducing secondary care referrals and scan requests, increasing patient satisfaction, and potentially reducing costs (Halls *et al.*, 2020). Therefore, if physiotherapists start to leave these roles, these overarching improvements for the healthcare system

may be reduced. Therefore, urgent action should be taken to address this issue.

These negative effects are comparable to those seen in other health professions such as midwifery (Robertson and Thomson, 2014). Doctors also experience moderate/ severe depression and moderate/ severe anxiety when involved in complaints, this distress appears to increase when the complaint is escalated with highest levels of depression and anxiety following GMC referral. Furthermore, many doctors felt victimised, bullied and almost a third spent over one month off work (Bourne *et al.*, 2015).

The national survey (chapter 5) also revealed that junior physiotherapists are often involved in litigation claims, confirming that physiotherapists at any level are at risk of being involved in litigation. Possible reasons for junior physiotherapists involvement in legal claims could include inexperience, or the increased risks of social, economic and legislative contexts in which junior clinicians of the new millennium practice in their clinical profession (Ferorelli *et al.*, 2021). This is discussed in section 5.4.2.

This thesis also highlights the negative impacts of litigation on physiotherapists clinical practice, with most practicing defensively as a result of litigation. Defensive practice had been observed previously in other health professions such as medics and midwives (Ortashi *et al.*, 2013; Bourne *et al.*, 2015; Robertson and Thomson, 2016), the impacts of defensive practice for both have been previously discussed (section 5.4.3), including impacts such as unnecessary investigations leading to incidental findings. This can lead to cascades of investigations and treatments which expose patients to avoidable risks and further follow up for clinicians (Ries, Johnston and Jansen, 2022). Defensive practice may also be opposing the clinicians' ethical responsibilities, as it may deviate from sound practice, by exposing patients to physical, emotional and financial burdens concerned with low value care, as well as undermining the patient-clinician relationship and contributing to misallocation of healthcare resources (Ries, Johnston and Jansen, 2022). A study which investigated the views and experiences of Australian physicians, highlighted the need for increased knowledge and awareness these potential harms of low

value care and stated that doctors often focus on the benefits of further tests without considering the negative impact (Ries, Johnston and Jansen, 2022).

The clinical impacts of litigation for physiotherapists are comparable to that of other healthcare professions, however, the current thesis further highlights these issues for physiotherapists who have not had any experience of a litigation claim. The current thesis found that physiotherapists with no experience of litigation are often aware that they could be involved in a claim during their career, this awareness can similarly cause these clinicians worry, stress and cause them to practice defensively in an attempt to mitigate this. The qualitative findings (chapter 4) highlight the impacts of litigation on physiotherapists, however qualitative themes were based on data from senior physiotherapists in advanced roles. The national survey (chapter 5) identified that litigation claims frequently occur when physiotherapists are in more junior roles, at the early stages of their career. This shows that effects of litigation and awareness of litigation, are likely to affect physiotherapists working at all levels. This further emphasises the importance of ensuring physiotherapists litigation knowledge and support, at all stages of their career.

6.1.2 Litigation support

This thesis found that the pathway for support for employed physiotherapists is through their employer, and the CSP support self-employed physiotherapists who are members of the CSP in the event of a claim (chapter 3). At the outset of this research, it was unknown that support with litigation was based on the physiotherapist's employment. Furthermore, there is currently no clear information explaining the legal process for physiotherapists, including information on where they can find support. This lack of clear information means physiotherapists were often unsure who to contact when they found out they were involved in a legal claim (chapter 4). Those physiotherapists that believe they know who to contact for support in the event of a claim, would often contact an organisation that was not appropriate for their circumstances (chapter 5). This could lead to increased worry and anxiety as the physiotherapist may feel unsupported. As the research presented in this thesis is published, changes are already being made to improve the clarity around the legal process and the support available for physiotherapists, with the CSP

reporting on this in their Frontline magazine for CSP members and on their website (The Chartered Society of Physiotherapy, 2023b, 2023a).

Physiotherapists stated that other healthcare professions appear more aware of the legal processes and of the support they can receive from their employer or professional organisations and insurers, and therefore appear to experience fewer negative impacts of litigation (section 4.3.1). As mentioned previously (section 6.1.1) other medical professionals such as doctors do often experience negative litigation effects. However, studies have found that the risk of depression and anxiety for doctors was lowest when doctors reported they had spoken to their colleagues and had perceived support from management (Bourne *et al.*, 2017). Furthermore, doctors' perceptions of support from medical professional organisations, and defence organisations were also associated with lower rates of depression and anxiety (Bourne *et al.*, 2017). Similarly, these negative impacts could be improved for physiotherapists if they felt better supported. This support regarding both the legal process and emotional support is important not only to improve the wellbeing of the clinician but also contributes to reducing defensive practice (Bourne *et al.*, 2017).

6.1.3 Litigation training

This thesis found that litigation training should be implemented at both undergraduate and post graduate levels. This will help physiotherapists feel better prepared in the event of litigation and may help to reduce the negative effects of litigation on their health, wellbeing, and clinical practice. Litigation training involves learning from litigation, this has been highlighted in this thesis as an important area for improvement. Currently, there is no compulsory litigation training at either undergraduate or postgraduate levels (World Physiotherapy, 2021), and it has been reported that more could be done to better prepare graduates for starting their first physiotherapy role, as they are often protected by educators from the complexities faced by "real life patients" (Hartley, Ryad and Yeowell, 2023). Litigation training that is available, is usually self-directed by the clinician, who may choose to sign up to litigation training in their spare time or as part of their continued professional development. These litigation training courses are available to health professionals, however these courses are often not specific to physiotherapy (NHS Health Education

England, 2023). By implementing suitable training for physiotherapists and learning from litigation repeat claims of a similar nature are less likely. A quote from Coleman (2019) highlights the importance of this: *"My concern as a lawyer, having done this work for over 20 years, is that I'm still seeing the same cases coming through. I'm still seeing the same themes arising and the NHS don't seem to be learning from the mistakes.".*

Universities should provide some information on litigation as part of the physiotherapy syllabus to ensure physiotherapists have some basic knowledge of this before starting their career. The CSP, NHS and other physiotherapy employers could implement more specific training to help support their staff. This workplace training could provide ample opportunity to implement structured learning from litigation to discuss clinical vignettes based on real clinical negligence claims, which would reduce the risk of repeated claims. Implementing this training would also encourage talking in the workplace on an informal basis with regards to litigation, which not only further promotes the learning from litigation but may also reduce potential blame culture. Other organisations such as professional and regulatory bodies could also provide or signpost self-employed physiotherapists to areas where they are also able to access this training. Results from the qualitative study (chapter 4), suggest that litigation training for physiotherapists could involve sharing of existing cases and ways in which these claims could be mitigated in future. A similar process has previously been recommended for doctors, with the suggestion that clinical negligence claims should be discussed regularly in clinical staff meetings led by senior doctors, in order to learn from clinical negligence claims in the same way that doctors learn from clinical incidents (Rimmer, 2021). Poor communication between doctors and patients can lead to malpractice litigation, with lawyers identifying that poor communication and attitudes were most commonly the reasons for litigation against doctors (Brown, 2008). Communication struggles between physiotherapists and suspected CES patients has been previously described with perceived barriers including language, expectations, mental alertness and mutual embarrassment (Paling and Hebron, 2021). There may be a lack of understanding by the patient and a battle for physiotherapists to achieve the correct balance between instilling concern into the patient and providing reassurance when giving safety-netting information (Paling and

Hebron, 2021). Strategies for reducing litigation include open, honest communication with the patient and thorough documentation of the consent process and delivery of care (Lee *et al.*, 2020). These elements of communication training related to litigation are included in training for medics. Litigation training for physiotherapists could include similar components. Although it remains unclear the true extent of CES claims involving physiotherapists due to the current reporting methods described throughout this thesis, it is important that physiotherapists are aware of their liability for these types of claims, as they are subject to the same standards of care applied by the law as those in other healthcare practitioner roles (Delany and Griffiths, 2009).

6.2 Implications of findings

6.2.1 Implications for physiotherapy practice

The current thesis highlights that physiotherapists are at risk of being involved in litigation relating to conditions such as CES. Previously, the impacts of litigation on physiotherapists' health, wellbeing and clinical practice were unknown. The research presented in the current thesis describes these negative impacts and provides recommendations to begin improving litigation support and training in the profession (section 7.2). Improving support could help to reduce the stress and anxiety experienced by physiotherapists, as improved support reduced these effects for doctors (Bourne *et al.*, 2017). These improvements may also contribute to reducing the negative effects of litigation on physiotherapists' clinical practice, as if physiotherapists feel better informed and supported, they may be less inclined to practice defensively (Bourne *et al.*, 2017). Furthermore, the thesis findings help to highlight the negative culture in physiotherapy. If the current recommendations are followed, improving support and training may contribute towards reducing this blame culture. Improving litigation training may increase talking about, reflecting on, and learning from litigation, which could in turn change clinician's perceptions of litigation and make the topic less taboo in the profession.

It was previously reported that around 20% of CES patients have a poor outcomes, including life changing damage due to misdiagnosis or delays in

treatment (Greenhalgh *et al.*, 2015, 2018). Litigation can contribute to defensive practice in physiotherapy. Defensive practice can occur due to many factors, most commonly, influence from the patient or a concern for overlooking severe disease (Andersen *et al.*, 2021). Physiotherapists may feel under pressure to send patients for a scan due to the patients' influence, as there are suggestions of power struggles between physiotherapists and some patients who desire a scan referral (Paling and Hebron, 2021). However, having prior experience or awareness of litigation can also contribute to defensive practice. Defensive practice is most often not beneficial to the patient, as it often means patients will be sent for unnecessary investigations, which is not in their best interest, using their time, and potentially causing them harm through the negative impacts of these investigations. Furthermore, the focus of the patient's consultation may change as the clinician focuses more on providing their own reassurance to avoid potential litigation, rather than focusing on the patient's care and requirements (Finucane *et al.*, 2022). Negative impacts of unnecessary imaging include radiation exposure when using radiographs and computerised tomography (CT), patients feeling negatively labelled by common abnormalities that are found (Flynn, Smith and Chou, 2011) such as disc herniations, disc bulges and disc degeneration (Jarvik *et al.*, 2003). Identifying abnormalities through early MRI that are unrelated to the symptoms shown can lead to unnecessary interventions and increased risk of unnecessary surgery (Jarvik *et al.*, 2003; Flynn, Smith and Chou, 2011). Furthermore, the assumption that a normal scan will reassure worried patients is unproven, and this may in fact cause increased worry and a low expectation of recovery for patients (Finucane *et al.*, 2022).

Physiotherapy training and learning from litigation allows physiotherapists to reflect on scenarios that have led to a claim and attempt to avoid these scenarios in future. This is beneficial to potential CES patients as improving identification and prompt treatment of CES will improve treatment outcomes and the likelihood of opening a legal claim is reduced. Litigation is an extremely stressful process for the claimant and defendant alike, with the effects of the process referred to as similar to the death of a loved one, the loss of a job, and the experience of a grave illness (Tumelty, 2021). Learning from litigation in the

physiotherapy profession will reduce the risk of recurrence of similar claims, which would benefit both the patient and the physiotherapist.

6.2.2 Implications for organisations

6.2.3.1 Implementing support for physiotherapists

Recommendations for physiotherapy organisations include improving clarity on where physiotherapists should go for support should they become involved in a claim. Physiotherapists who contacted the CSP for support were not aware that this was not the CSP's duty unless the physiotherapist was self-employed. Subsequently, by the CSP ensuring their role in this process is made clear and they are able to re-direct physiotherapists looking for support appropriately based on their employment, physiotherapists will feel better supported in the event of a claim. Furthermore, improving clarity and availability of this information for physiotherapists reduces the likelihood of CSP members feeling they are unsupportive or unhelpful.

As presented in the scoping review discussion (section 2.4.2) there seems to be clearly described legal and support processes for other professions through organisations including the GMC who provide clear information on their 6-month process for concerns about doctors and their investigation process (General Medical Council, 2021). This level of support and guidance should be comparable for physiotherapy professional bodies and regulators. Currently, the physiotherapists regulatory body (HCPC) do not appear to provide any information on the legal process for physiotherapists. The current research has revealed that it is not the role of the HCPC to support physiotherapists involved in a claim. This should be made explicit, as the HCPC may be an organisation physiotherapists could contact for information if they become involved in a claim. The HCPC could signpost physiotherapists to where they are able to find appropriate support. The MDU offer membership for physiotherapists, however information and guidance on their website is aimed at other healthcare professionals such as doctors, nurses and GPs, there is no mention of physiotherapy on their website. Improving the transparency of the guidance information available

for physiotherapists, ensures they are supported comparably to other healthcare professions.

6.2.3.2 Litigation costs to organisations

Extent of CES litigation was investigated in the scoping review (chapter 2), multi-methods inquiry (chapter 3) and national survey (chapter 5). The national survey investigated the extent to give context of how many physiotherapy claims are related to CES as a proportion of all claims reported by physiotherapists. The use of the survey was not to report exact figures of total number of CES claims over a specified period of time, as was completed in the scoping review and multi-methods inquiry. Therefore, the extent data used to calculate costs associated with CES, was that from the scoping review and multi-methods inquiry.

From the scoping review and multi-methods inquiry, the extent of litigation related to CES in the physiotherapy profession was found to be 51 CES claims in the UK between 2009-2021. Using the average cost data collected in the scoping review (section 2.4.1.3) as £300,000 per claim (Mukherjee, Pringle and Crocker, 2014), these 51 physiotherapy related claims could have cost around £15,300,000 in damages. This figure could be underestimated due to the variance in damages related to this condition costing up to £1.5M for a single claim (Mukherjee, Pringle and Crocker, 2014). This research could help organisations such as the NHS and CSP reduce the number of claims through establishing litigation training and promoting learning from litigation.

Litigation can also cause defensive practice which can lead to costly investigations and interventions due to the unnecessary appointments, investigations and treatments (Ortashi *et al.*, 2013; Finucane *et al.*, 2022). Therefore, not only are organisations making large pay-outs for successful claims, but the longer-term impact of litigation may also lead to further misuse of money and resources.

6.2.3.3 Recording of claims

The NHS needs to improve the way in which claims are recorded, to ensure consistency across the UK for comparison purposes and to include healthcare professionals involved in the claims. Having accurate data regarding the number of claims and which health professions are involved aids learning from litigation which can help to make improvements for patients and health care professionals in the future. Improving reporting of claims will help to assess how the number of claims fluctuates over time in relation to the physiotherapy profession, allowing more accurate evaluation of the scale of CES claims associated with the physiotherapy profession. This could also allow future evaluation of whether implementing litigation training and support for physiotherapists corresponds with decreases in the number of CES litigation claims.

In recent years, there has been rapid development of various computer software and hardware technologies and extensive adoption of electronic medical data systems, meaning health data such as Electronic Health Records (EHR) and medical claims data is becoming more easily accessible (Min, Yu and Wang, 2019). In Denmark the HER is the Danish National Patient Register, which includes information on hospital diagnoses and contact dates for all in and outpatient contacts to hospitals in Denmark. This information includes a primary diagnosis and up to several secondary diagnoses describing each patient's individual course of treatment, with diagnoses coded using an international classification system (Budtz, Hansen, *et al.*, 2021). These EHRs for whole country cohorts are available for Wales, Scotland, Denmark, and Sweden and have been used in research for several years, though there was no national linked healthcare data for England (Wood *et al.*, 2021). However, by 2025, all integrated care systems and their NHS trusts should have core digital capabilities, including EHRs (Department of Health and Social Care, 2022). These electronic systems allow researchers to accurately see the number of patients with serious pathology such as CES. If patient claims records were also available nationally through an electronic platform, researchers could accurately analyse the number of claims in the context of the number of CES patients.

6.2.3 Implications for research

As this research is the first to investigate the extent of CES litigation related to physiotherapy in the UK, further research can collect updated claims data to establish the future trends in the data. If improvements are made to the reporting of claims data, future research could provide more accurate extent data. The current research highlights a number of claims in the neuromusculoskeletal area which were not identified through the current methods. Therefore, researchers could further investigate these other areas of claims related to UK physiotherapy.

Future research could aim to establish which of the current recommendations are implemented in physiotherapy practice and the potential impacts of these on physiotherapists health and wellbeing in comparison to the results currently reported. The national survey revealed that impacts of litigation on physiotherapists health, wellbeing and clinical practice were not limited to CES. Future research could investigate in more detail if the current results are widely applicable to multiple conditions, for example by conducting interviews and survey with physiotherapists involved in litigation that is not CES related.

The current thesis recommends (section 7.2) that physiotherapists should have access to a debrief service with an independent professional to discuss their case confidentially. It would appear that a similar service is available for MDU members, known as a peer support network offering confidential support and from a fellow medical professional who has experienced the process themselves. This is accessed through contact with their medicolegal advisers (MDU, 2023). Further research is needed to establish how a similar physiotherapy specific service could be created. Including investigating which organisation is best suited and able to run and oversee this. Furthermore, this research would need to consider the legalities around providing this type of service. For example, advice would not be from a qualified solicitor but a clinician who may have helpful advice, this would need to remain confidential, and this service would not influence the legal process in any way.

Following the dissemination of the research presented in this thesis, the CSP have already began making improvements for physiotherapists in relation to providing a debrief service. On their new webpage it states, “We can also work with our networks to 'buddy you up' with a physiotherapist who has been through a similar experience.” (The Chartered Society of Physiotherapy, 2023). This statement would suggest that this process has already been implemented. It is assumed that this service is initiated through the CSP call handler who will signpost physiotherapists (who they may not be able to support legally), to emotional support through their contacts. However, it is unknown how effective this system is, and it is assumed that this service is only available for CSP members. Further investigation is needed to establish the effectiveness of this buddy system and to identify how these systems may be implemented more widely in physiotherapy, including for those who may not be CSP members.

This thesis recommends (section 7.2) that litigation training should be available for physiotherapists, starting with basic litigation information at undergraduate level, followed by more advanced training as physiotherapists advance through their clinical careers. The results of the national survey (chapter 5) suggest that this training could be overseen by the CSP as a condition of membership or by physiotherapy employers as a condition of employment. However, although the current research suggests how this could be managed and discusses potential topic areas for this training (section 6.1.3), further research is needed to finalise a training syllabus and to begin the implementation and trialling of this training.

The national survey (chapter 5) collected data regarding categories of physiotherapy claims, however 19% of all claims were related to ‘other’ and 51% of claims in the neuromusculoskeletal category were related to ‘other’ conditions. Therefore, future research could look more closely into what these claims may be related to, this may uncover further areas of physiotherapy claims which are largely impacting physiotherapists. This could be conducted by contacting the CSP and submitting FOI requests to the NHS, searching for claims with the code ‘physiotherapy’. Although the healthcare professional is not necessarily recorded, NHS database searches using the term ‘physiotherapy’ has previously provided some data in relation to legal claims (Beswetherick, 2019).

The national survey (chapter 5) also found that claims often occurred when physiotherapists were in junior physiotherapy roles. As discussed previously (sections 5.4.2 and 6.1.1), reasons for junior physiotherapists' involvement in legal claims could be due to inexperience, practicing outside of their scope of practice, or changes in society with increasing risk and legislative contexts in which junior clinicians are starting their profession (Ferorelli et al., 2021). However, the data collected in the qualitative study (chapter 4) was mostly from physiotherapists further into their career (with a mean of 20 years in MSK practice across participants). Therefore, future research could investigate whether the experiences described by physiotherapists in the current study are reflective of physiotherapists of all career levels. This could be facilitated through qualitative interviews with physiotherapists with a broader range of experience within the profession.

6.3 Strengths and limitations

The current thesis is the first to investigate the experiences of UK physiotherapists in relation to CES litigation. The research presented in this thesis facilitates the start of important changes to be made in the physiotherapy profession and associated organisations, to ensure clinicians' health and wellbeing in the future.

The scoping review (chapter 2) allowed foundational knowledge to be collected. However, this method was insufficient to collect the data needed. Therefore, the multi-methods inquiry (chapter 3) was created as an extension of this part of the research. Though completing a more in-depth dive for foundational data, this research was able to highlight areas for improvement around the way claims are recorded. This was an important element that fed into some later findings including the 'learning from litigation' qualitative theme (chapter 4). Due to the nature of the way claims are currently recorded and logged, data is difficult to obtain and is often incomplete, meaning the extent data collected is underestimated.

The qualitative study (chapter 4) allowed for collection of comprehensive data from physiotherapists and many other stakeholders involved in the physiotherapy litigation process. This allowed the results to provide a detailed and holistic approach to this complex topic area. Although a large sample was achieved in the qualitative study, participants often had similar demographics i.e., similar ages and level of experience. Although this could be related to the specific nature of the topic, it may have been due to the sampling methods used. Participants were contacted based on an initial list of personal and professional contacts in the field. However, the further snowball sampling method acquired a more expansive group of participants.

The online national survey (chapter 5) validated the findings from the other methods (chapter 4, qualitative study), confirming results were applicable more generally in the physiotherapy profession and across other conditions. However, due to the survey dynamics some of the data was unexplained, which could be investigated further through future research. This survey design did allow for simple and efficient completion and likely contributed to a high number of responses.

7. Summary and recommendations

Cauda Equina Syndrome (CES) has high number of medico-legal cases associated with it (Gardner, Gardner and Morley, 2011) and physiotherapists are often involved in diagnosing this condition (Greenhalgh *et al.*, 2023 [in process]). The current research is the first to investigate the extent and process of CES litigation for physiotherapists in the UK. It was previously unknown how many UK physiotherapists litigation affects, or the impact it has on them. This research and the recommendations made, will help to ensure physiotherapists are fit for practice, their wellbeing is maintained, and they are supported in their role.

The overall aim of this thesis was to explore the experiences of UK physiotherapists in relation to CES and litigation to help support them in their role and ensure their health and wellbeing. The objectives of this thesis were:

1. To investigate the extent of CES litigation cases amongst UK physiotherapists
2. To understand the legal process for UK physiotherapists involved in CES litigation cases
3. To understand the experiences of physiotherapists involved in CES litigation cases
4. To understand the support needs of physiotherapists involved in CES litigation cases
5. To investigate the potential training needs for physiotherapists in relation to CES litigation

7.1 Summary of findings

7.1.1 Extent of CES litigation amongst UK physiotherapists

Data from the scoping literature review (chapter 2), and multi-methods inquiry (chapter 3), found N=2496 CES claims recorded in the UK between 2009-2021. Of these, 51 CES claims were attributed to physiotherapy (15 from the scoping literature review, 36 from multi-methods inquiry). The national survey collected further extent data from 688 UK physiotherapists. The national survey revealed 10% of physiotherapists had been involved in litigation at some point in their

career. Furthermore, a total of 23% of neuromusculoskeletal claims were related to CES, which was 9% of all claims captured by the national survey.

7.1.2 Legal process for UK physiotherapists

Two studies presented in the current thesis investigated the legal process for physiotherapists (scoping review, chapter 2 and multi-methods inquiry, chapter 3). The scoping review (chapter 2) found some information on the CSP website regarding the litigation process and who physiotherapists should contact regarding negligence claims. However, this information was not easily accessible and is only available to those physiotherapists who are CSP members. NHS Resolution web pages included information for healthcare professionals regarding the litigation process and providing support including legal advice contact. However, these web pages were not specific to physiotherapy and therefore, not all information will be applicable to them. In the public domain, there was not easily accessible, clear and informative advice, specifically aimed at physiotherapists.

The multi-methods study (chapter 3) identified that there are different legal processes for physiotherapists depending on their employment; self-employed physiotherapists may be supported by the CSP if they are members, those employed by the NHS should be supported by NHS and those non-NHS employed physiotherapists should be supported by their employer. Furthermore, this study was able to identify a more detailed legal process for physiotherapists, which consists of two main phases, a pre-claim phase and a claim phase. In the pre-claim phase, the legal team for the claimant contacts the healthcare professional's employer to undertake preliminary checks. Many claims are dropped during this phase, the healthcare professional involved may not have been notified of the potential claim. If there are grounds for the case to proceed, the claim phase begins. When a letter of claim is received, this could be the first time the physiotherapist becomes aware of the claim.

7.1.3 Experiences of physiotherapists involved in CES litigation

Two of the studies in this thesis investigated the experiences of physiotherapists who have been involved in litigation. The qualitative study

(chapter 4) and the national survey (chapter 5). In the qualitative study physiotherapists described negative physical impacts of litigation claims, most commonly stress, anxiety, and worry. Physiotherapists also commonly described the legal claim affecting their work life and clinical practice, with many saying they practiced more defensively as a consequence.

The national survey (chapter 5) validated these findings, with most physiotherapists experiencing personal effects of litigation, most commonly stress, worry and anxiety and low mood and /or depression. The most common effect on physiotherapists professionally was defensive practice e.g., more detailed note taking, lower threshold for referral to another department or to order investigations.

7.1.4 Support needs of physiotherapists involved in CES litigation

Two of the studies presented in the current thesis investigated the support needs of physiotherapists in relation to litigation. The qualitative study (chapter 4) investigated support needs of UK physiotherapists with an experience of CES litigation. This found that many physiotherapists felt unsupported, often because they were unaware of where to find appropriate support for their situation and were not signposted as to where to find this. Physiotherapists described how they believe support could be improved going forward; physiotherapists discussed how they think improvements can be made to the support they received, including clearer information on where to find support, improved workplace support from employers and emotional support systems.

The national survey (chapter 5) investigated support needs of UK physiotherapists in relation to litigation not limited to CES. The survey validated findings from the qualitative study, not only for CES but more generally. The survey confirmed that most physiotherapists believe they know who to contact for support if they were to become involved in a legal claim, however most would contact the CSP who are not the appropriate organisation for most to find support. Most physiotherapist's thought it would be useful to have a someone to contact discuss their case confidentially, and to have more resources available for support with the litigation process.

7.1.5 Training needs for physiotherapists in relation to CES litigation

Two of the studies presented in the current thesis investigated the training needs of physiotherapists in relation to litigation (qualitative study, chapter 4 and national survey, chapter 5). The qualitative study (chapter 4) found that physiotherapists believed that there should be some basic litigation training in students' final year of undergraduate level and that further litigation training should be implemented at postgraduate level, as physiotherapists progress through their career. The national survey (chapter 5) validated these findings as participants also believed that litigation training should be available at both undergraduate and postgraduate level, with the majority believing training should be mandatory. Participants believed the CSP could be responsible for overseeing the training as a condition of membership, or physiotherapists employers could oversee this as a condition of employment.

7.2 Recommendations summary

The recommendations from this thesis in its entirety are as follows:

7.2.1 Recording of claims recommendations

- For NHS databases CES needs to have its own specific category for accurately recording claims. Furthermore, the primary healthcare professional(s) cited in the litigation case should also be recorded, in order to facilitate greater understanding of the professions involved in CES claims. For all categories (NHS, non-NHS and self-employed) claims data should specify if their data relate to a calendar year, fiscal year or other and what they count as a claim that is, do they include open/closed and potential/confirmed. This would provide more transparent data and allow for accurate data analysis in future. See section 3.7.

- The process for submitting FOI requests across the UK needs to be made clearer and more transparent. Having an equivalent body to NHS Resolution, for the devolved UK administrations is recommended. See section 3.7.

7.2.2 Legal process recommendations

- Organisations, such as the CSP could provide clearer information on the pathway for physiotherapists in receipt of a litigation case and the support available. A single repository of clear information regarding the legal process for physiotherapists involved in claims is advised. It should be made clear that there is support for physiotherapists regardless of their employer, however where this support comes from differs based on their employment (NHS employed, non-NHS employed, self-employed). See section 3.7.

7.2.3 Support recommendations

- Resources for supporting physiotherapists should be created to inform physiotherapists of the legal process and to signpost them to the support available to them. This could be provided on the CSP website or through their employer. See section 4.6. Some resources have already been created as outputs from the current research (Yeowell, Greenhalgh, Leech, *et al.*, 2022; Yeowell, Leech, Greenhalgh, *et al.*, 2022), these have also been shared on the CSP website (The Chartered Society of Physiotherapy, 2023b).

- Although the HCPC is not involved in the litigation process for physiotherapists, they should make this much clearer. It is anticipated that physiotherapists would assume the professional regulator would be involved in the litigation process and so the HCPC should anticipate that they will get more enquiries regarding this as litigation increases. See section 3.7.

- Physiotherapists should have access to confidential support if they become involved in litigation. It is recommended that physiotherapists involved in litigation have access to a debrief service with an independent professional to discuss their case confidentially, to provide them with support. This could be a helpline for physiotherapists to have a confidential support from other clinicians who have experienced legal claims. See section 5.6. Following the dissemination of the research

presented in this thesis, the CSP have implemented a buddy system for physiotherapists (The Chartered Society of Physiotherapy, 2023b). Further investigation is needed to identify how this may be implemented more widely in physiotherapy, see section 6.2.3.

7.2.4 Training recommendations

- Training should begin with some basic litigation information for physiotherapists at undergraduate level, delivered by universities. Further, more advanced training should then be available as physiotherapists begin and advance through their clinical careers. This could be overseen by the CSP as a condition of membership and by employers as a condition of employment. See section 5.6.

- Learning from litigation is recommended. This could be facilitated through regulatory bodies, governing bodies and employers sharing information relating to litigation claims, both locally and nationally. This could be implemented as a form of training throughout the NHS, sharing information from claims and providing training based on learning from these claims, within trusts, between trusts, regionally and nationally. Other physiotherapy employers could also share their claims information regionally and nationally if they are a large organisation. The CSP could facilitate this training and learning from litigation for self-employed members. See section 4.6.

7.3 Closing statement

This thesis was undertaken to explore the experiences of UK physiotherapists in relation to CES and litigation. The findings and recommendations presented in this thesis will contribute to ensuring physiotherapists health, wellbeing, and support in their role. They will also help to future proof the physiotherapy profession and contribute to improving patient safety in the future.

8. References

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9. Appendices

Appendix 1. Ethics approval letters

Manchester Metropolitan University

15/07/2020
Project Title: Cauda Equina Syndrome and litigation

EthOS Reference Number: 18122

Ethical Opinion

Dear Rachel Leech,

The above amendment was reviewed by the Health, Psychology and Social Care Research Ethics and Governance Committee and, on the 15/07/2020, was given a favourable ethical opinion. The approval is in place until 14/04/2022 .

Conditions of favourable ethical opinion
**Please add the generic email HPSCEthics@mmu.ac.uk to J.Goldbart's email, for concerns etc.

Application Documents

Document Type	File Name	Date	Version
Additional Documentation	CES_PIS_Phase 2-Interviews Ver 2.0_24_6_2020	24/06/2020	2.0
Additional Documentation	CES_PIS-Phase 3-National Survey Ver 2.0_24_6_2020	24/06/2020	2.0
Additional Documentation	CES_Consent-form-V2.1-7July2020 (1)	07/07/2020	2.1

The Health, Psychology and Social Care Research Ethics and Governance Committee favourable ethical opinion is granted with the following conditions

Adherence to Manchester Metropolitan University's Policies and procedures

This ethical approval is conditional on adherence to Manchester Metropolitan University's Policies, Procedures, guidance and Standard Operating procedures. These can be found on the Manchester Metropolitan University Research Ethics and Governance webpages.

Amendments

If you wish to make further changes to this approved application, you will be required to submit an amendment. Please visit the Manchester Metropolitan University Research Ethics and Governance webpages or contact your Faculty research officer for advice around how to do this.

We wish you every success with your project.

HPSC Research Ethics and Governance Committee

HPSC Research Ethics and Governance Committee

For help with this application, please first contact your Faculty Research Officer. Their details can be found here

11/10/2021
Project Title: Cauda Equina Syndrome and litigation

EthOS Reference Number: 18122

Ethical Opinion

Dear Rachel Leech,

The above amendment was reviewed by the Health, Psychology and Social Care Research Ethics and Governance Committee and, on the 11/10/2021, was given a favourable ethical opinion. The approval is in place until 14/04/2022 .

Conditions of favourable ethical opinion

Application Documents

Document Type	File Name	Date	Version
Additional Documentation	CES_Phase 3-PIS_Amend_11Oct	11/10/2021	2.0

The Health, Psychology and Social Care Research Ethics and Governance Committee favourable ethical opinion is granted with the following conditions

Adherence to Manchester Metropolitan University's Policies and procedures

This ethical approval is conditional on adherence to Manchester Metropolitan University's Policies, Procedures, guidance and Standard Operating procedures. These can be found on the Manchester Metropolitan University Research Ethics and Governance webpages.

Amendments

If you wish to make further changes to this approved application, you will be required to submit an amendment. Please visit the Manchester Metropolitan University Research Ethics and Governance webpages or contact your Faculty research officer for advice around how to do this.

We wish you every success with your project.

HPSC Research Ethics and Governance Committee

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For help with this application, please first contact your Faculty Research Officer. Their details can be found here

Appendix 2. Data extraction table for database records

Author(s) Year of publication	Title	Aims/ purpose of the study Type of claim Type of study	NHS or non-NHS UK Nation	Methodology	Results (Claims Data Cost Data Process Data)	Conclusions that relate to wider context	Conclusions that relate to review objectives
Atrey; Gupte, Corbett 2010	Review of successful litigation against English health trusts in the treatment of adults with orthopaedic pathology: clinical governance lessons learned.	To review successful cases relating to orthopaedic claims between 2000-2006 to determine litigation trends and show areas of concern. Orthopaedic surgery	NHS England	Information regarding successful legal claims for orthopaedic negligence was retained from the NHSLA via the freedom of information act. The results were collated and categorised according to the anatomical site and whether cases were	2312 successful claims were reviewed. A total of 1473 claims had satisfactory detail to be considered in the study. 20 CES cases we found. Results showed that emergency spinal cases were costly to the NHS, with a total of $23,035,856 paid out for 91 (6.2%) of the 1473 cases (£16,917,532.65 when converted at current exchange rate).	This study highlights the limitations of using NHS data via freedom of information requests in a research field. This study promotes targeted training in specific areas, for example for the early recognition of CES. Education and vigilance are advocated for orthopaedic training as many successful litigation cases could have been prevented.	N/A – not specific to physiotherapy

		Review (Full-text)		elective or trauma. Each case was reviewed to highlight the nature of the claim and data was analysed to reveal any trends. The NHSLA stated that their database is used as a claims management tool and not for risk management or research purposes and they could therefore not guarantee that coding is consistent or that detail was adequate.	A missed, or a delayed, diagnosis of CES represented 20 cases with an average payment of $459,622 per case **(**£344,302 when converted at current exchange rate).		

Beswetherick 2017	Are self-employed musculoskeletal physiotherapists mis-diagnosing Cauda Equina syndrome? A retrospective study of clinical negligence claims in the UK	This study aimed to evaluate and quantify all claims of alleged failure to diagnose CES. CES Report (Abstract)	Non-NHS (CSP) UK	Clinical negligence claims data notified to the CSP's insurance broker for dates from 2001/2002 - 2015/2016 was requested and obtained. Claims data was organised by category and underwent analysis. Claims were excluded from analysis if they were public liability claims, employer liability claims or fitness to practice claims.	Claims totalled 682 over the 15 years. Claims increased by 388% over the period from 17 (2001/2002) to 66 (2015/16). There was a significant increase in claims in 2008/2009 when compared to the year previous. Following 2008/09 claims ranged from 53-78, with a mean of 66. The categories with the top 5 claims which totalled 91% of the claims for the period were "negligent treatment" (263 claims), "mis-diagnosis" (124 claims), "negligent manual therapy" (121 claims), "negligent exercise" (56 claims) and "electrotherapy burns" (55 claims). The mis-diagnosis category had 124 claims which included 10 CES claims (8%).	N/A	Physiotherapists should learn from litigation studies in order to lessen the risk of mis-diagnosis of CES and subsequent clinical negligence cases. There is a need for greater awareness for all musculoskeletal physiotherapists as to the importance of recognising the early symptoms of CES.

					Five of the CES claims were from 2015/2016.		
Beswetherick 2019	Are NHS-employed musculoskeletal physiotherapists in England mis-diagnosing Cauda Equina syndrome?	This study aimed to quantify the prevalence of mis-diagnosis claims made against NHS musculoskeletal physiotherapists in England. CES Also found on the NHS Resolution website FOI_3276_Cauda-Equina-Syndrome.pdf	NHS England	A freedom of information request was sent to NHS Resolution. Successful claims that were closed or settled were searched using cause codes of "wrong diagnosis" and "failure/delay diagnosis" and a free text search using the key words "cauda equina," over a 10-year period from 2006/2007 - 2016/2017. The search was then narrowed using the search term	The primary search using the codes "wrong diagnosis" and "failure/delay diagnosis" with the keywords "Cauda Equina" obtained 119 successful claims which were closed or settled during the 10 years. When the search was further refined using the term "physiotherapy" there were 5 (4.2%) successful claims that were closed or settled during the 10 years.	N/A	There were a small number of successful claims that had been closed or settled, relating to wrong or failure/delay in the diagnosis of CES, made against NHS physiotherapists in England. The results indicate that physiotherapists may be misdiagnosing CES regardless of if they are employed or self-employed.

		(resolution.nhs.uk) Report (Abstract)		"physiotherapy" .			
Fairbank 2014	Cauda Equina Syndrome – Risk Management	This paper discusses they key symptoms of CES and gives some claims and cost data	NHS & non-NHS (MDU) UK	This paper discusses the symptoms of CES and how misdiagnosis and procedural delay can have poor outcomes and be costly in terms of litigation.	For cases of missed or delayed diagnosis of CES, the average compensation is £336,000 in the UK* *(Data taken from Gardner et al 2001, originally from Markham 2004)	This gives some data regarding average costs of CES claims in the UK.	N/A – not specific to physiotherapy
Ford, Cooper 2016	Learning from lawsuits: Ten-years of NHS litigation authority claims against 11 surgical specialities in England.	This paper depicts the trends of claims made against the NHS across 11 surgical specialities	NHS England	Data was requested via FOI request for all claims received by the NHS Litigation Authority (NHSLA) from 2004 to 2014. Surgical	The NHS paid out approximately £1.5 billion across 11 surgical specialities from 2004 to 2014. Orthopaedic, obstetric and general surgery received the largest number of claims per year. Neurosurgery had the highest average cost per claim. Failure/delay in	Lessons learnt from medico-legal claims are transferrable in strategic planning. This current report demonstrated a significant burden on the NHS and improvement in practice on an individual level should be encouraged along with	N/A – not specific to physiotherapy

		over 10 years. Surgery including neurosurgery and orthopaedic Report based on FOI requests and a literature review (Full-text)		specialities included cardiothoracic, general, neurosurgery, obstetric, oral and maxillofacial (OMFS), orthopaedic, otorhinolaryngology, paediatric, plastic, urology and vascular surgery. A literature review of peer-reviewed publications was also carried out using search terms 'NHSLA' and 'Surgery'	treatment and/or diagnosis and failure to warn/adequately consent were the three most common types of claim. The literature review found a study by Atrey et al. (2010) had a total of 1473 claims between 2000-2006 and the most common cause for claims were infection, consent, mismanagement (fractures, cauda equina and compartment syndrome).	providing systems-based recommendations to the NHS.	
Gardner, Gardner, Morley 2011	Cauda equina syndrome: a review of the current clinical	To address the problem of CES resulting	NHS & non-NHS (MDU & MPS)	Literature review of the management and medico-	Although CES is rare, medico-legal costs are large, between January 1st 2003 - December 31st 2007, there were 63 likely claims notified to the	CES has a prominent position in a medico-legal aspect as there is a lack of awareness and urgency in its	N/A – not related to physiotherapy, only wider concept.

	and medico-legal position.	from compression by lumbar disc herniation, prolapse or sequestration about which most has been written. CES Review (Full-text)	UK	legal aspect of CES.	MPS worldwide relating to CES, (46 in UK). Twenty cases were concluded of which damages were paid for 55% of claims with an average pay-out of £117,331 per case. Representing a total payment of £1,290,641 over the 5 years (£258,128 per annum) and only one-third of the cases were concluded. The highest settlement was £584,000. Data taken from Markham (2004) showed that the MDU identified 62 CES claims of which 42 were concluded and associated damages were paid in 20 of the cases (48%) (this was the case for only 34% of all other UK claims), with an average settlement of £336,000 per claim at 2003 prices. Totalling £6,720,000 for CES alone. The	management by and secondly due to potentially devastating effects of the condition which can lead to bowel, bladder, sexual and lower limb dysfunction. This study provides general extent data not related to physiotherapy specifically.	

					highest settlement was £759,000 and one of the out-standing claims was reserved at £1.1 million. Just less than half the 62 cases related to general practice concerning incorrect or delayed diagnosis, the rest were virtually all orthopaedic regarding inadequate treatment or post-operative complications. From 1st April 2003 - 31st March 2008, the NHSLA was informed of 78 claims relating to CES. Of the 24 concluded cases, damages were paid in 12 of the cases with an average pay out of £211,758 per case and a total pay-out £2,541,098 over the 5 year period (£508,219 per annum) with only one-third of cases concluded. The highest settlement for a CES related claim was £2,041,000.		

Greenhalgh, Truman, Webster, Selfe 2016	Development of a toolkit for early identification of cauda equina syndrome	To develop a CES toolkit to aid the identification of CES CES Report (Full-text)	NHS & non-NHS (MDU) UK	This paper creates a three-arm toolkit for the use of clinicians diagnosing patients with suspected CES. The toolkit was developed by synthesising existing literature with the use of in depth interviews from CES patients.	CES claims have an average payment of £336,000* The NHS has paid out circa. £44 million in the 10 years prior to 2013 for CES claims.** *(Data taken from Fairbank 2014 – originally from Markham 2004)	N/A	This paper shows the high litigation costs of CES claims and the costs of CES claims to the NHS.
Greenhalgh Finucane, Mercer, Selfe 2018	Assessment and management of cauda equina syndrome.	To examine the current evidence and provide a consistent approach in the safe management of patients	NHS England	Masterclass which included a focus on the importance of communication, documentation and a practical approach to safety netting those at risk of CES.	293 CES claims* were made by individuals with CES between 2010 and 2015, at a cost of 25 million pounds*. *(this data is from NHSLA 2016)	N/A	The impact of litigation on Physiotherapy in the UK is becoming a concern due to increasing numbers of litigation cases involving Physiotherapists. Litigation can be a very stressful and

		presenting with CES. CES Review (Full-text)		Data from: NHS Litigation Authority (NHSLA) regarding CES claims between 2010-2015			arduous process. It is vital that the clinician protects themselves and their patient by ensuring full and accurate records are kept. It is also crucial that there are clear pathways and protocols in place to help manage patients with suspected CES.
Hamdan, Strachan, Nath, Coulter 2014	Counting the cost of negligence in neurosurgery: Lessons to be learned from 10 years of claims in the NHS.	To provide data on trends in England on neurosurgical negligence claims over a 10 years. Neurosurgery Report (Full-text)	NHS England	Used data provided by the NHSLA to examine negligence claims associated with neurosurgery from the financial years 2002/2003 to 2011/2012. Using the abstracts provided, the information was	Throughout the 10 years the annual number of claims increased significantly. There was 794 negligence claims (range 50-117/year); of the cases which were closed (613), 405 (66.1%) were successful. The total cost associated with claims during the 10-year period was £65.7 million, with a mean claim of £0.16 million for each successful case. Claims related to emergency cases were most expensive when compared with claims related	In England, the number of neurosurgical negligence claims is increasing. The financial cost of these claims is substantial and the burden significant. Negligence claims relating to CES were frequently successful (14/16; 87.5%)	N/A – only related to wider context, not specific to physiotherapy

				extracted which related to the underlying pathology, injury severity, nature of misadventure and claim value.	to elective cases (£209,327 vs. £112,627; P=0.002). Spinal cases were the most frequently sued procedures (350; 44.1% of total), inadequate surgical performance was the most common misadventure (231; 29.1%) and fatality was the most common injury described in claims (102; 12.8%). Negligence claims associated with cauda equina syndrome were regularly successful (14/16; 87.5% of closed cases). Total of 16 CES claims found.		
Hutton 2019	Spinal Services GIRFT Programme National Specialty Report	Getting It Right First Time review of spinal surgery Spinal claims Review	NHS & non-NHS (MDU) UK	This report reviews data in relation to spinal services including data from the NHS Resolution and the MDU. The report highlights areas of	NHS Resolution data indicates that claims related to spinal surgery pay out an average of over £100m per year, however the MDU has decided to revoke cover for spinal surgeons who work in the private sector. CES claims made up 23% of spinal surgery claims in	Following the review of current claims, there is an evolving consensus that the number and size of claims could be reduced through a more consistent and rigorous method of the inclusion of patients in the decision-making process	N/A not specific to physiotherapy

		(Full-text)		excellence and areas of improvement in the NHS.	England between 2013/15 - 15/16. The expected cost for CES claims is £68m for this period (24% of the total expected cost). The most common factor associated with these claims was delay or failure of diagnosis was the (58 claims, 44%), followed by delay or failure in treatment (22 claims, 17%). 17 of the claims refer to failures in obtaining a MRI scan (13%), and 10 claims (8%) describe issues with referral or transfer. For 8 CES claims standard of surgical procedures was raised (6%). Of the patients involved in CES claims 57% had symptoms of either incomplete or complete CES at first presentation. Furthermore, 39% were identified as having bilateral radiculopathy.	of their treatment, as well as adhering to best practice for gaining consent. This is a long-established recommendation from the BASS.	

					In total there were 131 CES claims* made up 23% of spinal surgery claims which cost £68 million*. *this data is the same as Machin, Hardman, Harrison, Briggs, Hutton 2018		
Lavy, James, Wilson-MacDonald, Fairbank 2009	Cauda equina syndrome	This study aims to show CES as a possible clinical diagnosis, evaluate the evidence for an emergency surgical method, and continue to promote awareness of the medicolegal problems	NHS England	This study reviewed a range of data related to CES including data from the NHSLA via personal communication and reports.	Between 1997 - 2006 the NHSLA dealt with 107 cases in England during which care in hospitals had been compromised (this data was via NHSLA, personal communication of the authors, 2008). Estimating that there are 100 new cases of CES in England annually, this implies that at least 10% of CES cases involve litigation claims. The NHSLA reported that between 1997 – 2006 the number one complaint in 35% of litigation cases was against the emergency department and in 52% complaints were against the inpatient management team	This study shows a high rate of litigation for CES and shows the spread of clinical areas that can be involved in a claim.	N/A – not specific to physiotherapy

		associated with the condition. CES claims Review (Full-text)			(personal communication as above). For the other cases the main complaints were against other clinical areas, for example outpatients. In 52% of cases the clinician responsible was in orthopaedics, 27% in the emergency department, and 8% in neurosurgery; for any other cases the responsible clinician accountable varied. The authors prepared 22 CES medicolegal reports over five years. The average time delay to diagnosis was 67 hours and the average time delay to treatment was 6.14 days. Delays were related to orthopaedic surgeons for 32% of the cases, general practitioners in 18% of cases and others in 14%. In 34% of cases there was no clear case to answer. The amount of patients to receive treatment within 24 hours was 14% and 32% were within 48 hours.		

					All recorded patients had moderate/severe bowel and genitourinary symptoms. Many of the patients also showed persistent back pain that would have likely occurred regardless of the timing of surgery.		
Machin, Briggs 2014	Litigation in trauma and orthopaedic surgery	This study aimed to show the present trends with regards to ligation against trauma and orthopaedic surgery using data from the NHSLA database Orthopaedic surgery	NHS England	Obtained all data relating to claims against 'Orthopaedic Surgery' from the NHSLA database after the registration of all claims became mandatory. This comprised of all trauma and elective work and all open and closed cases between April 2003 - April 2012.	Over the nine years a total of 36 closed claims had a settlement cost of over £1 million. Of these claims 13 were associated with spinal surgery with claims subsequent to delayed/failed treatment of CES, negligent spinal decompression and failing to remove haematoma from the spine causing neurological deficit. Of these 12 were related to CES.	Litigation is an increasing problem for orthopaedic surgery. The current trends and associated costs are unsustainable. Many orthopaedic surgeons will be involved in a negligence claim during their career. Lessons can be learned from all claims and these should be circulated to the profession. The authors believe the common causes for claims are preventable.	N/A

		Report based on formal requests to NHSLA for 'Orthopaedic Surgery' claim data (Full-text)					
Machin, Hardman, Harrison, Briggs, Hutton 2018	Can spinal surgery in England be saved from litigation: a review of 978 clinical negligence claims against the NHS	Evaluate incidence of clinical negligence claims (including open and closed claims) against spinal surgery performed by orthopaedic spinal surgeons and	NHS England	This paper reviewed 978 clinical negligence claims via NHS Resolution. The cases were spinal surgery cases identified from claims against 'Neurosurgery' and 'Orthopaedic Surgery'. Claims were between April 2012 and April 2017 and	There was an estimated cost of £535.5 million for spinal surgery clinical negligence claims over the five-year period investigated. A trend was seen showing increasing volume and increasing estimated costs of claims. The study found that 'judgement/timing' (512 claims, 52.35%) was the most common cause for claims. A sub-analysis of 574 claims over a 3-year period revealed the most prevalent pathologies included cauda equina syndrome (CES) (131	With high volume and costs of clinical negligence claims relating to spinal surgery, there is a threat to the future of the profession. CES was the second most prevalent pathology for spinal surgery clinical negligence claims and an increase in volume and cost of claims was found.	N/A – only related to wider context, not specific to physiotherapy

		neurosurgeons in the NHS in England. Spinal surgery Retrospective review (Full-text)		included all emergency, trauma, elective work and all open and closed cases.	claims, 22.82%). Of the acute cases, the most common pathology relating to claims was CES (57 claims, 38.00%). Fifty-six claims (37.33%) related to inadequate decompression, 51 of which were associated with CES. The predicted value for claims relating to CES was £68 million over the 3-year period which was 23.60% the total projected cost. Delay or failure of diagnosis was the most com- mon factor quoted (58 claims, 44.27%), followed by delay or failure in treatment (22 claims, 16.79%). There were 17 claims (12.98%) which specifically referred to failure to obtain an MRI scan, and 10 claims (7.63%) which described issues with referral or transfer. The standard for surgical procedures used to		

					treat CES was mentioned in 8 claims (6.11%). There were 81 claims which were each estimated to cost over £1 million and these accounted for £157 million (54.48%) of the total cost for the 3-year period. Reduced mobility was the most common factor relating to the highest value claims (45 claims, 56%) and CES was one of the most common underlying pathologies (11 claims, 13.58%).		
Markham 2004	Cauda equina syndrome: diagnosis, delay and litigation risk	To discuss cauda equina syndrome, its diagnostic features and best practice for manageme nt. CES claims	NHS & non-NHS (MDU) UK	Undertook analysis of 96 cases of CES notified to UK-based malpractice insurance organisation (the Medical Defence Union)	95 cases of cauda equina syndrome were notified to the Medical Defence Union (MDU). Of the incidents involving cauda equina syndrome which were notified to the MDU - 65% progressed into claims, which is greater than 2½ times the proportion of all UK cases which develop into claims. Of the finalised	65% of CES cases progressed to claims by the affected patients. 48% of these cases resulted in payment of compensation for damage.	N/A – not specific to physiotherapy

		Review (Full-text)			cases, 48% of cauda equina syndrome claims resulted in payment. This compares to 34% for all UK claims. The average pay out for these cases is £336,000. The highest payment found for CES was £759,000. Regarding claims outstanding the highest was reserved at £1.1m. Just less than half of the cases notified by MDU members were reported by a GP, almost all of which involved incorrect or delayed diagnosis.		
Mukherjee, Pringle, Crocker 2014	A nine-year review of medicolegal claims in neurosurgery	To identify areas in neurosurgery associated with litigation, attendant causes and costs	NHS England	Retrospective analysis of 42 closed (i.e. claims with outcomes) litigation cases treated by neurosurgeons between March 2004 and March 2013 at St	Of the 42 claims analysed, 29 were defended out of court and 12 were settled out of court. One of the cases required court attendance and was successfully defended. Of the 42 claims, 28 claims were regarding spinal cases. Data showed that the most common causes of claims were faulty	The article found that spinal surgery had the highest litigation risk compared with cranial and peripheral nerve surgery. Claims were most commonly regarding faulty surgical technique and delayed diagnosis/misdiagnosis, which also had the	N/A – only related to wider context, not specific to physiotherapy

		Neurosurgery claims (including spinal) Review (Full-text)		George's Hospital, London. Data included clinical event, timing and reason for claim, sub-speciality e.g. spinal surgery, operative course and legal outcome.	surgical technique (43%), delayed diagnosis/misdiagnosis (17%), lack of information (14%) and delayed treatment (12%), they had a chance of success of 39%, 29%, 17% and 20% respectively. The highest median pay-outs were related to claims against faulty surgical technique (£230,000) and delayed diagnosis/misdiagnosis (£212,650). The mean delay between the clinical event and the associated claim was 664 days. There were 28 claims against spinal surgery, of which there were four cases of delayed diagnosis, including three cases of cauda equina syndrome secondary to a herniated disc.	highest success rates and associated pay-outs. For spinal surgery, the most common reason for claims was faulty surgical technique.	

					One successful claim was made regarding faulty surgical technique relating to a complete severance of the right L5 nerve root through an L4/5 microdiscectomy for CES treatment. This caused an irreversible right foot drop, impacting the patient's mobility and quality of life. One of the CES cases in this study had a pay out of £1,525,000 against the local hospital. This was the largest single pay out in the study.		
Quraishi, Hammett, Todd, Bhutta, Kapoor 2012	Malpractice litigation and the spine: the NHS perspective on 235 successful claims in England	This study evaluated the overall incidence and total burden of successful litigation claims involving the manageme	NHS England	The study design included a retrospective review of the NHSLA database, retrieving all successful claims involving spinal disease from 2002 – 2010 which	Missed CES secondary to prolapsed intervertebral disc disease was the third most common pathology leading to a successful claim in the context of acute care with 34 cases (23.6%) and average damages of £268,515. In terms of elective care CES was the cause of the alleged negligence in 9 (9.9%) of the	Spinal litigation continues have a significant cost to the NHS. The difficulty of resolving these cases is displayed through the associated legal costs.	N/A – not physiotherapy specific

		nt of spinal disease across the NHS in England. Spinal disease claims Review (Full-text)		totalled 235 cases.	235 closed cases, with average damages of £332,496.		
Thavarajah, Podger, Hobbs, 2013	Orthopaedic litigation what is the financial burden trend?	To assess orthopaedic litigation in the NHS over a 10-year period (2000-2010) including financial loss, injuries (negligence) sustained and causation that	NHS England	Data from the NHSLA was requested (via the freedom of information act) for all legal claims of orthopaedic negligence against English Health Trusts from 2000-2010. Outcomes which were	The 4th most common injury sustained as a result of negligence was 'nerve damage' (e.g. failure to diagnose cauda equina syndrome) which had 617 claims. Spinal themes relating to delayed diagnosis and negligent surgery accounted for 40 claims within the top 100 settlements, this could be partially because of the high risk associated with this	Reducing litigation is crucial in order to ensure autonomy, this can also be facilitated by documenting what clinicians did and the reasoning behind any decisions made.	N/A – not physiotherapy specific

		resulted in these successfully litigated cases. Orthopaedic surgery Report based on FOI requests from NHSLA (Full-text)		recorded included claim pay out (for Closed claims), injury sustained and causation as a result of clinical negligence. Details of the top 100 pay-outs were given for context.	type of surgery, although delayed diagnosis is a problem faced by many who do not provide out of hours MRI scans.		
Todd 2011	Causes and outcomes of cauda equina syndrome in medico-legal practice: a single neurosurgical experience of 40 consecutive cases.	A report on 40 patients litigating in relation to the management of CES. Neurosurgery claims	NHS England	40 CES patients' medical records and radiological imaging were reviewed. Demographic data was collected as well as level of cauda equina compression,	40 CES litigation cases were referred to a single neurosurgeon/expert witness between 2004 and 2009. The CES occurred between 2000 and 2009. Possible primary breaches of duty of care were seen in 39 of the cases (98%). Following the primary breach, there were a further 30 breaches,	CES is well documented as an emergency condition. The problem seems to be failure to apply well-established knowledge rather than a complete lack of knowledge of CES.	N/A not specific to physiotherapy

		including CES Report (Full-text)		what pathology caused the compression, the clinical picture at first presentation, causes of any iatrogenic injury, possible breaches of duty of care and the responsible discipline, recovery of bladder control and return to work.	totalling 69 breaches of duty of care for 39 cases.		
Todd 2015	Cauda equina syndrome: is the current management of patients presenting to district general hospitals fit for purpose? A personal view based on a	This study aims to provide an evidence base for manageme nt of patients with suspected CES	Non - NHS England	A literature review was undertaken and the authors database was used to retrospectively review CES cases.	The author's database of 157 medicolegal cases (2001-2015) was retrospectively reviewed It was found that in 39 patients there was intra- or postoperative injury (the latter typically caused by a post-operative	This provides some extent data from medicolegal cases regarding CES from the authors database.	N/A

	review of the literature and a medicolegal experience				haematoma) to the CE roots, plus there were three patients with no CES, leaving 118 patients for analysis. At first clinical contact 100 (85%) patients were CESS or CESI and 18 (15%) were CESR. At the time of treatment 98 (83%) were CESR and only 20 (17%) were CESI, none were CESS.		
Wilson-MacDonald, Fairbank, Lavy 2018	Cauda equina syndrome and litigation	This study aimed to establish the incidence of CES litigation and the causes of these cases. CES claims Review (Abstract)	NHS England	This review looks at records over 10 years from the NHSLA between 1997 – 2007 and 8 years of medical negligence cases.	There were 117 CES litigation cases found in the NHSLA record and another 23 medical negligence cases. 62 of the NHSLA cases were closed claims. The most common reason for litigation was delay in diagnosis and the most common complications related to cases were neurological, bladder and bowel.	Litigation continues to be a problem with CES related cases. In many successful litigation cases there is a delay in diagnosis and management of CES.	N/A

Appendix 3. Data extraction table for websites

Author(s) and year of publication Care Setting	Title	Source	NHS or non-NHS & Country/ Devolved Administration	Methodology	Concepts of research	Conclusions that relate to wider context	Conclusions that relate to review objectives
CSP 2017	Cauda Equina Syndrome - multi shades of grey	https://www.csp.org.uk/documents/cauda-equina-syndrome-multi-shades-grey	NHS & non-NHS (MDU) UK	The powerpoint presentation found on this link gives information relation to diagnosis of CES, patient symptoms and classifying CES patients into various stages. It also includes some secondary CES claims data.	There were 150 claims from 2005-16 – 92% of these were against GPs, 70% were defended with 8 million paid out. 12% of the claims had over £500,000 payout*. *(Data taken from Taylor 2017) There were 293 claims for CES between 2010-15 – 70% of these claims involved 31-50 year olds.From these claims £25 million was paid out.** **(Data taken from NHSLA 2016) Around 30-40 CES cases per year end up in litigation with average	This provides some extent data for CES claims.	N/A

					compensation costs of £336,000. There are 1000 operations per year related to CES.*** ***(Data taken from Fairbank 2014 originally from Markham 2004)		
CSP 2017	Clinical update: cauda equina syndrome	https://www.csp.org.uk/frontline/article/clinical-update-cauda-equina-syndrome	NHS & non-NHS (MDU) UK	This web page gives general CES statistics and discusses the definition of CES, patient examination, CES symptoms and patient outcomes	The web page discusses how CES cases can lead to litigation and gives the average cost of a CES claim as £336,000*. There is also mention that delays to diagnosing CES patients are often due to failures in recognising symptoms as well as delays in referrals and MRI scanning. *(Data taken from Fairbank 2014 originally from Markham 2004)	N/A	Shows that the average cost of CES litigation cases are high.
CSP 2017	Complaints briefing: What to do if a complaint is made against you	https://www.csp.org.uk/publications/complaints-briefing-what-do-if-complaint-made-against-you	NHS & non-NHS (CSP) UK	This web page Includes document regarding what physiotherapists should do if a complaint is made against them under various circumstances.	The document gives specific details regarding four scenarios: if a complaint is made about the clinician to their employer, if a complaint is made about a clinician regarding clinical negligence, if a complaint is made about a clinician to the HCPC including what the process will entail in each circumstance and who to contact and who not to contact. For each scenario the document advises the clinician where the	N/A	The CSP advises that a complaint against a physiotherapist can take various forms and that it is important to know who has made the complaint, who is dealing with the complaint and how it will be resolved in

				Includes the various complaints that may be made against a CSP member are: i) complaint to their employer, ii) complaint regarding clinical negligence, iii) complaint to the HCPC and iv) complaint to the police.	complaint will be heard and resolved and what they should do. For complaints made to employers, these will be investigated according to local complaints and policy procedure. If the complaint is upheld disciplinary proceedings may be made against the clinician. Clinicians who are invited to an investigatory meeting should contact the CSP steward at their workplace for support and guidance. If clinicians do not know who their CSP steward is they should contact the CSP Enquiry Handling Unit. For clinical negligence claims the document advises they will be heard in the civil court and gives some brief insurance information. For employed clinicians it advises notifying their manager of the claim straight away in order for them to assist the clinician with their defence and advises reviewing clinical notes. For self employed clinicians with a clinical negligence claim against them, the document discusses insurance options		order to access the correct support.

					and advises acknowledging the letter of claim stating that the claim will be handled by the clinician's insurers. It advises self-employed clinicians not to contact the patient involved in the claim or to admit liability in the first instance. Regarding complaints made to the HCPC, these will be dealt with under the HCPC's fitness to practice procedures, which consists of a preliminary investigation and a fitness to practice hearing. The document advises that in receipt of these claims, clinicians should contact the Employment Relations and Union Services Directorate of the CSP via the Enquiry Handling Unit. It advises NHS employees to also make their steward aware of the complaint. It advises all clinicians not to make any direct contact with the HCPC except to acknowledge receipt of their letter and that if clinicians are removed form the HCPC register, they will have their CSP membership removed.		

					For complaints made to the police, clinicians will be asked to attend the police station for interview, clinicians may be arrested and placed under caution. Following interview clinicians may be released without charge, bailed or offered a caution. Clinicians do not have to accept a caution; these will stay on clinicians enhanced CRB checks in the future. If you are charged with a criminal offence the case will be heard in a magistrates court and are often passed to the crown court. If clinicians accept caution or are charged the police will notify the HCPC who will conduct their own investigations as above. All CSP members are entitled to legal advice at police station interviews.		
CSP 2017	Insurance cover: have you got it covered?	https://www.csp.org.uk/frontline/article/insurance-cover-have-you-got-it-covered	NHS & non-NHS (CSP) UK	Web page gives information on types of insurance cover and provides two case studies from two physiotherapists perspectives; one NHS	The first case study states that the initial claim was made against his private company, which was not insured. However, it was established that the physiotherapist was acting in a self-employed capacity and could therefore claim indemnity under the public liability insurance (PLI) scheme. Between the PLI and his PhysioFirst cover the physiotherapist had sufficient	N/A	Physiotherapists should check what insurance cover they are entitled to based on their work and who they work for.

				physiotherapist who also worked self-employed worker and another self-employed physiotherapist running her own practice.	protection but had not understood the vulnerability of his work outside the NHS. The CSP's legal and insurance team dealt with negotiations and the case was closed. The second case study was also regarding a physiotherapist who had a negligence case brought against her. After contacting the CSP and their brokers, it was confirmed the physiotherapist was a CSP member and so was entitled to PLI indemnity. The physiotherapist was on the HCPC register and treatments were within her scope of practice. The case was closed following no communication from the claimants solicitors.		
CSP 2018	PTUK2018: Are NHS-employed MSK physiotherapists in England misdiagnosing Cauda Equina syndrome - Natalie Beswetherick	https://www.csp.org.uk/documents/ptuk2018-are-nhs-employed-msk-physiotherapists-england-misdiagnosing-cauda-equina	NHS UK	This web page has a PowerPoint presentation showing results of Natalie Beswetherick's 2017 data.	Of the CES claims found between 2006/2007-2016/2017 114 claims were against doctors and 5 were against physiotherapists.* *(Data taken from Beswetherick 2017)	N/A	These results give extent data for CES claims between 2006-20017 and show how many of those claims physiotherapists were involved in (4%).

CSP 2019	The little-known spinal injury 'costing the NHS millions'	CSP website The little-known spinal injury 'costing the NHS millions' | The Chartered Society of Physiotherapy (csp.org.uk) Provides link to BBC News website https://www.bbc.co.uk/news/health-49235474	NHS UK	BBC news article outlining CES signs and symptoms. Including case study quotations and litigation data.	This article highlights the difficulty of assessing the number of people with CES as some hospitals do not log case numbers for the condition. Figures for NHS England 2010-11 show 981 surgical decompressions related to CES. Estimated NHS costs of CES compensation claims for 2014-16 = £68m - 2/3rds due to delay or failure of diagnosis or treatment. Does not include claims brought against GPs - thus estimated costs relating to compensation for CES and covering legal costs = £150m to £200m a year. Specialist lawyers believe that medical professionals often act too slowly or fail to recognise the key signs of CES. Laywers see the same cases coming through with the same themes arising and the NHS don't seem to be learning from the mistakes made. The article highlights that compensation payments can reach £4m for CES claims (excluding legal fees).	CES claims costs are high. It is very difficult to get an accurate figure for legal claims relating to CES and the number is suspected to be much higher than what is recorded.	N/A

CSP 2019	Getting support with medicolegal issues	https://www.csp.org.uk/professional-clinical/professional-guidance/medicolegal-work/getting-support	NHS & non-NHS (CSP) UK	This web page tells physiotherapists who to contact should a negligence claim be made against them. The web page also gives information for professional witnesses and expert witnesses.	If physiotherapists are unsure whether and actual or potential event may lead to a claim against them they can read the PLI claims guide and make a PLI notification. If a HCPC registered physiotherapist receives notification that a complaint has been made against them, they should contact their CSP steward or the CSP directly.	N/A	Physiotherapists can contact the CSP if they are unsure about a potential claim against them and should also contact them if they receive notification of a complaint through the HCPC.
CSP 2019	Understanding medicolegal work	https://www.csp.org.uk/professional-clinical/professional-guidance/medicolegal-work/understanding-medicolegal-work	NHS & non-NHS (CSP) UK	Gives a brief description of circumstances under which a claim may be made against a physiotherapist. The web page helps to explain how concerns are investigated and how physiotherapists	Patients can make a complaint to a hospital or department which will be investigated. Physiotherapists may be involved in these complaints and may need to provide records. In some circumstances a coroner may be involved if a patient has died and physiotherapists may be required to provide their clinical records and a statement. Patients can also contact a solicitor to make a clinical negligence claim and physiotherapists may be required to	N/A	The CSP may be able to provide support to physiotherapists undergoing an investigation processes under certain circumstances.

				may be involved in medicolegal work.	provide their clinical records and a statement. On rare occasions the police may be involved if the allegation is crime related, in which case physiotherapists should check if the CSP can support them or contact their criminal defence insurer if they have one. Fitness to practice complaints can also be made, patients may complain to the HCPC which could be investigated by the HCPC. Physiotherapists can contact their workplace steward, if they have one, to get support with these processes. These 4 complaint categories are also described in the record above (Complaints briefing: What to do if a complaint is made against you).		
CSP 2019	Writing a medicolegal statement	https://www.csp.org.uk/professional-clinical/professional-guidance/medicolegal-	NHS & non-NHS (CSP) UK	Guide for how to write a statement as part of the investigation process. Web page informs physiotherapists	Helpful guide for physiotherapists including things to keep in mind such as, submission deadline for statement, retaining copy of clinical records and understanding what physiotherapists are being asked to comment on. Advises physiotherapists to be truthful and honest, be objective and stick to	N/A	If asked to write a statement as part of an incident or claim regarding a patient, physiotherapists can go to the CSP website for advice

		work/writing-statement		what they should include in their statement as part of the investigation process.	the facts, to write in chronological order. Physiotherapists are responsible for the contents of their statement and should write this themselves.		on writing their statement.
NHSLA 2016	Did you know? Cauda Equina Syndrome	NHSLA website https://webarchive.nationalarchives.gov.uk/20180903114432/http:/www.nhsla.com/Safety/Documents/DYK_Cauda_Equina_Syndrome_Web.pdf	NHS England	CES leaflet with key facts costs and figures for CES and litigation	Between January 2010 – December 2015 the NHSLA received 293 claims related to CES at a cost of over £25 million including damages, defence and also claimant costs. There were 232 claims were under investigation, 41 cases were resolved with no damages paid and 20 cases had damages paid.	This data show a high number of claims for CES and high related cost to the NHS.	N/A – not specifically related to physiotherapy
NHS Resolution 2018	Cauda equina syndrome Freedom of information request details	https://resolution.nhs.uk/foi-disclosure-log/cauda-equina-syndrome/	NHS England	This web page includes a PDF file of an FOI request submitted in 2018 in relation to cauda equina claims	A search was conducted for successful claims closed or settled using the codes 'wrong diagnosis' and 'failure/delay diagnosis' using a free text search of the keywords 'cauda equina' for the period 2006/7 - 2016/17 which showed 119 successful claims. The search was further restricted using the term 'Physiotherapy' which resulted in fewer than five successful claims.*	N/A	This gives extent data for CES claims involving physiotherapists.

					*(This data is published in Beswetherick, 2019 above)		
NHS Resolution 2019	An introduction to the Clinical Negligence Scheme for General Practice (CNSGP)	https://resolution.nhs.uk/resources/an-introduction-to-the-clinical-negligence-scheme-for-general-practice/	NHS England	The video on this web page describes the negligence scheme for all healthcare professions working in general practice.	Claims arising before 1st April 2019 will need to be notified to your indemnity provider. If clinicians are notified of a clinical negligence claim on or after the 1st April 2019 should contact NHS resolution and general practice claims helpline that is available 24/7 365 days a year. Clinicians should provide an apology and an explanation to the patient and their family where appropriate. An email address is also provided for more information.	This provides some brief guidance for healthcare practitioners working in a general practice setting regarding clinical negligence claims.	N/A
NHS Resolution 2020	Did you know? Cauda equina syndrome	NHS Resolution website https://resolution.nhs.uk/wp-content/uploads/2020/07/Did-you-know-Cauda-Equina.pdf	NHS England	This NHS resource discusses the red flag symptoms of CES as well as the cost of CES litigation to the NHS in recent years	Between January 2008 - December 2018, the NHS Resolution received a total of 827 claims related to CES. 340 of the claims were settled with damages paid, 212 cases were without merit and 275 cases remained open. These claims have cost the NHS £186,134,049 which includes payments for claimant legal costs, NHS legal costs and damages.	This shows that CES claims still incur a large cost to the NHS and a large number of claims can still be seen for a rare condition.	N/A – not physiotherapy specific

NHS Resolution 2020	Primary Care Appeals – dispute resolution guidance	https://resolution.nhs.uk/resources/primary-care-appeals-dispute-resolution-guidance/	NHS England	This web page gives information for submitting or responding to, applications for dispute resolution.	This page describes which regulations are applicable in various scenarios, whether legal representation is permitted and what information should be provided. It also gives information regarding who will make the final decision, the procedure, oral hearings, witnesses and timescales as well as what to do if you would like to appeal.	This gives some brief guidance regarding disputes which may go to a hearing.	N/A – not physiotherapy specific
NHS Resolution 2020	Supporting general practice – Common pitfalls Supporting general practice – What to do if you receive a complaint or a claim	https://resolution.nhs.uk/resources/supporting-general-practice-common-pitfalls/ the following link is then found:	NHS England	The video on this web page describes what clinicians should do if they receive a complaint or claim. The video discusses each step relating to various scenarios, including receiving a letter of complaint or a	Advises clinicians to provide patients with an explanation and apology and explains that this does not mean they are accepting liability and will not affect their indemnity. If there is a request for compensation, there is a possibility of a formal claim forming and the video advises clinicians to report this to their medical defence organisation, insurer or NHS resolution. If clinicians make and ex gratia payment it may not protect them from a claim and NHS		N/A – not physiotherapy specific

		https://resolution.nhs.uk/resources/supporting-general-practice-complaint-or-claim/ (Supporting general practice – What to do if you receive a complaint or a claim)		request for records and court proceedings.	Resolution may not be able to refund them. Clinicians should follow their own practice arrangement for dealing with complaints. Their practice complaints manager is responsible for dealing with complaints. Medical records will likely be requested if a claim is made, patients may also be entitled to records. The video discusses ensuring anonymity of other patients or third parties and advises clinicians to record what they have disclosed. A letter of claim is a precursor to court proceedings. These letters must be reported to a clinician's indemnifier. The video also shows what a claims from looks like that may be sent by the court, patient or their solicitor. It also discusses documents for court proceedings and gives a contact email address and 24-hour helpline for legal advice. Time scales are also discussed throughout regarding response times.		
NHS Resolution 2020	Handling claims under the Clinical Negligence	https://resolution.nhs.uk/resources/handling-claims-	NHS England	This podcast on this page is aimed at healthcare professionals who	The podcast states that incidents occurring before 1 April 2019 should be reported to a clinicians Medical Defence Organisation (MDO) provider	This provides some guidance for clinicians involved in	N/A

	Scheme for General Practice	under-the-clinical-negligence-scheme-for-general-practice/		have had a claim brought against them and discusses who they should contact and advice on steps to take in relation to their case.	or other indemnity provider, incidents that occurred on or after 1 April 2019, should be reported to the NHS Resolution and incidents occurring during both periods, or where it's unclear, should be reported to the NHS Resolution and the clinicians MDO or indemnity provider. The podcast advises clinicians with a claim against them to apologise in the first instance, to the patient and their family and that they would never withhold indemnity from a clinician who has apologised and that they encourage this. They should report the claim to NHS Resolution. They say that reporting an incident to them early can help to avoid potential claims and can speed up the process and therefore reduce costs too. They refer to the NHS Resolution website for support and also provide an email address and phone number for legal advice. Clinicians can still treat patients who are complaining or claiming against them as long as there is no breakdown of trust between the clinician and the patient which means	claims and advises on early steps.	

					they cannot provide good clinical care to them. Some claims may go to court however, most claims are resolved without formal court proceedings. Just less than one third of claims end up in litigation and less than 1% will go to a full trial.		
NHS Resolution 2021	Existing Liabilities Scheme for General Practice	https://resolution.nhs.uk/services/claims-management/clinical-schemes/general-practice-indemnity/existing-liabilities-scheme-for-general-practice/	NHS England	This web page gives information on the Existing Liabilities Scheme for General Practice (ELSGP).	The scheme initially, only covers liabilities for members of the Medical and Dental Defence Union of Scotland (MDDUS) at the time of the incident the claim relates to. The scheme will apply to general practice members of the Medical Protection Society (MPS) from 1 April 2021. The web page provides an email address and claims helpline phone number for clinicians who have an ongoing claim, although they do state that if lawyers are managing a clinicians case on their behalf they should be the first point of contact.	This page gives information on who healthcare practitioners covered by the ELSGP scheme can contact, with regards to ongoing claims against them.	N/A
NHS Resolution 2021	Clinical Negligence Scheme for General Practice	https://resolution.nhs.uk/faq-section/clinical-negligence-	NHS England	This web page answers some frequently asked questions that healthcare	The scheme is for all healthcare professionals working in a primary setting and the page gives information such as who you should contact if you receive a claim and what is covered by	This provides so basic information relating to the scheme and	N/A

	frequently asked questions	scheme-for-general-practice/		practitioners may have in relation to the negligence scheme for general practice.	the scheme. It provides a link to when and how to report a claim if one is received.	helps clinicians understand if they are covered by the scheme and what it is for. It also proves some guidance for reporting a claim that has just been received and also who should be notified of claims made at a previous date.	
Taylor 2017	Analysis of cauda equina syndrome claims	MDU Journal website - https://mdujournal.themdu.com/issue-archive/spring-2017/analysis-of-cauda-equina-syndrome-claims	NHS & Non-NHS (MDU) UK	The MDU completed an analysis of closed CES claims between January 2005 - August 2016.	Almost 150 claims were reported to the MDU 92% of which were against GPs. The MDU successfully defended over 70% of the claims reported during the time period investigated. the MDU spent nearly £350,000 on legal costs. For cases that were settled, the compensation cost was over £8 million paid by the MDU. Payments for damages ranged from £2,250 to £670,000, and of 12% of settled case involved damages payments totalling	In recent years the majority of CES claims have been against GPs. The MDU were able to defend the majority of the claims made.	N/A – not physiotherapy specific

					over £500,000. Many cases settled by the MDU had compensation agreements that were less than £100,000. The MDU paid more than £4.5 million in claimant solicitors' costs.		

Appendix 4. Freedom of Information Request Examples

I would like to know the number of claims with 'Cauda Equina' in the Incident Description field for the last 12 months - 2018/2019 (or the last recorded 12-month period), additionally, if possible, which health care professions were involved in these claims.

I would like to know the number of legal claims with 'Cauda Equina' in the Incident Description field for the following years; 2015/2016, 2016/2017, 2017/2018 and 2018/2019. Including data for open, closed, confirmed and potential claims.

Appendix 5 PRISMA-ScR (Tricco *et al.*, 2018)

Table. PRISMA-ScR Checklist

Section	Item	PRISMA-ScR Checklist Item
Title	1	Identify the report as a scoping review.
Abstract		
Structured summary	2	Provide a structured summary that includes (as applicable) background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.
Introduction		
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.
Methods		
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.
Critical appraisal of individual sources of evidence§	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).
Summary measures	13	Not applicable for scoping reviews.
Synthesis of results	14	Describe the methods of handling and summarizing the data that were charted.
Risk of bias across studies	15	Not applicable for scoping reviews.
Additional analyses	16	Not applicable for scoping reviews.
Results		
Selection of sources of evidence	17	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.
Characteristics of sources of evidence	18	For each source of evidence, present characteristics for which data were charted and provide the citations.
Critical appraisal within sources of evidence	19	If done, present data on critical appraisal of included sources of evidence (see item 12).
Results of individual sources of evidence	20	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.
Synthesis of results	21	Summarize and/or present the charting results as they relate to the review questions and objectives.
Risk of bias across studies	22	Not applicable for scoping reviews.
Additional analyses	23	Not applicable for scoping reviews.
Discussion		
Summary of evidence	24	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.
Limitations	25	Discuss the limitations of the scoping review process.
Conclusions	26	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.
Funding	27	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.
* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.
† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).
‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.
§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy documents).

Appendix 5 GMC - How we investigate concerns web page

How we investigate concerns

We receive complaints or concerns about many doctors throughout their careers.

But we only investigate when these raise issues about a doctor's ability to practise safely or threaten public confidence in the profession.

This guide will take you through the key milestones of our investigation process.

It explains:

- what happens if we open an investigation to look into a concern about your practice
- how we investigate a concern
- what an investigation might mean for you.

Why you need to read this guide

To find out more about how our investigation processes work.

Appendix 7. – Interview topic guide for physiotherapists

Topic guide questions re-ordered for Physiotherapists' interviews

Demographic info:

CURRENT ROLE, PREVIOUS MSK EXPERIENCE

1) Is your current role based within the NHS or in the private sector? If private – self-employed or employed?
2) Who do you work for and Where abouts in the UK do you work?
3) Which NHS agenda for change banding are you currently working at?
4) So, I understand that you work in the musculoskeletal field at present? Can you tell me
5) Obviously, you have lots of experience of MSK, how long have you been qualified as a physiotherapist? And how many years have you worked in the area of MSK physiotherapy?
6) about your particular sub-specialty or area of interest?
7) Can you tell us a bit about what your current role entails?
   What type of patient conditions do you currently see?
8) What type of support structure or team do you have around you in your current role?
   Do you have access to medical colleagues, radiological/haematological investigations, surgical colleagues?
9) What clinical experience did you have prior to this role?

TRAINING RELATED TO CES, LITIGATION, FEAR OF LITIGATION, IMPACT OF FEAR ON PRACTICE

So, if we could start to think broadly about CES and litigation in first of all:

1) Could you briefly talk us through any work you've done or training you've had, that's contributed to your understanding of CES and its management?
2) In your current role, how frequently do you have to deal with patients with suspected CES?
3) Do you have a CES pathway where you work? Did you have any involvement in the development of this pathway? If not, did you receive training to familiarise you with the pathway? If so, how are the details of that pathway disseminated to more junior colleagues who weren't involved in its development?
4) Have you received any formal training relating to litigation?
5) When did you become aware of the risk of litigation affecting your practice? Is this something you considered when moving into that role?
6) Does fear of CES litigation affect the way you carry out your clinical practice? If so, how?

PERSONAL EXPERIENCES OF LITIGATION IF RELEVANT

So, our understanding is that you have had your own experience of CES related litigation, is that correct?:

Have you had any personal experience of CES related litigation?

If not have friends/ colleagues? – effects on them / their practice?

What has shaped your opinion on litigation?

If yes…..

1) Firstly, can you tell me how many cases you have been involved with?
2) And were you in your current job role when each of these cases took place? If not, where were you working and in what role for each case?

3) If you think back to the first case you were involved with, can you talk me through your initial reaction when you found out that you were going to be involved in a litigation case?
4) Are you happy to talk us through that first experience, so, what happened with the patient, your involvement, and how you came to find out they had been diagnosed with CES? What did that feel like?
5) Can you talk me through your experience of being involved in the litigation process? How were you first informed that you would be involved in a litigation case?
6) Tell me about how this experience impacted on your professional practice, both at that time and since then?
7) What impact did this experience have on you personally?
8) Tell me about any support you received whilst you were going through this experience? Did you discuss the experience with peers, friends, family?
9) Do you know what the outcome of the case was?
10) How were you informed of the outcome? If never informed – How did that make you feel?

IF MORE THAN ONE EXPERIENCE: DIFFERENCE BETWEEN FIRST EXPERIENCE OF LITIGATION AND SUBSEQUENT EXPERIENCES

So, if we now move on to thinking about the second/third cases you were involved with:

1) Having had the experience of the first case, was there any difference in your reaction or the way you felt when you first found out about the second and third cases?

2) Was there any difference in the level of support you received during the second and third cases?
3) Was there any difference in the way the second or third cases impacted on you either personally or professionally? If so, how?
4) Do you know the outcome of the second and third cases?
5) How were you informed of these?
6) If the cases are completed – how did you feel once you'd been informed the cases were not going to proceed?

LASTING IMPACT OF EXPERIENCES OF LITIGATION

Reflecting on your experience of litigation,

1) What do you think has been the lasting impact on you, either personally or professionally?

If no…(i.e. no personal experience of litigation)

1) Do you have any friends or colleagues who have had experience of litigation relating to cauda equina syndrome or any other condition?
2) If so, in your view, what was the impact of their experience of litigation on them either personally or professionally?
3) Aside from the experiences of your friends, what else do you think has shaped your view of litigation in relation to cauda equina syndrome?

IDENTIFYING WAYS TO IMPROVE TRAINING AND SUPPORT FOR THOSE INVOLVED IN LITIGATION

So, we spoke earlier about the support you'd received during your experiences,

1) What do you think can be done to better prepare physiotherapists to deal with CES litigation?

How can we better support physiotherapists as they go through this process?

What can the CSP do?

What can employers do?

2) Are there any training courses that you are aware of that you think should be made more widely available to physiotherapists?
3) Do you think litigation training should be mandatory for all physiotherapists?

   If so, how do think this could best be introduced?
4) Did you receive any litigation training as part of your undergraduate training?
5) Do you feel that undergraduate students should be exposed to information about litigation?

   Do you think this is something that would just frighten them, or do you think it's important that this information is embedded at this level?

ANYTHING ELSE YOU WOULD LIKE TO ADD

Ok, so I think I have asked everything we wanted to ask. Is there anything else you think is important that we haven't discussed or anything else you would like to add?

SNOWBALL SAMPLING: Is there anyone else you can think of who has had experience of litigation related to cauda equina syndrome that you think might be willing to speak to us about that experience….?

Appendix 8. - Qualitative interviews data synthesis sent to physiotherapists with experience via email

Qualitative interviews results summary

Four themes were found from the qualitative interviews:

- Litigation effects
- It's not personal
- Learning from litigation
- Support and training'.

'**Litigation effects'** describes the direct effects of litigation on a physiotherapists health and wellbeing. Here several participants reported the effect it had on their physical health for example high blood pressure, gastric reflux, and their mental wellbeing such as stress and anxiety. This theme also encompasses the impact on physiotherapists' professional practice, including practising more defensively, changes to note taking and lowering thresholds for investigation.

'It feels personal' describes how physiotherapists often feel litigation is a personal attack on them and their ability to do their job. Some physiotherapists come to realise litigation is not personal over the course of a claim as they learn about the legal process and how they became involved. Physiotherapists described being 'swept up' in the legal process and some came to realise that, all health professionals involved in the patient journey can be investigated as part of the claim.

'**Learning from litigation'** relates to the learning processes that occurred on an individual level for the physiotherapist in relation to litigation. Often physiotherapists didn't know what the implications of litigation were and they wondered if they would be struck off. Physiotherapists were unsure who they should contact when they found out they were cited in a claim or if they could tell anyone due to confidentiality. The theme also describes the learning that occurs in relation to the physiotherapy profession, for example some physiotherapists described their places of work sharing feedback from claims locally (for example, within the department or trust) in order to learn from litigation to help improve practice. However, for most physiotherapists, they highlighted a reticence to talk about litigation and to share findings due to perceptions of a 'blame culture' and perceived stigma associated with the claim and also due to a lack of means by which to share learning more widely.

'**Support and training'** captures the support that is needed for physiotherapists going through litigation. Physiotherapists highlighted that emotional support for those going through a legal claim was needed and this should be provided by someone who understood what they might be going through, for example, by someone who had previously gone through the process themselves. Some physiotherapists also compared the support received by other health professions who experienced litigation, which was perceived as being better compared to that received by physiotherapists. Most physiotherapists highlighted that training was needed to understand the process of litigation and range of potential outcomes and that this should be introduced during undergraduate training and built on during the physiotherapists career.

Appendix 9. – Blank National Survey

UK Physiotherapists National Online Survey

Welcome: The experiences of physiotherapists in relation to litigation

We would like to invite you to take part in our research investigating the experiences of UK physiotherapists in relation to litigation. Our findings will be used to help support physiotherapists in their role to ensure their health and wellbeing. This project is being funded by the Chartered Society of Physiotherapy (CSP) (Manchester Metropolitan University ethics approval reference: 18122).

Why have I been invited?

We are contacting **all qualified** physiotherapists in the UK to complete a national survey (all grades, retired physiotherapists and from all specialities). **You do not need to have any experience of litigation to take part.** The survey will investigate the extent of litigation in regard to UK physiotherapy, the experiences of being involved in litigation, how to support physiotherapists in their role, and potential training needs. This survey is completely **anonymous**. The survey should take approximately 5-10 minutes to complete.

Do I have to take part?

It is up to you to decide. If after reading this information sheet, you have any questions, please contact the researchers whose details are given below. If you wish to take part, please complete the questionnaire. By completing the questionnaire you are consenting to take part. As the survey is **anonymous**, once submitted you will not be able to withdraw it.

What will happen to the results of the research study?

The results of the research study will be used in reports sent to the CSP. The results will also be used for academic publications and oral presentations at conferences or other learning events. Your data will be used to support other research in the future, and may be shared anonymously with other researchers.

You may contact the researcher if you would like more information or if there is anything that is not clear:

Research Assistant details:

Rachel Leech, Manchester Metropolitan University, Brooks Building, Birley Campus

53 Bonsall Street, Manchester, M15 6GX r.leech@mmu.ac.uk

Principal Investigator details:

Dr Gillian Yeowell, Manchester Metropolitan University, Brooks Building, Birley Campus, 53 Bonsall Street, Manchester,

M15 6GX, Tel. 0161 247 2961 g.yeowell@mmu.ac.uk

If you want to discuss the research with an independent person or have any complaints regarding this research, then you should contact:

Prof Khatidja Chantler, Faculty Head of Ethics, Manchester Metropolitan University, Brooks Building, Birley Campus, 53 Bonsall Street, Manchester, M15 6GX, K.Chantler@mmu.ac.uk 0161 247 1316

Are you a qualified Physiotherapist who has worked in the UK? * *Required*

- ○ Yes
- ○ No

Demographics

What is your sex? * *Required*

- ○ Male
- ○ Female
- ○ Prefer not to say

How long have you been qualified as a Physiotherapist? * *Required*

- ○ 0-5 years
- ○ 6-10 years
- ○ 11-15 years
- ○ 16-20 years
- ○ >20 years

Who are you employed by? (If you work in multiple employment settings, please choose the one in which you spend most of your time) * *Required*

- ○ Employed NHS
- ○ Employed non-NHS
- ○ Self-employed
- ○ Non-clinical physiotherapist
- ○ Retired

NHS Employed

What is your role? * *Required*

- NHS AFC Band 8
- NHS AFC Band 7
- NHS AFC Band 6
- NHS AFC Band 5
- Other

non-NHS Employed

What is your role? * *Required*

- Physiotherapist manager / head of service
- First contact practitioner
- Advanced practice physiotherapist
- Consultant physiotherapist
- Senior physiotherapist
- Junior physiotherapist
- Other

Self-employed

What is your role? * *Required*

- Private practitioner physiotherapist
- Private Practice owner
- Other

Specialised areas of practice

Do you have a specialised area of clinical practice? * *Required*

- Neuromusculoskeletal
- Neurology
- Cardiovascular
- Paediatrics
- Respiratory
- Burns
- Learning difficulties
- Mental health
- Women's health
- Cystic fibrosis
- Transplants
- Oncology
- Other

Regions

Where in the UK do you currently work? (If you work in multiple regions, please choose the one in which you spend most of your time) * *Required*

- East Midlands
- East of England
- London
- North East
- North West
- Northern Ireland
- Scotland
- South Central
- South East Coast
- South West
- Wales
- West Midlands
- Yorkshire and Humberside

Experience

Have you ever been personally involved in litigation? (cited in a case) * *Required*

- Yes
- No

No litigation experience

Do you have awareness that litigation could affect you in your career? * *Required*

- Yes
- No

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Awareness of litigation

How does awareness of litigation affect you **personally**? (can tick more than one box) * *Required*

Please select at least 1 answer(s).

- [ ] Stress
- [ ] Low mood and/or depression
- [ ] Difficulty concentrating
- [ ] Struggling to make decisions
- [ ] Feeling overwhelmed
- [ ] Worry and anxiety
- [ ] Headaches or dizziness
- [ ] Being forgetful
- [ ] Being irritable and snappy
- [ ] Sleep problems and/or insomnia
- [ ] Eating too much or too little
- [ ] Avoiding certain places or people
- [ ] Drinking or smoking more
- [ ] Personal relationships affected
- [ ] Muscle tension or pain
- [ ] Stomach problems
- [ ] Chest pain or a faster heartbeat
- [ ] Sexual problems
- [ ] Other
- [ ] No effect on me personally

How does awareness of litigation affect your **professionally**? (can select more than one) * *Required*

Please select at least 1 answer(s).

- [ ] Defensive practice eg. More detailed note taking, lower threshold for referral to another department/ to order investigations
- [ ] Additional insurance cover
- [ ] Change of career
- [ ] Changed speciality e.g. move from MSK to falls service
- [ ] Changed role to a lower grade
- [ ] Changed clinical setting e.g. primary care to secondary care
- [ ] Changed employer/ employment status
- [ ] Reduced working hours
- [ ] Retired/ semi-retired
- [ ] Other
- [ ] No effect on my clinical practice

Litigation process

Would you know where you would go for **support with the legal process** if you found out you were involved in litigation? *Required*

- ○ Yes
- ○ No

Who would you contact support for **initial support with the legal process** if you were informed of a litigation case against you?

- ○ CSP
- ○ HCPC
- ○ Employer
- ○ Own solicitor
- ○ Other

Where would you go for **emotional support** if you were informed of a litigation case against you? (can select more than one option) *Required*

Please select at least 1 answer(s).

- ☐ Line manager
- ☐ Legal team
- ☐ Solicitor
- ☐ Peer support
- ☐ Family and friends
- ☐ Counsellors and/or therapists
- ☐ Other professionals
- ☐ CSP
- ☐ HCPC
- ☐ None

Litigation experience

How many litigation claims have you been involved in? * *Required*

○ 1 ○ 2-3 ○ >4

What was the outcome of your litigation case(s)? (please select a number for each row)

	Number of claims * *Required*				
	0	1	2	3	>4
Claim was dropped	○	○	○	○	○
Claim was settled out of court	○	○	○	○	○
Claim was settled through court proceedings	○	○	○	○	○
I don't know / I was not informed	○	○	○	○	○
Other	○	○	○	○	○

What condition/ treatment did your claim(s) relate to? (can select more than one option) * *Required*

Please select at least 1 answer(s).

- ☐ Neuromusculoskeletal
- ☐ Neurology
- ☐ Cardiovascular
- ☐ Paediatrics
- ☐ Respiratory
- ☐ Burns
- ☐ Learning difficulties
- ☐ Mental health
- ☐ Women's health
- ☐ Cystic fibrosis
- ☐ Transplants
- ☐ Oncology
- ☐ Other

(if Neuromusculoskeletal)

Please select at least 1 answer(s).

- ☐ Undiagnosed fractures
- ☐ Cauda equina syndrome
- ☐ Tendo-Achilles ruptures
- ☐ Prolapsed discs

- [ ] Osteosarcomas
- [ ] Spinal infection
- [ ] Infection following injection
- [ ] Burns
- [ ] Acupuncture
- [ ] Manual therapy/ manipulation
- [ ] Other

What was your role when you treated/ assessed the patient in relation to the claim? (If you have been involved in more than one claim please answer in relation to **the claim which most affected you**) * *Required*

- ( ) First contact practitioner
- ( ) Advanced practice physiotherapist
- ( ) Consultant physiotherapist
- ( ) Private practitioner physiotherapist
- ( ) Junior physiotherapist
- ( ) Other

At the time of litigation how much experience did you have in your role? (If you have been involved in more than one claim please answer in relation **to the claim which most affected you**) * *Required*

- ( ) 0-5 years
- ( ) 6-10 years
- ( ) 11-15 years
- ( ) 16-20 years
- ( ) >20 years

Support and effects of litigation

Did you know where to go for **support with the legal process** when you found out you were involved in litigation? (If you have been involved in more than one claim please answer in relation **to the claim which most affected you**) * *Required*

- ○ Yes
- ○ No

Who did you contact for **initial support with the legal process**? (can select more than one option) * *Required*

Please select at least 1 answer(s).

- ☐ CSP
- ☐ HCPC
- ☐ Employer
- ☐ Own solicitor
- ☐ Other

How much do you agree with the following statement: The level of support with the legal process I received was satisfactory * *Required*

	1	2	3	4	5	6	7	8	9	
Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree

Where did you receive **emotional support** from in relation to your case? (can select more than one option) * *Required*

Please select at least 1 answer(s).

- ☐ No support received
- ☐ Line manager
- ☐ Legal team
- ☐ Solicitor
- ☐ Peer support
- ☐ Family and friends
- ☐ Counsellors and/or therapists
- ☐ Other professionals
- ☐ CSP
- ☐ HCPC

How much do you agree with the following statement: There was an impact on me **personally** as a result of litigation * *Required*

	1	2	3	4	5	6	7	8	9	
Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree

What were the effect(s) on you **personally** of being involved in litigation? (can select more than one) * *Required*

Please select at least 1 answer(s).

- ☐ Stress
- ☐ Low mood and/or depression
- ☐ Difficulty concentrating
- ☐ Struggling to make decisions
- ☐ Feeling overwhelmed
- ☐ Worry and anxiety
- ☐ Headaches or dizziness
- ☐ Being forgetful
- ☐ Being irritable and snappy
- ☐ Sleep problems and/or insomnia
- ☐ Eating too much or too little
- ☐ Avoiding certain places or people
- ☐ Drinking or smoking more
- ☐ Personal relationships affected
- ☐ Muscle tension or pain
- ☐ Stomach problems
- ☐ Chest pain or a faster heartbeat
- ☐ Sexual problems
- ☐ Other
- ☐ No effect on me personally

How much do you agree with the following statement: There was an impact on me **professionally** as a result of litigation * *Required*

	1	2	3	4	5	6	7	8	9	
Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree

What were the effect(s) on you **professionally** as a result of being involved in litigation? (can select more than one option) * *Required*

Please select at least 1 answer(s).

- [ ] Defensive practice eg. More detailed note taking, lower threshold for referral to another department/ to order investigations
- [ ] Additional insurance cover
- [ ] Change of career
- [x] Changed speciality e.g. move from MSK to falls service
- [x] Changed role to a lower grade
- [ ] Changed clinical setting e.g. primary care to secondary care
- [ ] Changed employer/ employment status
- [x] Reduced working hours
- [ ] Retired/ semi-retired
- [ ] Other
- [x] No effect on me professionally

What were the key learning points for your employer/practice relating to the claim? (can select more than one) * *Required*

Please select at least 1 answer(s).

- [x] Changes to note taking
- [ ] Lower threshold for referrals to other departments / for investigations
- [ ] Improved access to investigations (e.g. 24 hour access to MRI access locally)
- [x] Improved pathways
- [ ] Debriefing sessions available for clinicians
- [ ] Better knowledge of litigation process
- [x] Other
- [ ] None

What are the changes you have made personally as a consequence of being involved in a claim? (can select more than one option) * *Required*

Please select at least 1 answer(s).

- [ ] Changes to note taking
- [ ] Lower threshold for referrals to other departments / for investigations
- [x] Better knowledge of litigation process
- [ ] Changes to clinical practice
- [ ] Make use of peer support available
- [x] Change of career
- [ ] Retired
- [ ] Other
- [x] None

How much would you agree that: It would be helpful
having a debrief with an independent professional to discuss the case confidentially * *Required*

	1	2	3	4	5	6	7	8	9	
Strongly disagree	☐	☐	☐	☐	☐	☐	☐	☐	☐	Strongly agree

Training

Do you think it would be useful to have more resources available for support with the litigation process * *Required*

- ○ Yes
- ○ No

If more resources to support litigation were to be produced what format would be most useful to you? (can select more than one) * *Required*

Please select at least 1 answer(s).

- ☐ Online support information
- ☐ Information over the phone
- ☐ Information via post
- ☐ Other
- ☐ No further resources required

If more resources to support litigation were to be produced where would be the best place for you to access them? (can select more than one) * *Required*

Please select at least 1 answer(s).

- ☐ Employers website
- ☐ CSP website
- ☐ NHS Resolution website
- ☐ Physiopedia
- ☐ Frontline magazine
- ☐ Other
- ☐ No further resources required

Do you think litigation training should be mandatory for all physiotherapists? * *Required*

- ○ Yes
- ○ No

Who do you think should be responsible for overseeing the training? (can select more than one) * *Required*

Please select at least 1 answer(s).

- ☐ Employer as a condition of employment

- [ ] Professional body (CSP) as a condition of Membership
- [x] Regulator (HCPC) as a condition of Registration
- [ ] Other
- [ ] Training should not be mandatory

Do you think training relating to litigation should be available at: (can select more than one) * *Required*

Please select at least 1 answer(s).

- [ ] Undergraduate level
- [x] Postgraduate level
- [x] None

Final page

Thankyou for completing our online survey and contributing to our research.

If you would like any further information about our research, please visit our website: Research: Cauda Equina Syndrome (CES) and litigation | Manchester Metropolitan University (mmu.ac.uk)

Appendix 10. – National Survey Results

Jisc Online surveys

UK Physiotherapists National Online Survey

Showing 688 of 688 responses

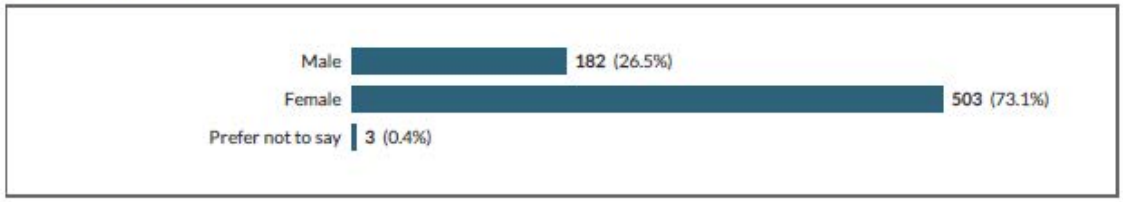
Showing **all** responses

Showing **all** questions

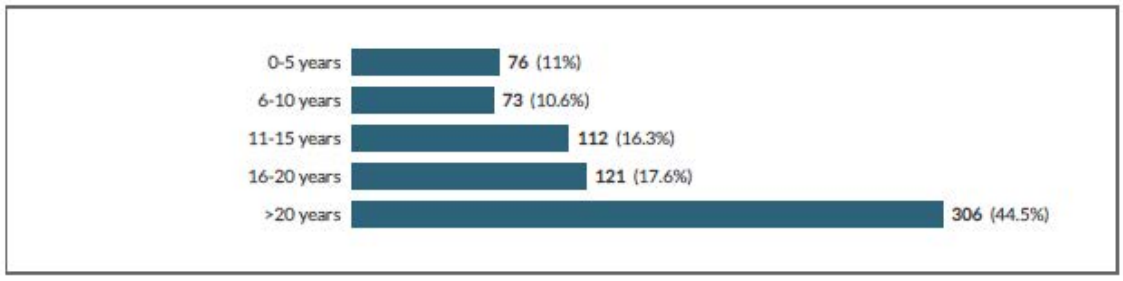
Response rate: 688%

1 Are you a qualified Physiotherapist who has worked in the UK?

2 What is your sex?



3 How long have you been qualified as a Physiotherapist?



4 Who are you employed by? (If you work in multiple employment settings, please choose the one in which you spend most of your time)

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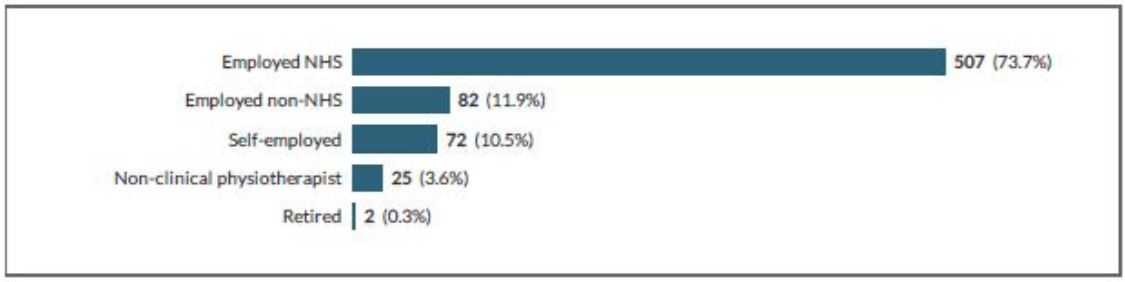
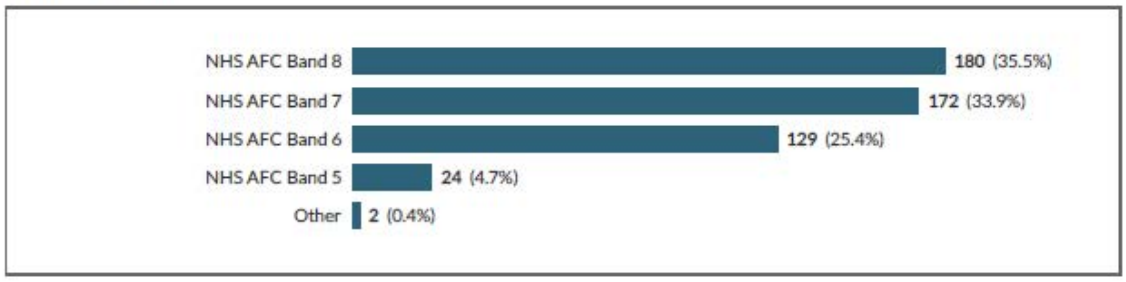
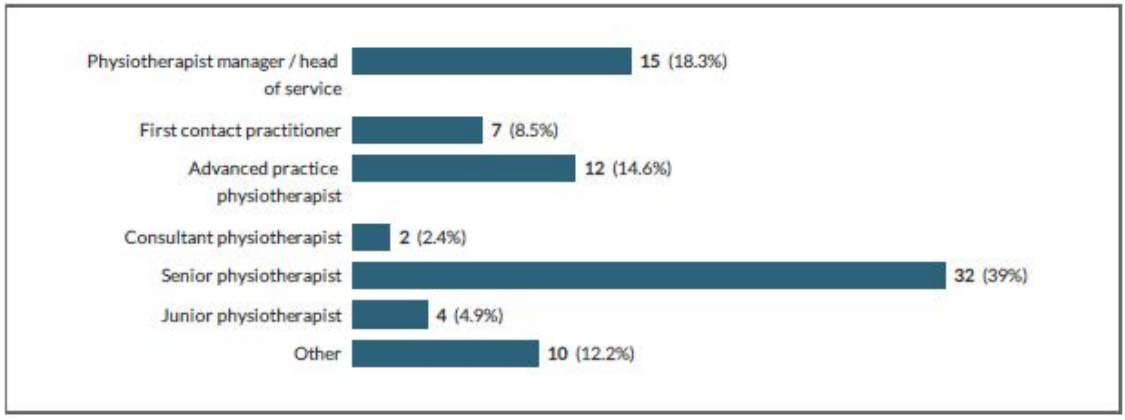


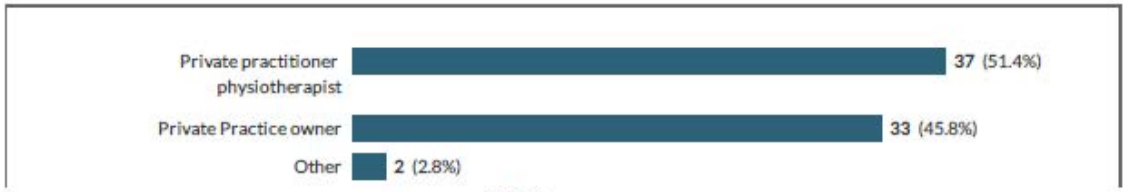
5 What is your role?



6 What is your role?

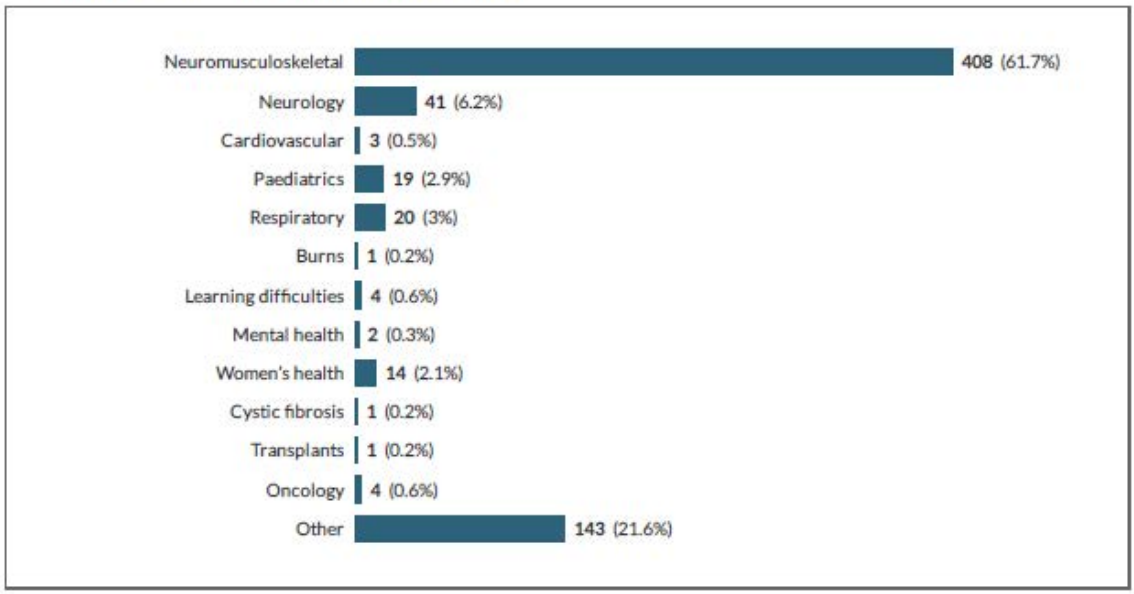


7 What is your role?

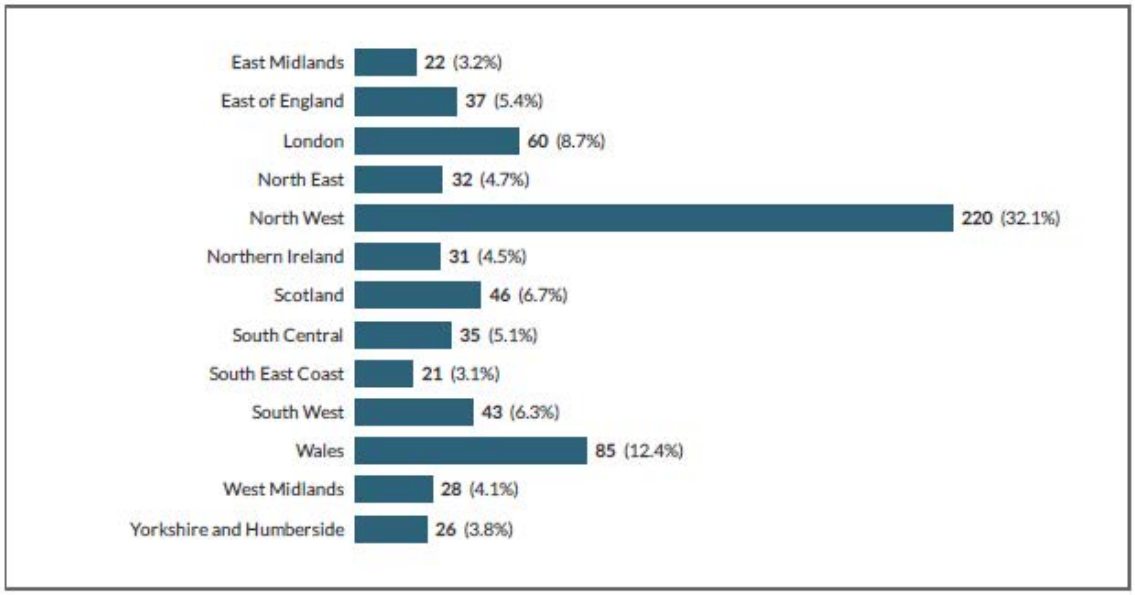


2 / 18

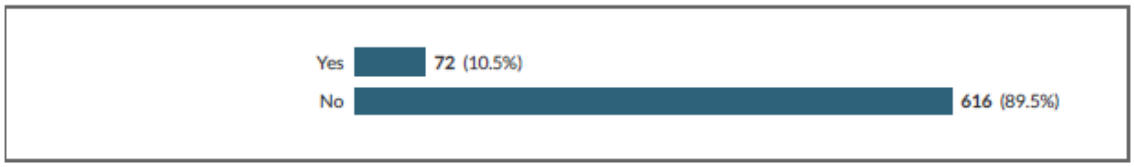
8 Do you have a specialised area of clinical practice?



9 Where in the UK do you currently work? (If you work in multiple regions, please choose the one in which you spend most of your time)

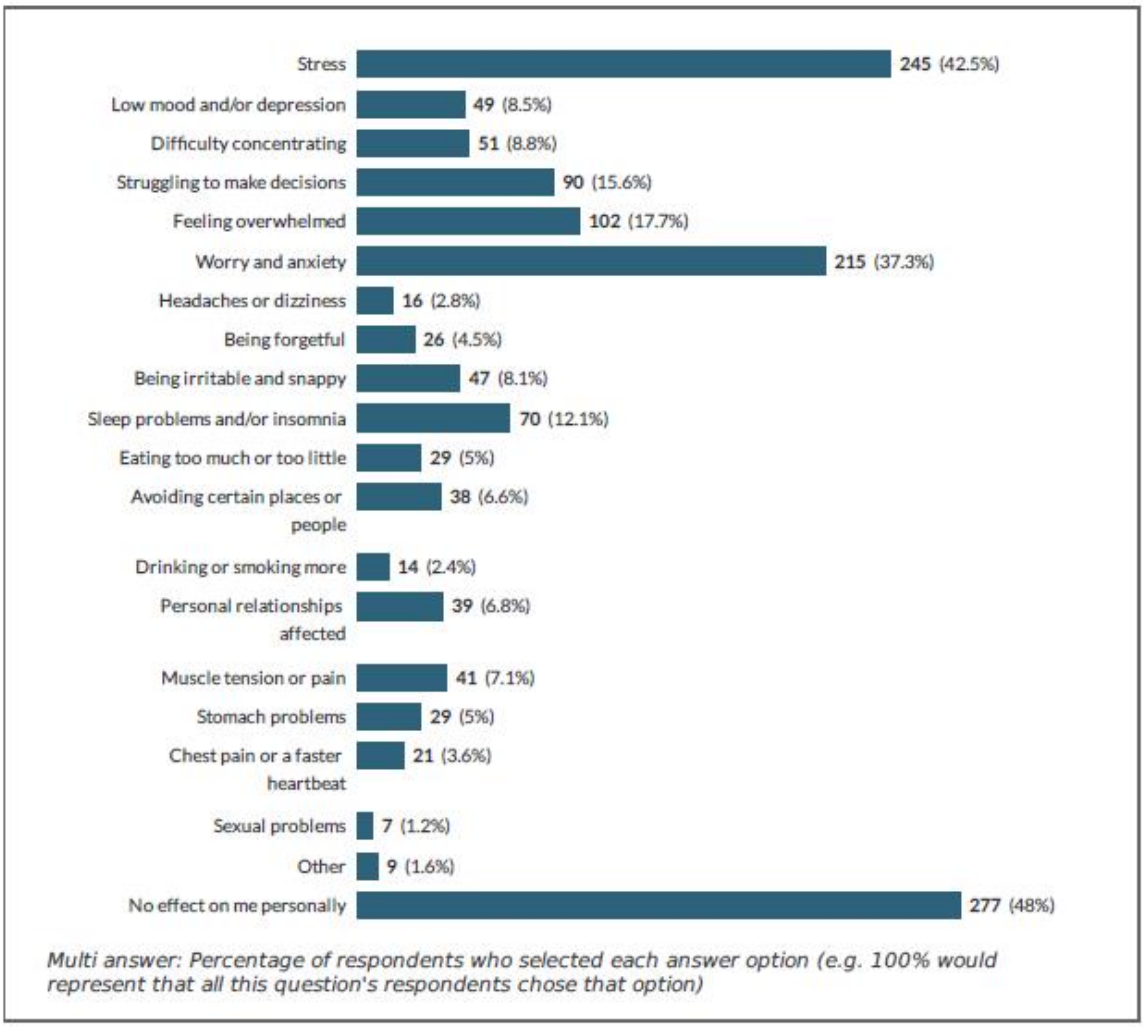


10 Have you ever been personally involved in litigation? (cited in a case)



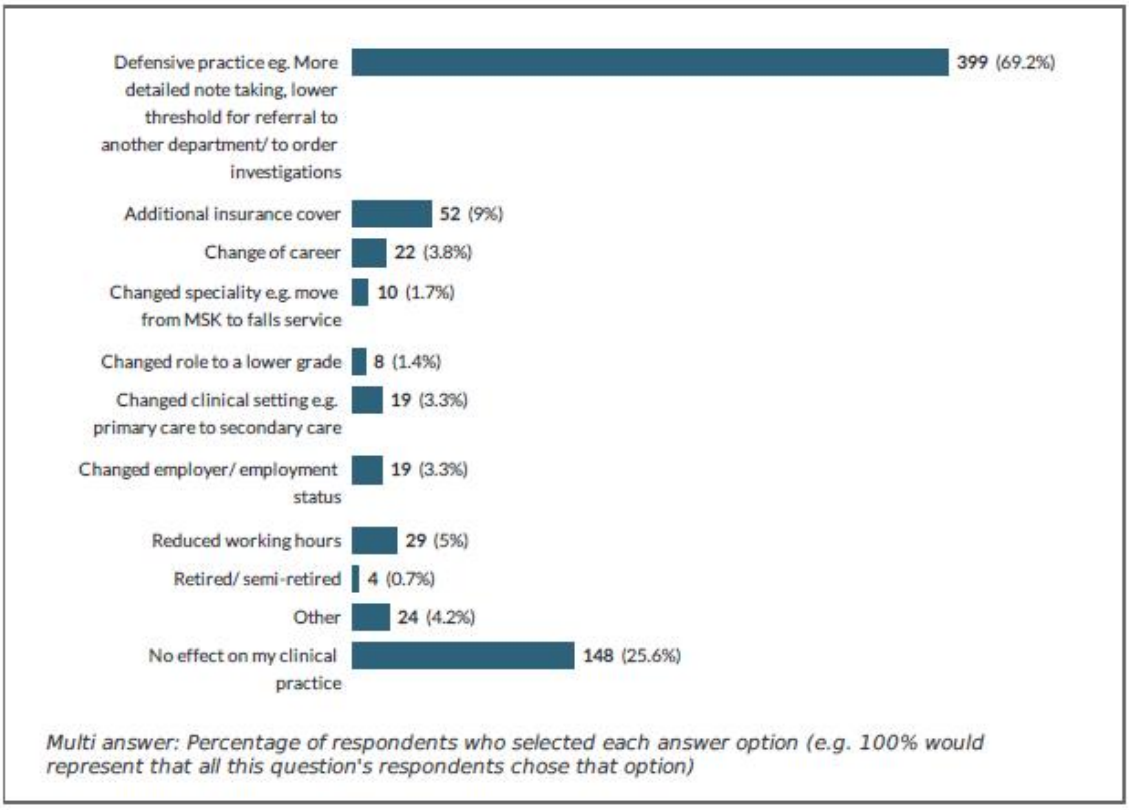
11 Do you have awareness that litigation could affect you in your career?

12 How does awareness of litigation affect you personally? (can tick more than one box)

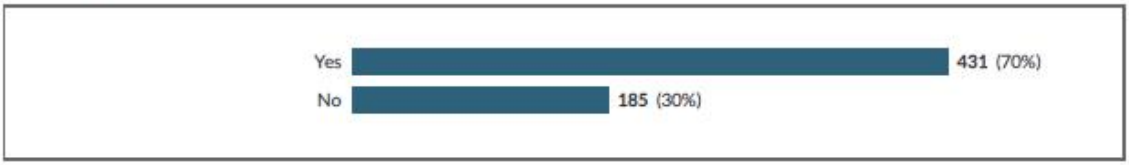


Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

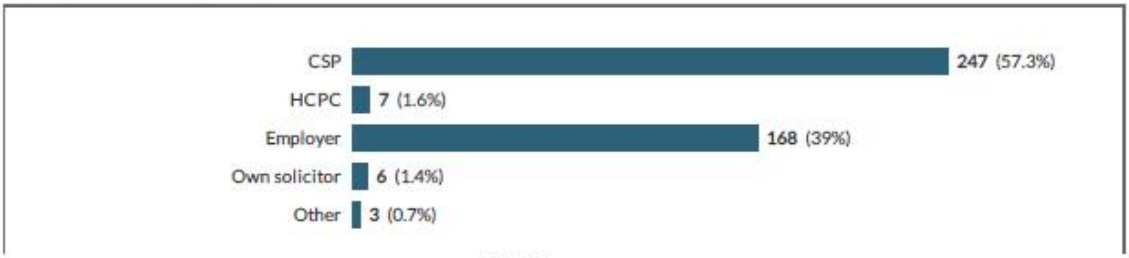
13 How does awareness of litigation affect your professionally? (can select more than one)



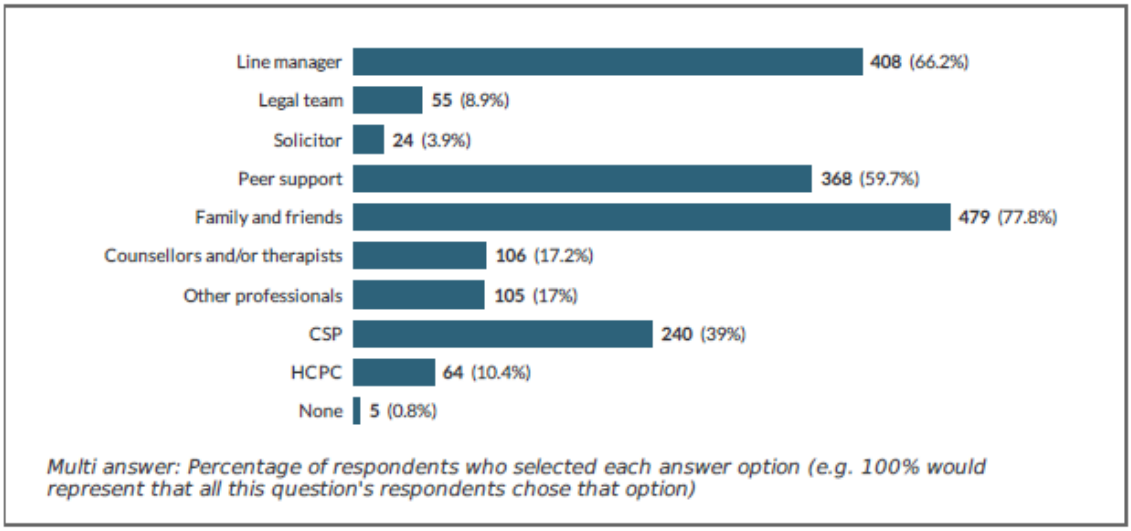
14 Would you know where you would go for support with the legal process if you found out you were involved in litigation?



14.a Who would you contact support for initial support with the legal process if you were informed of a litigation case against you?

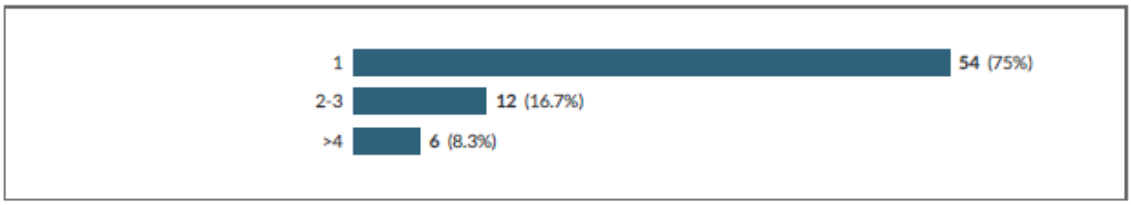


15 Where would you go for emotional support if you were informed of a litigation case against you? (can select more than one option)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

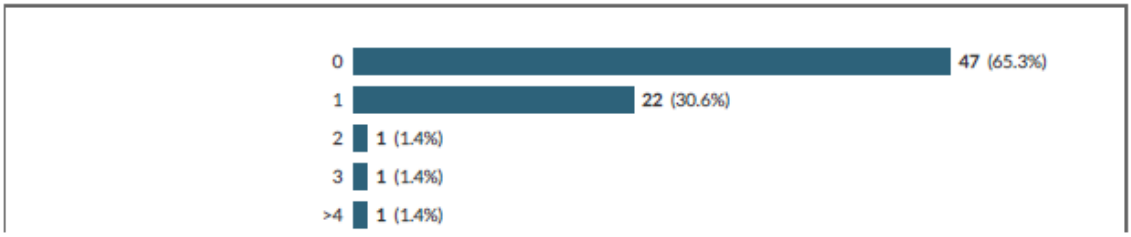
16 How many litigation claims have you been involved in?



17 What was the outcome of your litigation case(s)? (please select a number for each row)

17.1 Claim was dropped

17.1.a Claim was dropped - Number of claims



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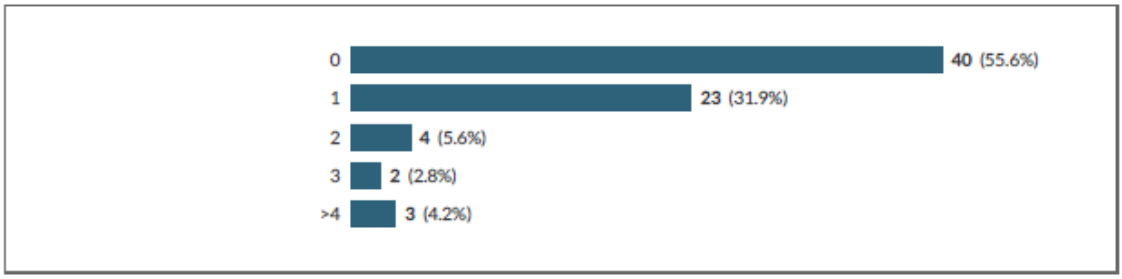
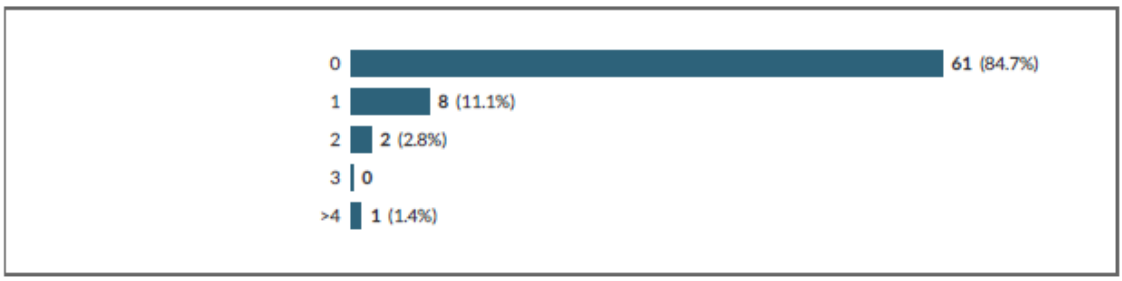
17.2 Claim was settled out of court

17.2.a Claim was settled out of court - Number of claims



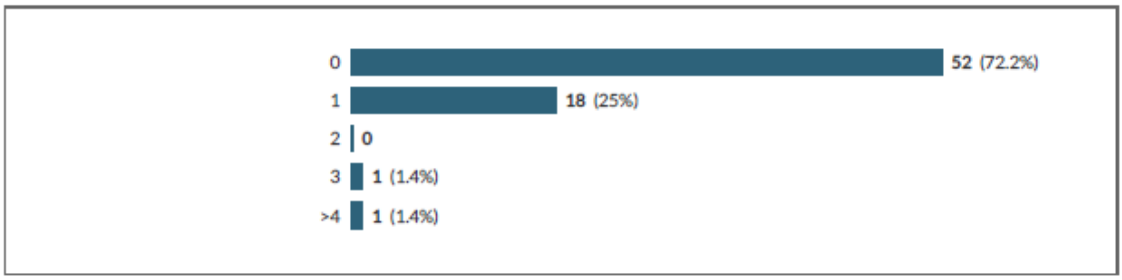
17.3 Claim was settled through court proceedings

17.3.a Claim was settled through court proceedings - Number of claims



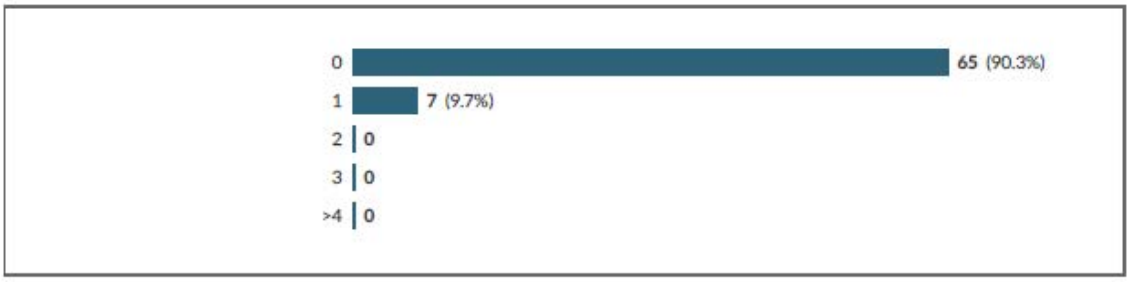
17.4 I don't know / I was not informed

17.4.a I don't know / I was not informed - Number of claims

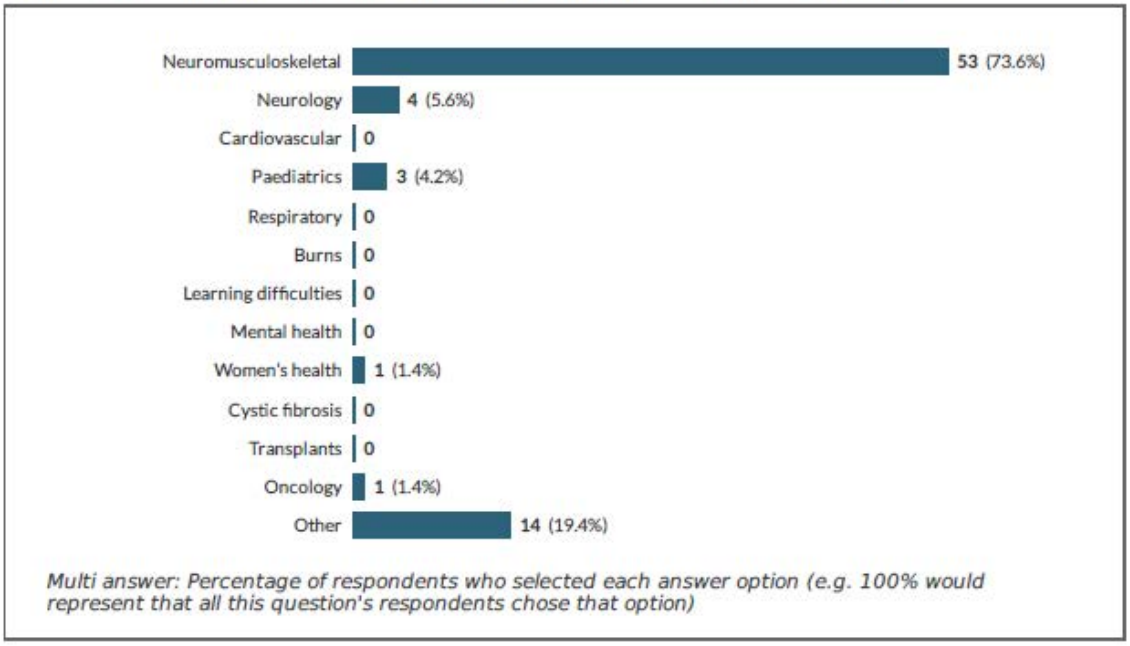


17.5 Other

17.5.a Other - Number of claims

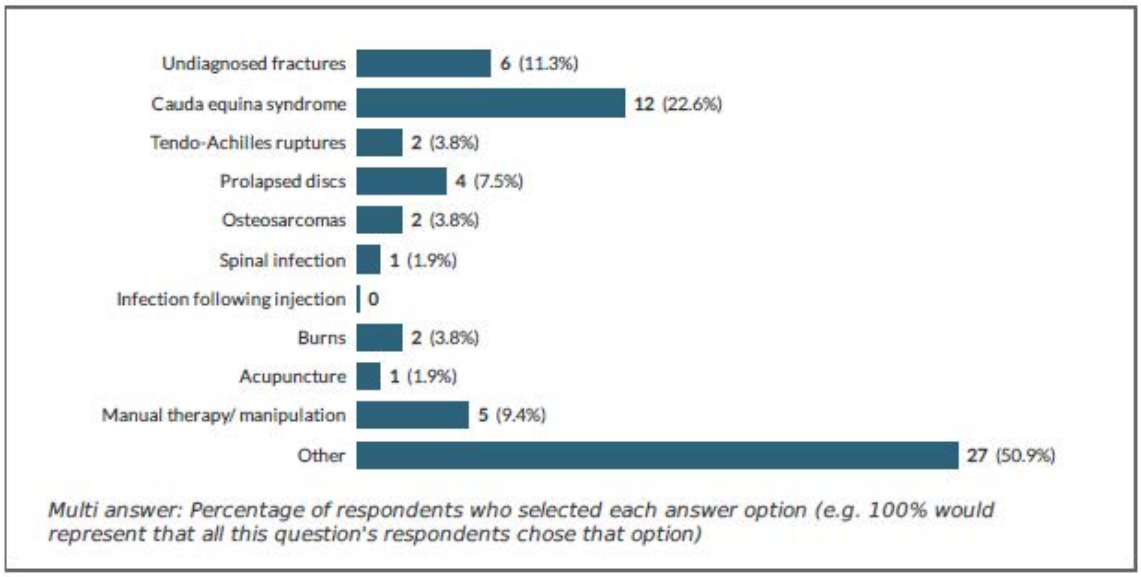


18 What condition/ treatment did your claim(s) relate to? (can select more than one option)

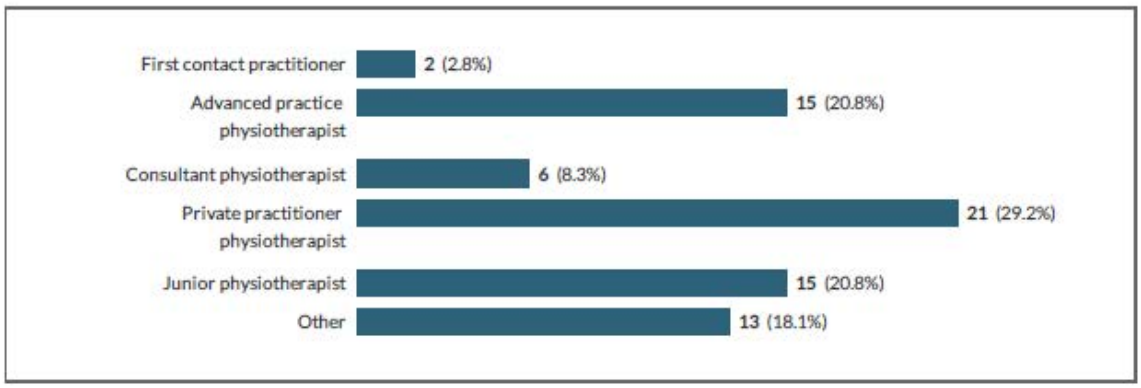


Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

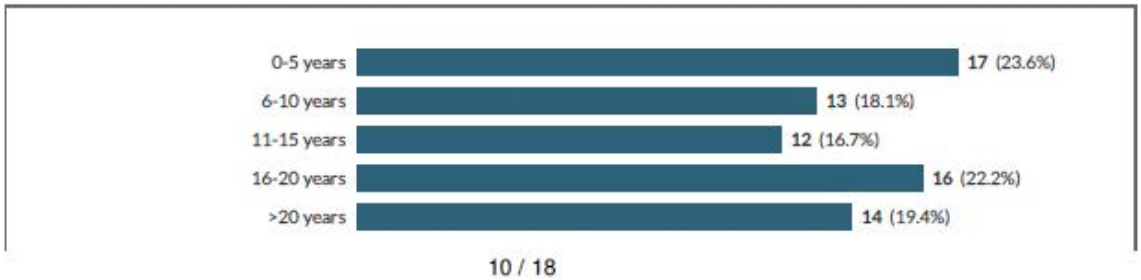
18.a (if Neuromusculoskeletal)



19 What was your role when you treated/ assessed the patient in relation to the claim? (If you have been involved in more than one claim please answer in relation to the claim which most affected you)



20 At the time of litigation how much experience did you have in your role? (If you have been involved in more than one claim please answer in relation to the claim which most affected you)



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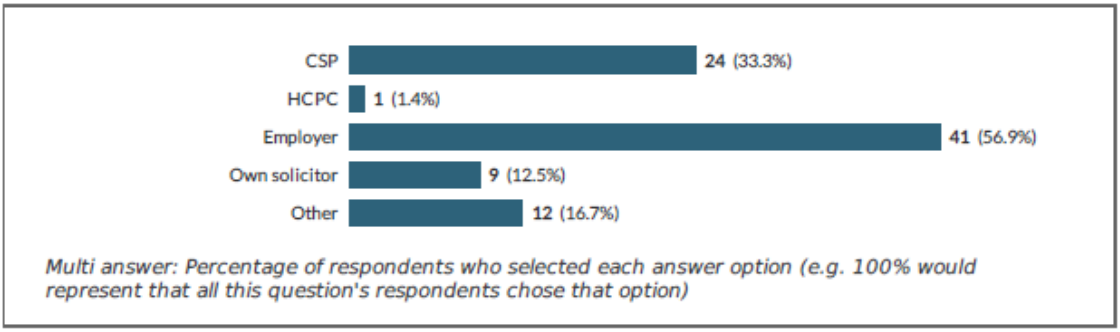
21 Did you know where to go for support with the legal process when you found out you were involved in litigation? (If you have been involved in more than one claim please answer in relation to the claim which most affected you)

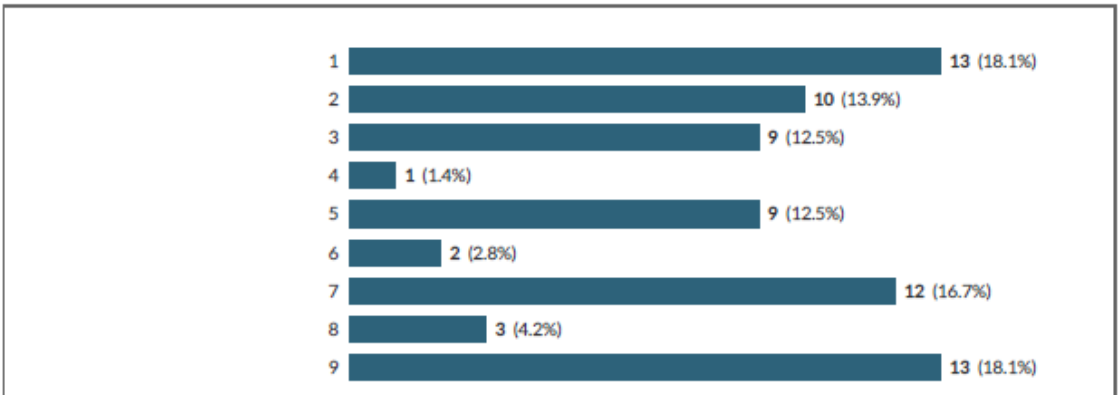
22 Who did you contact for initial support with the legal process? (can select more than one option)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

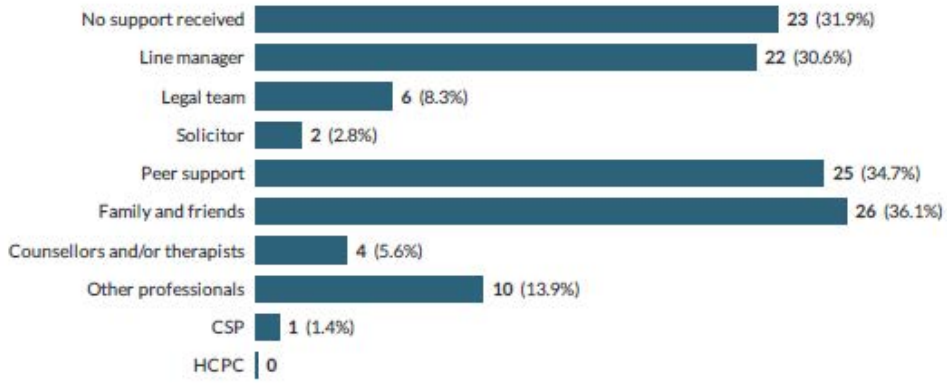
23 How much do you agree with the following statement: The level of support with the legal process I received was satisfactory

23.1 Strongly disagree vs Strongly agree



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

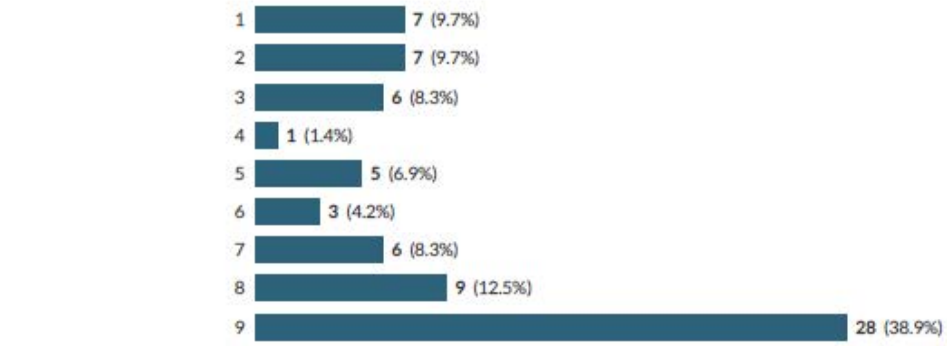
24 Where did you receive emotional support from in relation to your case? (can select more than one option)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

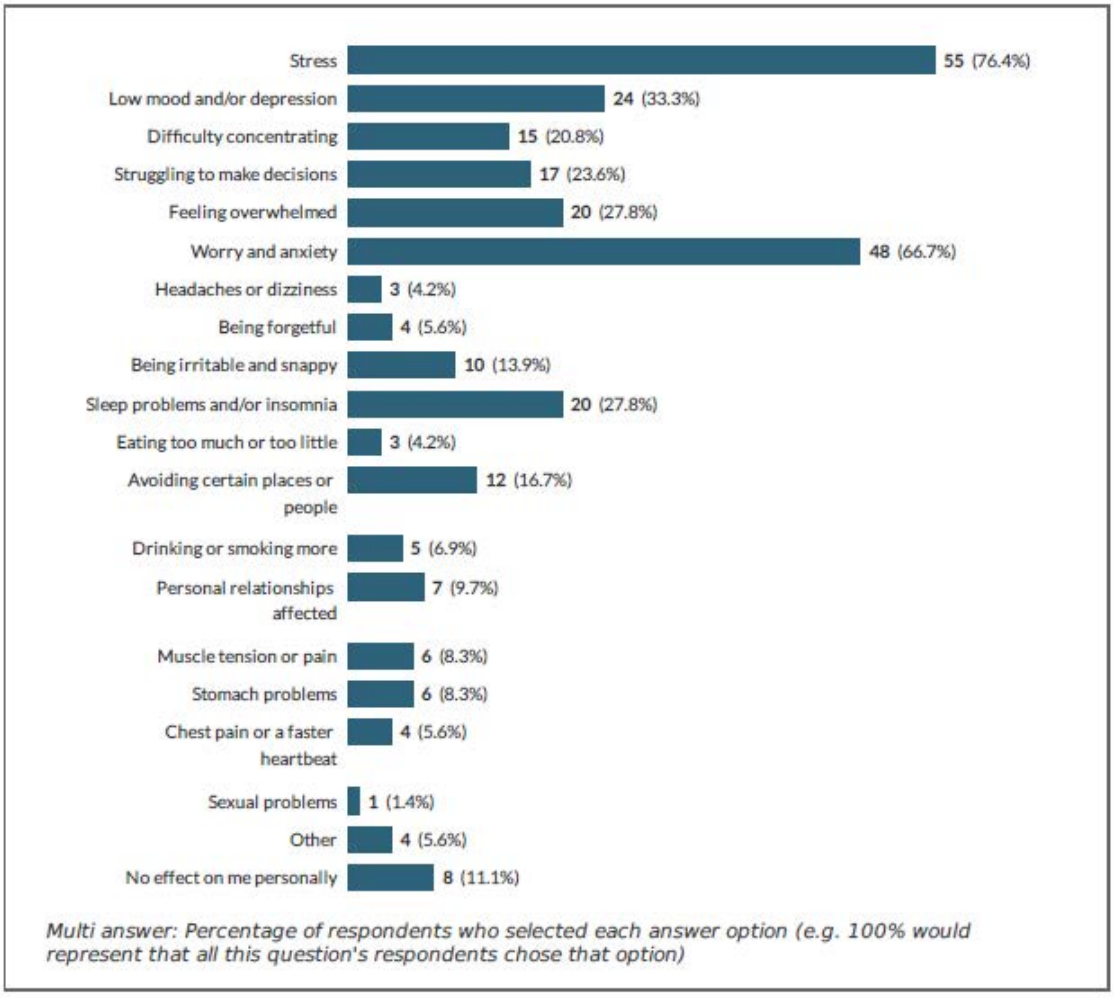
25 How much do you agree with the following statement: There was an impact on me personally as a result of litigation

25.1 Strongly disagree vs Strongly agree



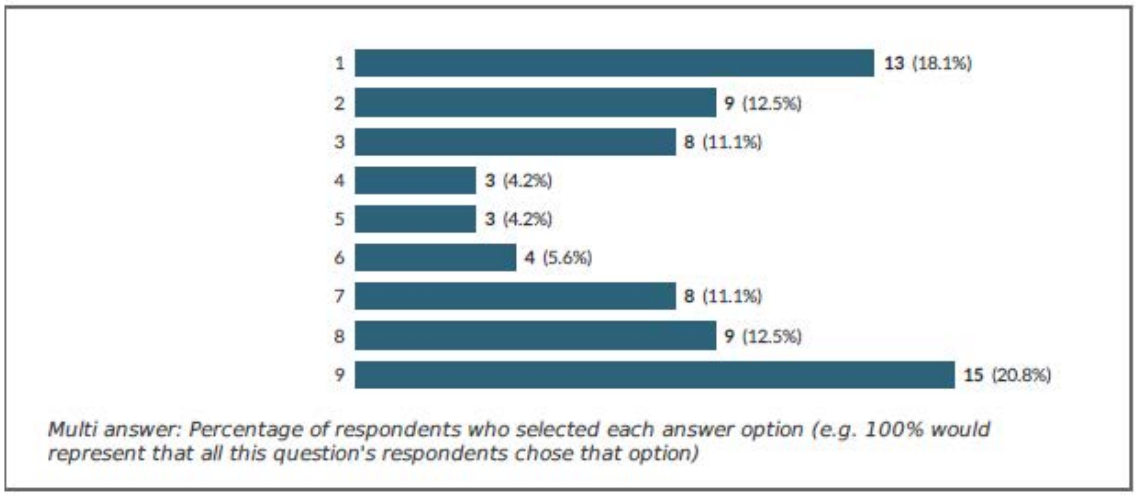
Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

26 What were the effect(s) on you personally of being involved in litigation? (can select more than one)



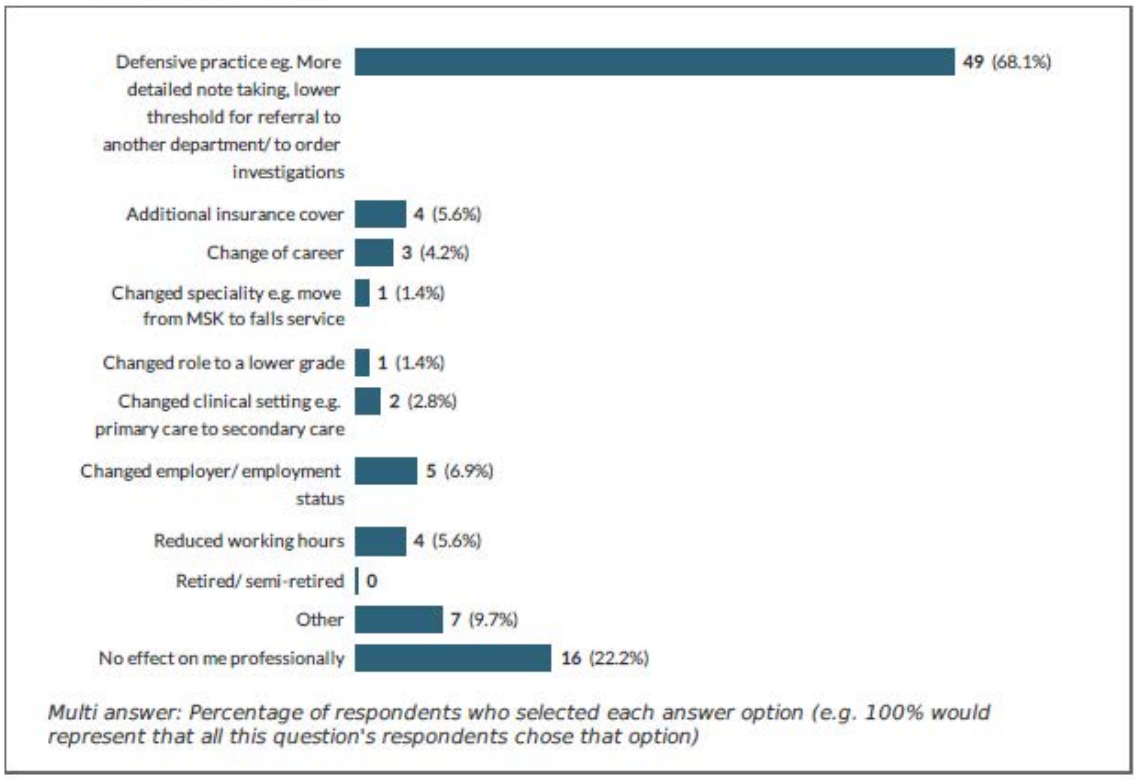
27 How much do you agree with the following statement: There was an impact on me professionally as a result of litigation

27.1 Strongly disagree vs Strongly agree



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

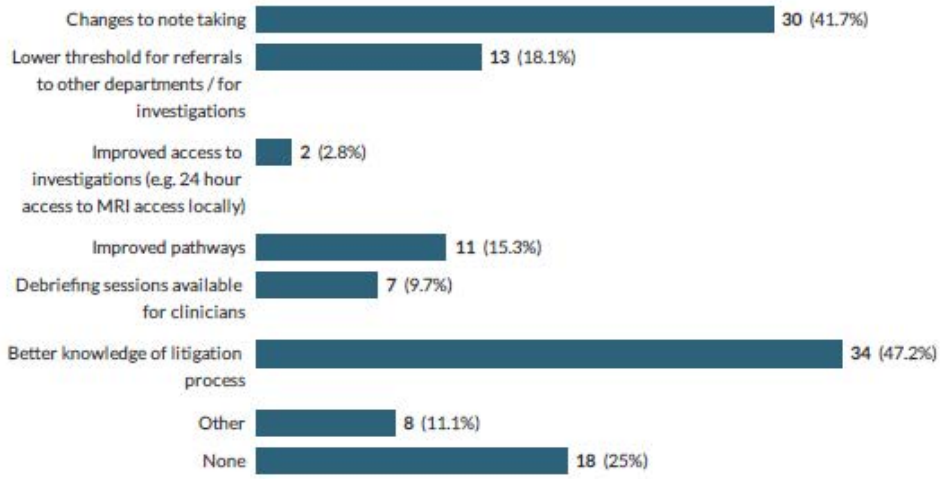
28 What were the effect(s) on you professionally as a result of being involved in litigation? (can select more than one option)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

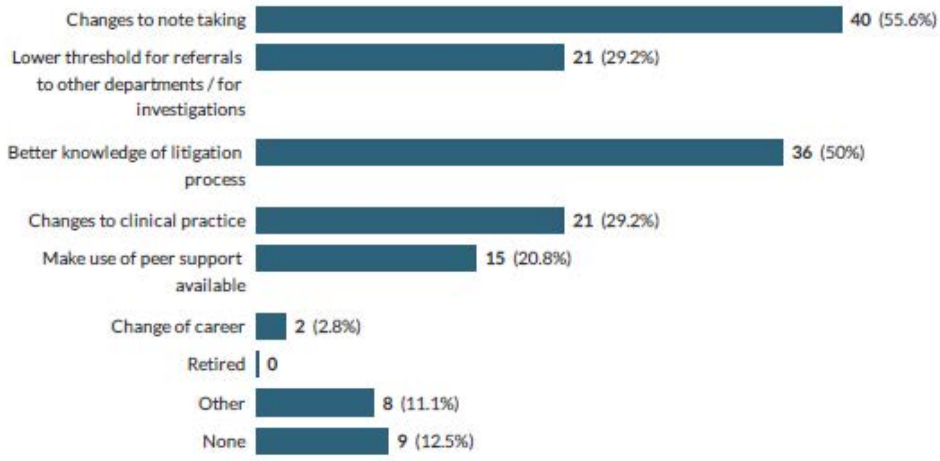
What were the key learning points for your employer/practice relating to the claim? (can select

29 more than one)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

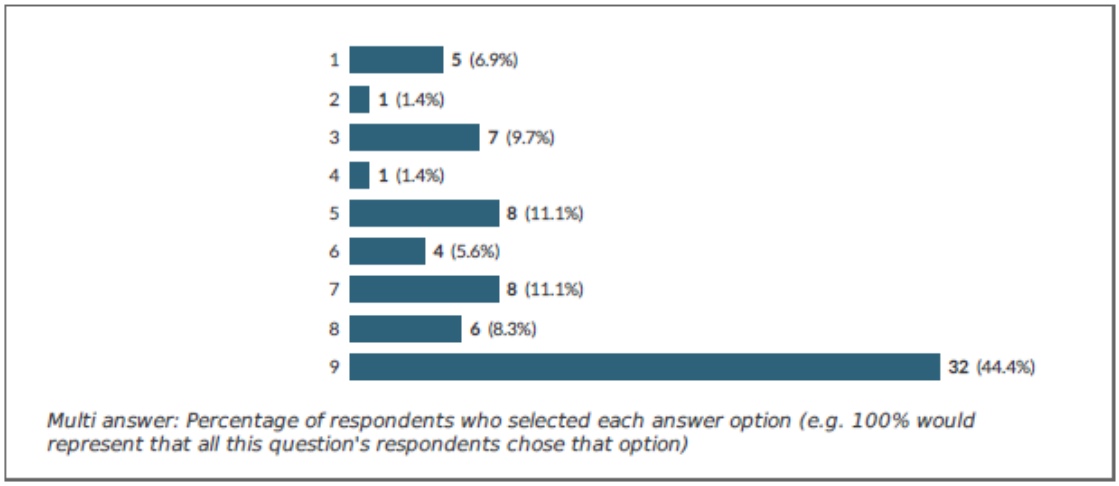
30 What are the changes you have made personally as a consequence of being involved in a claim? (can select more than one option)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

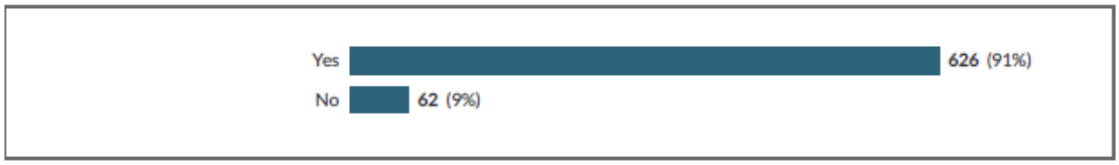
31 How much would you agree that: It would be helpful having a debrief with an independent professional to discuss the case confidentially

31.1 Strongly disagree vs Strongly agree

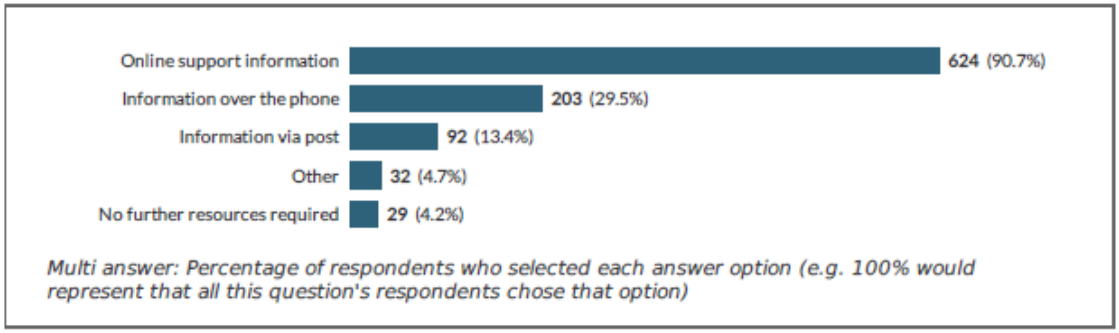


Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

32 Do you think it would be useful to have more resources available for support with the litigation process

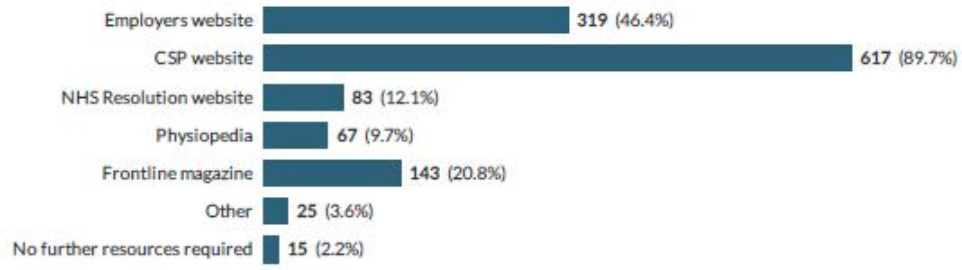


33 If more resources to support litigation were to be produced what format would be most useful to you? (can select more than one)



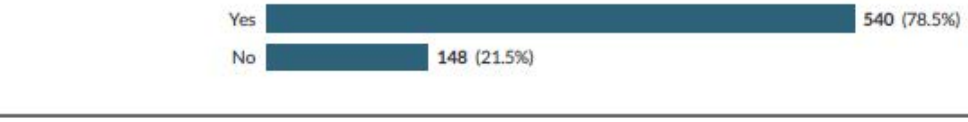
Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

34 If more resources to support litigation were to be produced where would be the best place for you to access them? (can select more than one)

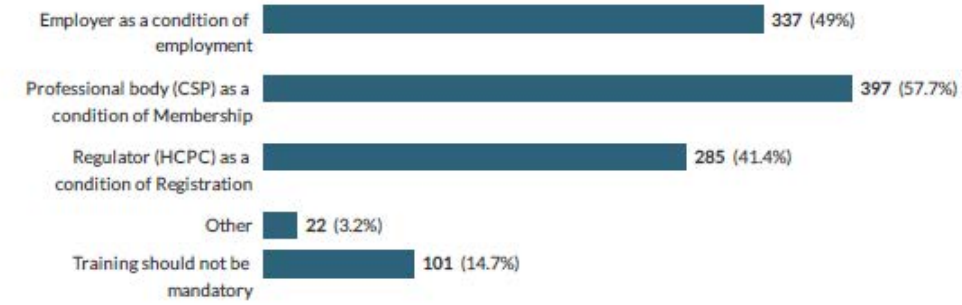


Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

35 Do you think litigation training should be mandatory for all physiotherapists?



35.a Who do you think should be responsible for overseeing the training? (can select more than one)



Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

36 Do you think training relating to litigation should be available at: (can select more than one)

Multi answer: Percentage of respondents who selected each answer option (e.g. 100% would represent that all this question's respondents chose that option)

Appendix 11. - Scoping review protocol paper

Received: 8 February 2021 | Revised: 19 February 2021 | Accepted: 20 February 2021

DOI: 10.1002/msc.1550

LITERATURE REVIEW

WILEY

A scoping review protocol: Investigating the extent and legal process of cauda equina syndrome claims for UK physiotherapists

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Funding information
Chartered Society of Physiotherapy Charitable Trust, Grant/Award Number: PRF/19/A18

Abstract

Introduction: Cauda equina syndrome (CES) is a condition where early identification and treatment is crucial to avoid potentially devastating effects. There is a high number of litigation cases linked with CES given it is a relatively rare condition. This scoping review protocol proposes to explore the extent and process of CES litigation in UK healthcare context cases amongst UK physiotherapists.

Methods and analysis: The methodological framework recommended by Arksey and O'Malley, Levac et al. and the Joanna Briggs Institute will be used throughout this review to aid reporting and transparency. A patient and public involvement (PPI) group meeting was convened at the beginning of the review process in order to provide knowledge exchange to inform the search strategy and propose resources to be used during the scoping review. Two reviewers will independently review the literature in order to apply the inclusion and exclusion criteria. Once the studies to be included have been identified, the data from these studies will be extracted and charted. Results will show quantitative data of the studies included in the review and a narrative synthesis of the literature.

Dissemination: This scoping review will evaluate the existing knowledge relating to CES and litigation and will map the key concepts around this topic. Results will be disseminated to practitioners and policy-makers through peer-reviewed publications, conferences, reports and social media. This method may prove helpful to others who are investigating extent and processes relating to medicolegal cases involving healthcare practitioners.

Registration: The current paper is registered with OSF registries (DOI 10.17605/OSF.IO/MP6Y3).

KEYWORDS
cauda equina syndrome, clinical negligence, litigation, medicolegal, physiotherapy

1 | INTRODUCTION

Cauda equina syndrome (CES) is a rare, yet well-known condition caused by compression of the cauda equina nerve roots (Woodfield et al., 2018). Risk factors for CES include a disc prolapse or any space-occupying lesion that causes cauda equina compression; spinal surgery can also be a risk factor (Finucane et al., 2020). Common symptoms of CES include unilateral or bilateral neurological symptoms, loss of dermatomal sensation and motor weakness; if any of these symptoms arise combined with bladder or bowel dysfunction or saddle sensory change, then CES should be suspected (Finucane et al., 2020). The clinical suspicion of compression of the cauda equina must be confirmed with a magnetic resonance imaging (MRI) scan (British Association of Spine Surgeons, 2019). CES can be challenging to diagnose and treat in an appropriate manner as it can be present in various clinical settings, and clinicians must provide efficient reasoning in order to provide appropriate management (Tricco et al., 2018). Delays in diagnosis and treatment of CES can have life-changing consequences for the patient and can lead to significant medicolegal consequences (Greenhalgh et al., 2018; Woodfield et al., 2018). Delays are often caused by failure to recognise the signs and symptoms of the condition, delays in organising MRI scans and delays in making referrals for surgical opinion (Finucane et al., 2020).

CES is highly litigious with an average payment of £336,000 (Finucane et al., 2017). The NHS paid out circa £44m in the 10 years previous to 2013, for CES-related claims (Fairbank, 2014), and more recently, it was revealed that in England, 23% of litigation claims for spinal surgical procedures are CES related (NHS Litigation Authority, 2013).

First contact practitioner (FCP) is a new model beginning to evolve within the United Kingdom (First Contact Practitioner, 2019); this allows the introduction of physiotherapists to become muscu-

The aim of this study is to gain an understanding of the magnitude of physiotherapy-related CES litigation and how the associated medicolegal processes are currently managed in the United Kingdom. The objectives are as follows:

1. To investigate the extent of CES litigation in physiotherapy.
2. To explore and describe the process of medicolegal litigation and how this is managed in relation to physiotherapy.

2 | METHODS AND ANALYSIS

A scoping review was chosen as the most appropriate method as scoping reviews typically map a wide range of literature from various sources to identify key concepts (Levac et al., 2010). A scoping review is an iterative process which uses all valuable evidence, as opposed to only using the most high-value evidence available which is usually the case for systematic reviews (Murray et al., 2016). Therefore, a scoping review does not adopt a formal method to analyse the quality of literature. However, scoping reviews should still have a comprehensive and rigorous search strategy (Murray et al., 2016; Peters et al., 2015). A scoping review was most appropriate for our topic area as the aim of our review was exploratory rather than hypothesis testing (Tricco et al., 2016).

The framework guiding this scoping review is that developed by Arksey and O'Malley (2005), which was further clarified by Levac et al. (2010) and the Joanna Briggs Institute (JBI) (Peters et al., 2015). This is a well-established framework that is commonly used to provide a structured method for scoping reviews. The PRISMA-ScR reporting guidelines will be used for reporting the results (Tricco et al., 2018).

Arksey and O'Malley's (2005) framework has a six-stage process which we have implemented for this scoping review. The sixth stage (consultation exercise with stakeholders) was originally stated as

TABLE 1 Primary and secondary search terms used for databases

Primary search terms	Cauda equina syndrome	Litigation	UK
Secondary search terms	Or central disc prolapse	Or negligence	Or England
	Or bilateral sciatica	Or malpractice	Or Wales
	Or urinary retention	Or medicolegal	Or Northern Ireland
	Or perineal hypaesthesia		Or Scotland
	Or sexual dysfunction		
	Or spinal		
	Or surgery		

team identified a preliminary research question while considering the concept, target population (UK healthcare professionals) and health outcomes of interest (well-being of physiotherapists in receipt of CES claims). The purpose and rationale of the scoping review and its proposed outcomes were contemplated (Levac et al., 2010). This activity was informed by the CES CFG meeting. The broad research question developed was: With respect to physiotherapy, what is the extent of CES litigation in the United Kingdom, and what is the legal process by which these litigation cases are managed?

2.2 | Stage 2: Identifying relevant studies

2.2.1 | Search strategy for databases

Following the CES CFG meeting, a broad search strategy will be developed using 'cauda equina syndrome' and 'litigation' as the primary search terms. The search strategy will be further refined by the research team; it will be piloted and re-piloted. Secondary search terms will include a wider set of keywords based on the primary terms, for example, negligence. These will be used with the Boolean operators AND OR in order to find a wide range of literature. This search strategy will be used for an electronic search of the Allied and Complementary Medicine Database (AMED), the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline. Table 1 shows all the keywords to be used in the database searches.

2.2.2 | Search strategy for grey literature and websites

The Chartered Society of Physiotherapy (CSP) website will be searched as it is the professional body and trade union for physiotherapists using the following terms: 'cauda equina', 'insurance', 'negligence' and 'litigation'. The Health and Care Professions Council (HCPC) and NHS Resolution (formerly NHS Litigation Authority) will also be searched using the same terms. References from the included records and grey literature will also be searched for relevant records.

The final search strategy will be fully documented and reported following completion of the study.

2.2.3 | Eligibility criteria

At the CES CFG meeting the subsequent inclusion and exclusion criteria were established to guide the scoping review search.

Inclusion criteria

Phenomenon of interest

- Adults—18 years and older.
- Includes information from the UK perspective.
- Focusses on the extent and prevalence of litigation cases for spinal pathologies (must include CES) and associated costs where available.
- Focusses the extent and prevalence of litigation cases for CESspinal surgery (including spinal orthopaedic surgery and spinal neurosurgery) and associated costs where available.
- Research study that investigates which professions are involved in CES litigation (including how many of these are physiotherapists and if relevant which NHS terms and conditions (AfC) pay scales they are from and associated costs where available.
- Data concerning how many litigation cases involve NHS staff and how many involve the private sector and not-for-profit/charitable organisations and associated costs where available.
- Information regarding litigation processes from NHS Resolution.
- Any literature regarding processes/pathways for dealing with litigation in relation to physiotherapy and other healthcare professionals acting as a defendant.

Sources

- Sources of information may consist of research studies, reports, reviews, guidelines, frameworks/pathways, ongoing court cases and grey literature.
- Websites of organisations involved in the management of medicolegal processes (NHS Resolution).
- Websites of professional and governing bodies of health professionals (CSP and HCPC).

Exclusion criteria

- Information solely related to medicolegal costs.
- Information regarding wrong site surgery.
- Literature solely based on consent in surgery.
- Literature relating to spinal anaesthesia.
- Literature not written in the English language.

Other sources such as the university library search facility will also be used as well as professional organisations' websites, grey literature and reference searches of relevant literature.

2.3 | Stage 3: Study Selection

2.3.1 | Study selection for databases

The titles and abstracts of the studies found using the search strategy will be evaluated independently by one reviewer (RL), and a second reviewer (GY) will complete the same process on 10% of the articles retrieved; if there is any uncertainty on the decision to include or exclude a particular article, it will be included for full-text review (Murray et al., 2016).

2.3.2 | Study selection for grey literature and websites

The titles and description information of website results (or abstracts in the case of articles) will be evaluated independently by one reviewer (RL) against the inclusion and exclusion criteria, if there is any uncertainty the full web page or text will be included for full review.

2.4 | Stage 4: Charting the data

2.4.1 | Data charting for databases

Following the review of the titles and abstracts, the full text of all articles to be included will be attained. The reviewers will meet throughout the charting process to discuss any challenges or uncertainty and to refine the search strategy if needed (Levac et al., 2010).

A data charting form will be developed by the research team similar to that described by the JBI (Peters et al., 2015). The research team will decide which variables should be extracted to answer the research question. One researcher (RL) will independently obtain data from the studies included during study selection using a data charting form. A second researcher (GY) will check 100% of the data extracted for accuracy and the researchers will then meet to establish if their data extraction approach is consistent before continuing. This will be an iterative process with researchers continuing to extract data and update the form. If useful data are found which do not comply with the charting form, further headings or categories will be added to the form. Any discrepancies will be discussed by the research team, and in the case of disagreement, a third reviewer (JS) will make the final decision. See an example of the data extraction headings as follows:

A. Author(s)
B. Year of publication
C. Title
D. Aims/purpose of the study
E. Type of claim
F. Type of study
G. NHS or non-NHS
H. UK nation
I. Methodology
J. Results
K. Conclusions that relate to wider context
L. Conclusions that relate to review objectives

2.4.2 | Data charting for grey literature and websites

Full web pages or text will be explored according to the inclusion and exclusion criteria by two reviewers (RL and GY). If there is any uncertainty, a third reviewer (JS) will make the final decision. A charting form, using broadly similar headings to those used above, will be used for web pages.

2.5 | Stage 5: Collating, summarising and reporting the results

We anticipate that the methods used in this scoping review protocol will allow us to gather and review current information for this broad topic area. Using the data found from the review, we will map the key concepts of available data, summarise current research findings and identify gaps in the literature around this topic. Our results will show the numerical analysis of the number of studies found from the review as well as a narrative synthesis of the data.

2.5.1 | Disseminating the results

The results of the scoping review will provide insight into the extent and legal process of CES litigation cases in physiotherapy. Circulating these findings will provide useful information for physiotherapists, cauda equina patients, governing bodies and insurers.

The results of this scoping review will complete the first phase of the study 'The experiences of physiotherapists in relation to cauda equina syndrome and litigation'. The knowledge found from the review will inform the subsequent phases of our research. The research team will also provide content to a dedicated project website. We will produce infographics to disseminate research findings in an easy-to-understand format accessible to a wide audience including physiotherapy clinicians, CSP professional body, a range of stakeholders and the public. Ongoing updates of our research activity and interim findings will be posted via a blog on the project website and we will Tweet updates of our research activity and links to dissemination outputs. The research team will approach the editor of *Frontline* magazine to publish a feature page on the

project and its findings. The CSP will also be provided with content regarding the project and its findings for the CSP website and iCSP (interactive CSP website).

3 | CONCLUSION

Scoping reviews are a valuable way to find a wide range of information around a topic. The current scoping review protocol follows a structured framework (Arksey & O'malley, 2005) which provides rigour for our methods. This review will enable us to chart the key concepts of this topic area and review the existing research around CES litigation and physiotherapists.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

ETHICAL APPROVAL

The current research and associated papers gained ethical approval from Health, Psychology and Social Care Research Ethics and Governance Committee at Manchester Metropolitan University (EthOS Reference Number: 18122).

AUTHOR CONTRIBUTIONS

Gillian Yeowell, Rachel L. Leech, Susan M. Greenhalgh and James Selfe designed the study. All authors developed the research question and search strategy and contributed to drafting and revising the manuscript. All authors have approved the submission of the final manuscript and have agreed to be personally accountable for the author's own contributions.

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Appendix 12 – Scoping review paper

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Review article

A scoping review: Investigating the extent and legal process of cauda equina syndrome claims for UK physiotherapists

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ABSTRACT

Introduction: Cauda Equina Syndrome (CES) is a condition where early identification and treatment is crucial to avoid potentially life changing devastating effects. This paper reviews the extent and process of CES litigation amongst UK physiotherapists.
Methods: A well-established framework by Arksey and O'Malley was followed when completing the current scoping review. Records were identified via a comprehensive search of three databases as well as website and grey literature searching. Data was extracted and a descriptive analysis and thematic summary were formed.
Results and discussion: A total of N = 1639 records were identified, following removal of duplicates and screening of titles and abstracts N = 211 full text records were screened and N = 39 were included for full analysis.
Conclusions: This study is the first to investigate the extent and process of CES litigation for physiotherapists in the UK. Our data suggest that between 2009 and 2021 there were 15 CES claims recorded against physiotherapists which is 0.7% of all CES claims recorded in the UK. In terms of the legal process for CES claims, there is currently limited information for physiotherapists and what steps they would need to take once they receive notification they are being sued.
Registration: The current paper is registered with OSF registries (DOI 10.17605/OSF.IO/6FCXN).

1. Introduction

Cauda equina syndrome (CES) is a rare, yet well-known condition caused by compression of the cauda equina nerve roots (Woodfield et al., 2018). Delays in diagnosis and treatment of CES can have life changing ramifications for the patient and can lead to significant medicolegal consequences (Greenhalgh et al., 2018; Woodfield et al., 2018). It is estimated that 10% of CES cases involve litigation (Lavy et al., 2009), which has a large impact on the NHS in terms of cost. The NHS paid out circa. £44m in the 10 years previous to 2013, for CES related claims (Fairbank, 2014).

Historically there have only been a small number of successful claims related to failure or delay in diagnosis of CES against UK physiotherapists, however this number has increased over recent years (Beswetherick, 2017, 2019). This increase, may be in part, be related to changes in the physiotherapist's role. First contact practitioner (FCP) is a new approach to the management of musculoskeletal conditions within the UK (Hutton, 2019; Greenhalgh et al., 2020). The aim of the FCP role is to provide timely access to expert musculoskeletal practitioners without the patient needing an initial general practitioner (GP) appointment (Hutton, 2019). This allows the introduction of physiotherapists with advanced practice skills to undertake many of the musculoskeletal responsibilities currently carried out by general practitioners (Greenhalgh et al., 2020). Therefore, physiotherapists are at an increased risk of being involved in litigation.

However, the true extent of physiotherapists' involvement in CES litigation is unclear as there is currently no centralised recording of these data from a whole UK perspective. In addition, it is unclear what guidance and processes are in place to support physiotherapists who become involved in litigation for CES.

The aims of this scoping review are:

1 To review the extent of CES litigation in physiotherapy in the UK

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2. To review the process of medico-legal litigation and how this is managed in relation to physiotherapy in the UK

2. Method

A scoping review was undertaken to address the aims. Scoping reviews typically map a wide range of literature from various sources to identify key concepts (Levac, Colquhoun and O'Brien, 2010). The framework by Arksey and O'malley (2005) was adopted as per our protocol (Leech et al., 2021). The following provides a summary of each stage.

2.1. Stage 1: identifying the research question

The Arksey and O'Malley framework (Arksey and O'Malley, 2005) was adapted by including a Patient and Public Involvement meeting (PPI) in stage 1. The stakeholders named the group as the Critical Friend Group (CFG). The group included four people living with CES (including someone undergoing a litigation case) and a physiotherapy stakeholder with experience of being involved in a CES litigation case. This meeting was held to ensure the research question and search strategy would be relevant and comprehensive.

2.2. Stage 2: identifying relevant studies

2.2.1. Search strategy for databases

The search strategy was informed by the CFG and further refined by the research team. The Allied and Complementary Medicine Database (AMED), The Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline databases were searched using the search strategy detailed in the protocol (Leech et al., 2021). The search was undertaken on 14th January 2021 and databases were searched from inception.

2.2.2. Search strategy for grey literature and websites

Records included from the databases were also searched for additional relevant references using the same eligibility criteria. The research team also searched the Chartered Society of Physiotherapy (CSP) website as it is the professional body and trade union for physiotherapists using the search terms 'cauda equina', 'insurance', 'negligence' and 'litigation'. The Health and Care Professions Council (HCPC) and NHS Resolution (formerly NHS Litigation Authority) were also searched using the same terms. The same inclusion and exclusion criteria were used as for the databases.

2.3. Stage 3: study selection

2.3.1. Study selection for databases

The titles and abstracts were evaluated independently by one reviewer (RL). A second reviewer (GY) repeated the process on 10% of the records retrieved. If there was any uncertainty on the decision to include or exclude a particular record it was included for full text review (Murray et al., 2016). There was concordance of 100% between the two reviewers. Full text records that met the inclusion criteria were included (Leech et al., 2021).

2.3.2. Study selection for grey literature and websites

Records obtained from the CSP website were filtered to exclude 'posts'. These records were items which any member could publish on the website, for example, to comment on a page and therefore did not meet our eligibility criteria. The titles and description information of website results (or abstracts in the case of articles) were evaluated independently by one reviewer (RL) against the inclusion and exclusion criteria. If there was any uncertainty on the decision to include or exclude a particular record it was included for full text review (Murray et al., 2016).

2.4. Stage 4: charting the data

2.4.1. Data charting for databases

A data charting form was developed by the research team similar to that described by The Joanna Briggs Institute (JBI) (Peters et al., 2015). One researcher (RL) independently obtained data from the records included during study selection using this data charting form. A second researcher (GY) checked 100% of the data extracted for accuracy, the researchers (RL & GY) met throughout the data charting process to establish if their data extraction approach was consistent, to discuss any uncertainty and to refine the search strategy where needed (Levac, Colquhoun and O'brien, 2010). This was an iterative process, with researchers continuing to extract data and update the form. If useful data was found which did not fit with the charting form, when appropriate, further headings or categories were added to the from. Following the full text reviews, concordance between the two researchers (RL & GY) was >95% regarding inclusion/exclusion. Where there was a disagreement a third reviewer (JS) made the final decision, this occurred in two cases, one of which was included and one excluded.

2.4.2. Data charting for websites

Full web pages or text were evaluated according to the inclusion and exclusion criteria by two reviewers (RL and GY). Following the full text reviews, concordance between the two researchers (RL & GY) was 100% regarding inclusion/exclusion.

2.5. Stage 5: collating, summarising and reporting the results

Using the methods stated in the protocol (Leech et al., 2021) key concepts were mapped, current research findings summarised and gaps in the literature identified.

3. Results

3.1. Descriptive analysis

The flow diagram (Fig. 1) shows the results of the search and the number of records found.

The initial search of the databases identified n = 1639 records, n = 482 of these were identified from databases, n = 1146 from websites and a further n = 11 were identified via the grey literature. After duplicates were removed, n = 1603 records remained. Website results that were 'posts' were excluded (n = 459).

A total of n = 1144 records underwent title and abstract review and n = 933 were excluded. N = 211 records underwent a full text review and were independently screened against the eligibility criteria by the same reviewers. A further n = 172 were excluded, leaving a total of n = 39 records for analysis.

3.1.1. Database descriptive results

The search terms used for the databases were entered as one complete search. The results of this search revealed n = 411 records from Medline, n = 69 records from CINAHL and n = 2 records from AMED.

3.1.2. Website descriptive results

See Table 1 for the number of records found from each of the websites.

3.1.3. Included records by year of publication

The earliest published record included in the current scoping review was from 2009. Records dated up until 2021 (year of search) were retrieved.

3.1.4. Claims and costs (extent of CES litigation)

Most of the source data presented in the 39 records, regarding the number of CES claims and associated costs, was gained through the

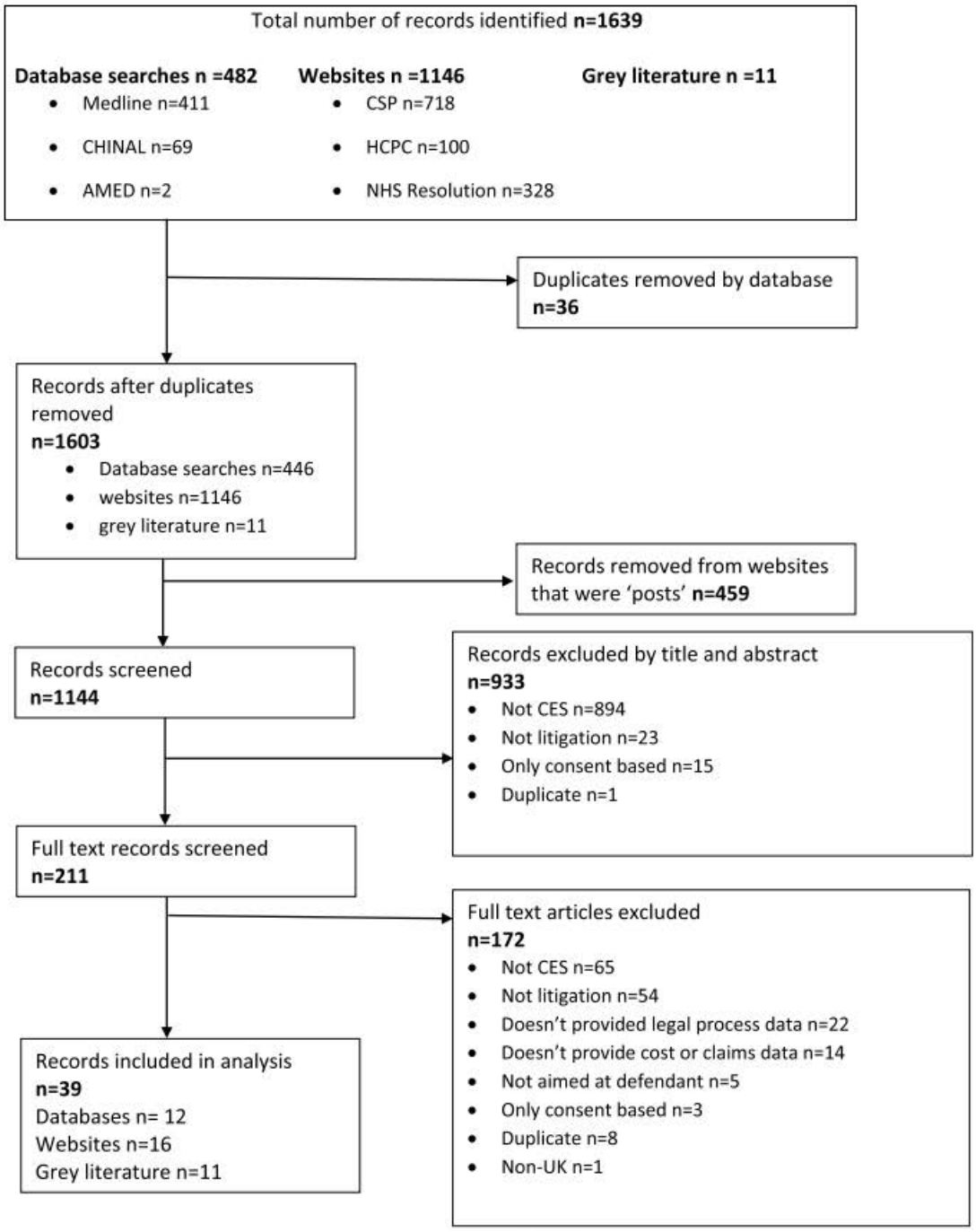

Fig. 1. Scoping review flow chart.

Table 1
Website search results – number of records retrieved.

Website	Search term	Records found
CSP	Cauda equina	n = 65 records found n = 22 records following removal of 'posts'
CSP	Insurance	n = 497 records n = 185 records following removal of 'posts'
CSP	Negligence	n = 82 records found n = 33 records following removal of 'posts'
CSP	Litigation	n = 74 records found n = 19 records following removal of 'posts'
HCPC	Cauda equina	n = 0 records found
HCPC	Insurance	n = 90 records found
HCPC	Negligence	n = 6 records found
HCPC	Litigation	n = 4 records found
NHS Resolution	Cauda equina	n = 14 records found
NHS Resolution	Insurance	n = 18 records found
NHS Resolution	Negligence	n = 200 records found
NHS Resolution	Litigation	n = 96 records found

NHSLA (now known as the NHS Resolution); via freedom of information requests, searching of their databases or via personal communication (Lavy et al., 2009). Other data were gained from the Medical Defence Union (MDU) (Markham, 2004; Hutton, 2019), insurance brokers (Beswetherick, 2017), individual hospitals (Mukherjee et al., 2014) or surgeons (Todd, 2011). In total, 28 of the 39 records analysed gave claims and cost data in relation to CES litigation cases.

3.1.5. Process of litigation

In relation to the legal process, 6 records were found from the NHS Resolution website and 5 records were found on the CSP website. In total, 11 records of the 39 records analysed related to the legal process.

See supplementary file 1 for the data extraction table for databases and supplementary file 2 for the data extraction table for websites. Records that were grey literature were split between the data extraction table for databases and the table for websites, depending on the type of record.

4. Discussion

This scoping review investigated the extent of CES litigation in physiotherapy in the UK and explored the process of litigation and how this is managed in relation to physiotherapy in the UK. Between 2009 and 2021 a total of 2050 CES claims were recorded. Of these 2050, 15 (0.7%) were physiotherapy related. We found little information describing the legal process for physiotherapists undergoing litigation in the public domain.

Papers which collected data regarding reasons for litigation highlighted that failure or delay in diagnosis was often the top factor which led to the most expensive CES claims (Mukherjee et al., 2014; Medical Protection Society, 2017; Wilson-MacDonald et al., 2018; Beswetherick, 2019). Many papers described data for spinal disease, spinal surgery, orthopaedic surgery or neurosurgery as a whole, with CES often cited as one of the most common pathologies for claims (Quraishi et al., 2012; Thavarajah et al., 2013; Machin et al., 2018). Many litigation cases relating to CES mention a lack of out of hours imaging facilities (Thavarajah et al., 2013; Mukherjee et al., 2014; NHSLA, 2016; Hutton, 2019) or out of hours GP appointments as reasons for lack of timely treatment (Taylor, 2017). A number of papers recommend raising awareness of the red flag symptoms related to CES and when it is appropriate to take action (Beswetherick, 2017; Medical Protection Society, 2017). However, some suggest that the problem is not a lack of knowledge relating to CES symptoms but a lack of application of the existing knowledge (Todd, 2011).

4.1. Extent of CES litigation

4.1.1. Period recorded

Data relating to medical negligence and litigation processes has only become available in more recent years, with the earliest record retrieved in our search being published in 2009. The lack of publications prior to this date may relate to when it became mandatory in 2002, for the National Health Service Litigation Authority (NHSLA) to be informed of all claims against NHS trusts in England (it was not possible to identify a specific date for other UK nations). Before this there was no complete record of litigation as NHS trusts did not regularly inform the NHSLA of smaller claims (Machin et al., 2014). There may also be an increase in litigation cases and associated costs over recent years (Machin et al., 2014).

4.1.2. NHS/non-NHS

Of the records analysed N = 11 included NHS based data, with a total of 1631 CES claims recorded (not including duplicated data). N = 2 records related to non-NHS data, with a total of 128 CES claims. N = 3 records included NHS and non-NHS data, with a total of 291 CES claims (not including duplicated data).

Most data regarding CES claims relates to the NHS and there is less information relating to non-NHS physiotherapists.

4.1.3. Claims data

Claims data varied; some records had larger claims data due to having a wider category that included CES rather than recording claims data solely relating to CES. For example, one article included 617 claims relating to 'nerve damage' which included CES (Thavarajah et al., 2013). Therefore, it is unclear how many of these claims were specifically CES related.

It is perceived that the number of CES claims is likely to be higher than data recorded as the NHS Resolution database is not a research tool and there is no guarantee that coding on their database is consistent (Atrey et al., 2010). Therefore, CES claims could be saved under other keywords and may not be included in data when searching for 'Cauda Equina Syndrome' on the NHS Resolution database. It appears that claims are categorised into four categories by the NHS Resolution and health boards of the devolved administrations, based on the progress of the claim (see Table 2 for definitions). However, not all health boards may report data in this way; data from the records retrieved seldom state if claims are open, closed, potential or confirmed. This means it is unclear if all claims are being accounted for. Consequently, the extent of claims may be higher if, for example, all claims reported in a study are only referring to claims that are closed as those that remain open would not be accounted for.

4.1.4. Cost data

Average settlements for litigation cases varied widely from between £2250 (Taylor, 2017) to £1,525,000 (Mukherjee et al., 2014). However, most claims were settled with damages awards between £200,000 to £400,000.

Damages and claimant solicitors' costs related to CES claims were high but also varied depending on each case, this is because settlements depend on factors related to each individual patient. For example,

Table 2
Definitions of types of claim.

Type of Claim	Definition
Open claim	Claims opened by litigation management department of local trust
Closed claim	Conclusion made and claim closed
Potential claim	A claim that is under review but is not confirmed and may not progress to a clinical negligence claim
Confirmed claim	Claims that have all required information and have been confirmed as an active clinical negligence claim

younger patients tend to be awarded higher settlements as negligence is likely to have a larger impact on their future (Hutton, 2019). Average damages for CES claims tended to range between £200,000 - £400,000, however some claims were much higher, at over 1.5 million (Mukherjee et al., 2014). Unfortunately, there is insufficient data to attribute the average cost of damages to physiotherapy or other professions, such as general practitioners or surgeons.

4.2. Process of CES litigation

4.2.1. Process data

There is little information describing the legal process for physiotherapists undergoing litigation in the public domain. There is information available to physiotherapists who are members of the CSP regarding the litigation process and who they should contact regarding negligence claims. However, physiotherapists would need to know where to search for this and would need to be a member of the CSP to access some of this information.

Five records were found that related to the legal process as applied to physiotherapy, these were all from the CSP website (The Chartered Society of Physiotherapy, 2017a; 2017b; 2019a; 2019b; 2019c). These web pages include information such as who to contact and the legal process should a physiotherapist be involved in clinical negligence case (The Chartered Society of Physiotherapy, 2017a). Another of the web pages discusses insurance, why it is needed and what it covers (The Chartered Society of Physiotherapy, 2017b). Other pages give information on who to contact with regard to medicolegal issues (The Chartered Society of Physiotherapy, 2019a), explains why patients may make a complaint and how concerns may be investigated (The Chartered Society of Physiotherapy, 2019b). They also provide support regarding what a physiotherapist should include in a statement, if asked to write one (The Chartered Society of Physiotherapy, 2019c). The CSP state that they may be able to provide support to physiotherapists undergoing litigation depending on their circumstances. However, this information is not readily available in one place on the CSP website, using the specific terms 'cauda equina', 'insurance', 'negligence' and litigation retrieved a total of 716 results including titles such as 'Hidden impact of cauda equina' and 'Clinical update: cauda equina syndrome'. Currently physiotherapists would have to search through multiple records in order to find the appropriate guidance on the process of CES litigation. Furthermore, legal terminology in these documents is often used interchangeably, for example, the terms 'complaint', 'claim' and 'litigation'. This could be confusing for a clinician seeking guidance on the legal process who may have little knowledge of legal terms.

NHS Resolution may not be the first place a physiotherapist may look for information on the litigation process, however some guidance on the litigation process is available and is easier to find. The information on their website is available publicly and non-NHS physiotherapists may also find some of this information useful, however they may not think to look here. There were six records relating to the legal process found from the NHS Resolution website. These web pages include information for healthcare professionals regarding the litigation process and providing support including legal advice contact. Including information regarding the clinical negligence scheme for general practice and existing liabilities scheme for general practice (NHS Resolution, 2019; 2021b). They also answer common questions regarding the clinical negligence scheme for general practice (NHS Resolution, 2021a) and how these claims are handled (NHS Resolution, 2020a), what healthcare professionals should so if they receive a complaint or claim (NHS Resolution, 2020c) and brief dispute resolution guidance (NHS Resolution, 2020b). These documents are not aimed at physiotherapists specifically; however, they are still applicable to them. One of these records is easily accessible from the NHS Resolution homepage using the primary care appeals link (NHS Resolution, 2020b). However, the others may need to be search for using specific terms.

In contrast with physiotherapy, there seems to be clearly described legal and support processes for other professions such as doctors and surgeons. For example, organisations such as the General Medical Council (GMC) have information on their website regarding their 6 month process for concerns about doctors and their investigation process which is publicly available on their website (General Medical Council, 2021). The HCPC also give information on their investigations process, however interestingly this guidance is oriented to the person making the complaint or claim, rather than HCPC registrants i.e. defendants (HCPC, 2019). The MDU offer support, guidance and advice to healthcare professionals, however their membership information is largely aimed at doctors, nurses, consultants and general practitioners. There is no specific mention of physiotherapy on the MDU website, although they do provide membership for physiotherapists, this information is only available through enquiry. There is publicly available information on the MDU website for support and includes pages such as: I've had a complaint, I've had a letter from the GMC, I'm being sued, I have to attend court, I have to write a report or statement, I'm being investigated by the police and I've had an inquiry from the media (The MDU, 2021).

4.3. Implications and future research

There is a paucity of research regarding litigation involving physiotherapists, with most current research providing data related to doctors and surgeons only. Future research should also investigate non-NHS litigation, as there is currently very little information on the extent of litigation for those working outside of the NHS. Considering the NHS paid out circa. £44m in the 10 years previous to 2013, for CES related claims (Fairbank, 2014) it is recommended that the NHS review coding of CES cases in order to improve accuracy of NHS data in future. Finally, as more FCP and advanced physiotherapy roles are created, there is an urgent need to provide physiotherapists with clearer and more accessible information on the legal process.

4.4. Limitations

It is apparent that there is little data available relating to the extent and process of CES litigation for physiotherapists in the UK.

Most of the source data presented in this scoping review originates from NHS Resolution, however the NHS Resolution database is not primarily a research tool, it is a claims management tool and there is no guarantee that coding on their database is consistent or that detail is adequate for research purposes (Atrey et al., 2010). Therefore, data obtained through their database and subsequent FOI requests could be inaccurate and the numbers presented in this paper are likely to be an underestimate. Some figures only including secondary and tertiary care do not include costs made against GP's or FCP's in primary care settings and therefore actual CES claims costs are also expected to be much higher than stated (Coleman, 2019).

When undertaking a scoping review there is no formal assessment of methodological quality of the papers included (Arksey and O'malley, 2005) and therefore studies of low quality may be included. However, scoping reviews are broad in nature and outline all literature regardless of quality, which allows a wide ranging and more contextual overview (Murray et al., 2017).

5. Conclusion

This study is the first to investigate the extent and process of CES litigation for physiotherapists in the UK. Our data suggest that between 2009 and 2021 there have been 15 CES claims recorded against physiotherapists which is 0.7% of all CES claims recorded in the UK. This is likely to increase with the introduction of more advanced physiotherapy roles such as FCP's that have high levels of clinical autonomy and see patients at early stages in their disease processes.

In terms of the legal process for CES claims, this scoping review has

demonstrated that there is a limited amount of information regarding the process of litigation for physiotherapists and what steps they would need to take once they receive notification they are being sued. Any information that is available is often difficult to find and is housed in multiple places. The guidance that is provided use legal terminology interchangeably, for example, the terms 'complaint', 'claim' and 'litigation', which could be confusing for a clinician seeking guidance. There is no clearly articulated overarching/national information describing the legal process aimed at physiotherapists involved in clinical negligence claims. We recommend the development of a single repository for information regarding the legal process for physiotherapists that is well signposted using clear and consistent language.

Ethical approval

The current research and associated papers gained ethical approval from Health, Psychology and Social Care Research Ethics and Governance Committee at Manchester Metropolitan University (EthOS Reference Number: 18122).

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Declaration of competing interest

None declared.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.msksp.2021.102458.

Abbreviations

CSP	Chartered Society of Physiotherapy
GMC	General Medical Council
HCPC	Health and Care Professions Council
NHSLA	National Health Service Litigation Authority
MDU	Medical Defence Union
MPS	Medical Protection Society

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Appendix 13. – Multi-methods paper

BMJ Open

Medico-legal litigation of UK physiotherapists in relation to cauc equina syndrome: a multimethods

Gillian Yeowell ,[1] Rachel Leech,[1] Susan Greenhalgh,[1,2] Emma Willis,[1] James Selfe[1]

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ABSTRACT

Objective The aim was to investigate the extent of cauda equina syndrome (CES) litigation and explore the process of medico-legal litigation in relation to physiotherapy in the UK.

Design A multimethods inquiry that followed on from a previously conducted scoping literature review was undertaken to address the aim. This included freedom of information requests and direct communication with relevant stakeholders and organisations.

Results A total of 2496 CES claims were found in the UK between 2012 and 2020. 51 of these were attributed to physiotherapists. There was little information available to physiotherapists regarding the legal process of litigation and much of this information was not from a physiotherapist's perspective.

Conclusion This is the first study that has investigated the extent and process of CES litigation in physiotherapy in the UK. The extent of CES litigation appears to be high considering CES is a rare spinal condition. Furthermore, the extent of CES litigation is suspected to be considerably higher than the data reported in this study due to the issues identified in how CES claims are recorded. Finally, there is no clearly articulated, easily accessible information describing the process and support available for physiotherapists in receipt of a legal claim.

STRENGTHS AND LIMITATIONS OF

⇒ The multimethod design has enable sive and holistic understanding of th
⇒ A robust and rigorous methodology swer the research aim.
⇒ The methods used may have led t mation of the extent of physiothera cauda equina syndrome litigation cl

INTRODUCTION

Cauda equina syndrome (CES) is caused by compression of the cauda equina nerve roots.[1] It is a rare condition with a prevalence of 0.01%.[2] Delays in diagnosis and treatment of CES can have life-changing consequences for the patient and can lead to significant medico-legal consequences.[1 3] Delays are often caused by failure to recognise the signs and symptoms of the condition, waiting for MRI scans to be organised and delays in making referrals for surgical opinion.[4]

CES is highly litigious, with the (National Health Service (NHS) receiving 827 CES claims between 2008 and 2018 at a cost of £186 134 049.[5] It was reported that in England, 23% of litigation claims for spinal surgical procedures were CES related.[6] Moreover, Chacko[7] highlights that medical liability litigation is likely to increase stating: *'As p increasingly aware that doctors ar lose when sued and that the courts a award larger settlements, the freque doctors are sued will almost certain*

First contact practitioner is a r to the management of musculos tions within the UK.[6 8] It ain timely access to expert musculo iotherapists without the patien initial general practitioner (ment.[9] Therefore, physiotherap to become the first point of c increased number of patients such, physiotherapists are mor involved in CES litigation case to the consequences for patie can have many negative effects cian, including stress and anxi have prolonged effects over contributing to decreased men ical well-being.[3]

It has been reported that claims involve physiotherapist due to the methods used in pr it is likely that this number is un Additionally, it remains uncle ance and processes are in pla physiotherapists involved in CES.[10]

Therefore, the aim of this re investigate the extent of CES explore the process of medico-l in relation to physiotherapy in t

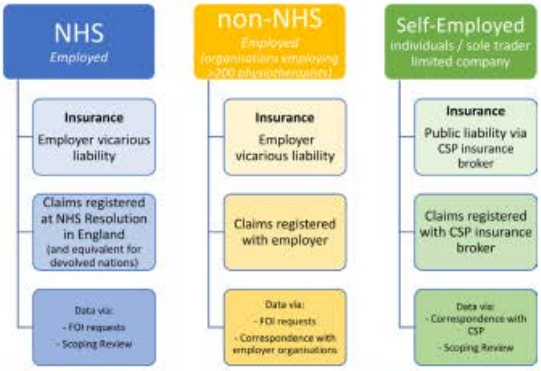

Figure 1 Pathway for litigation cases in physiotherapy and sources of data. CSP, Chartered Society of Physiotherapy; FOI, freedom of information; NHS, National Health Service.

METHODS

Design

To address the research aim, a multimethods inquiry was considered the optimal approach as the process of managing and recording litigation claims in the UK is dependent on the physiotherapist's employment status, that is, NHS employed, non-NHS employed or self-employed (see figure 1). As such, different methods were required to obtain data to supplement the data obtained in a previously undertaken scoping review,[10] including freedom of information (FOI) requests and direct communication with relevant stakeholders and organisations.

Summary of methods used

I. A scoping review had been conducted previously and published as a separate paper.[10]

This investigated the extent and legal process of CES claims for UK physiotherapists. A modified six-stage framework was followed for the scoping review.[11] Further detail on the methods can be found in the study protocol.[12] A total of n=1639 records were identified, following removal of duplicates and screening of titles and abstracts n=211 full-text records were screened and n=39 were included for full analysis.[10]

II. Personal communication with Chartered Society of Physiotherapy (CSP): to supplement the data from Beswetherick[13,14] obtained via the scoping review (method I), the research team contacted the CSP to seek detail of the information provided to its members regarding the legal process, and via a gatekeeper, requested data from their insurance broker relating to the extent of litigation for self-employed physiotherapists (figure 1). Data from 2012 to 2021 were collected. Data were requested for the date range 2015–2020 to enable data comparison. However, where more data were provided, this additional data have also been presented.

III. FOI requests: multiple FOI requests (total n=42) were submitted to NHS England, Northern Ireland, Scotland and Wales for NHS data (figure 1). The FOI requests related to the number of CES claims per year and the healthcare professional(s) cited in the claim. The claims were grouped into four categories relating to type of claim (table 1).

IV. Personal communication with large non-NHS employers: in order to obtain data for physiotherapists employed outside of the NHS (figure 1), the research team contacted non-NHS organisations who employed more than 200 physiotherapists in the UK, in order to retrieve extent claims data. Three organisations were identified. For the first employer, we were informed that a FOI request was required. The request was submitted and was identical to those sent to the NHS health boards (method III). The second organisation provided us with extent data following personal correspondence. The third organisation did not provide data. Therefore, to ensure anonymity, data were aggregated for the two non-NHS organisations.

Patient and public involvement

A patient and public involvement (PPI) representative has been involved from the inception of the study and throughout this research. They are one of the authors of this study and are a person living with CES. Additionally, a PPI group that includes three people living with CES (including someone undergoing a litigation case) helped to refine the research question, provided input into the design of the study and have given feedback on the study findings.

RESULTS

Extent of CES litigation in physiotherapy in the UK

Extent of CES litigation claim data obtained by the scoping review

With regards to extent of CES litigation, data from the previously conducted scoping review indicate there have

Table 1 Definitions of types of claim[10]

Type of claim	Definition
Open claim	Claims opened by litigation management department of local NHS trust
Closed claim	Conclusion made and claim closed
Potential claim	A claim that is under review but is not confirmed and may not progress to a clinical negligence claim
Confirmed claim	Claims that have all required information and have been confirmed as an active clinical negligence claim

NHS, National Health Service.

been 15 CES claims against physiotherapists between 2001/2002 and 2016/2017, which is 0.7% of all CES claims recorded in the UK.[10]

Extent of CES litigation claim data obtained by FOI requests and personal communication

To obtain extent data of CES litigation for staff employed in the NHS, a total 42 FOI requests were submitted to 14 NHS health boards (7 boards in Wales, 5 boards in Northern Ireland, 1 in England and 1 in Scotland; (table 2).

For extent data of CES litigation for staff employed outside the NHS, a request for data were submitted to three organisations identified as a non-NHS large employer of physiotherapists. Data were obtained from two of the three non-NHS organisations. These data were aggregated to ensure anonymity (table 2).

Extent data of CES litigation for self-employed physiotherapists were obtained via personal communication with the CSP (table 2).

A total of 446 CES claims were found across the three categories (NHS employed, non-NHS employed and self-employed). Of the 446 it was not possible to state how many of these claims involved physiotherapists for NHS-employed and non-NHS employed staff, as the data provided by these employers related to CES claims involving all healthcare professions. In these organisations, claims related to physiotherapy were either not recorded or could not be released for anonymity reasons. However, the self-employed group data relate solely to physiotherapy CES claims, of which there were 36 between 2012 and 2020.

Figure 2 shows there were a total of 395 NHS CES claims between 2015 and 2020. This data include claims for CES relating to all healthcare professionals and not solely to physiotherapists. The graph shows a peak number of claims between 2015 and2017.

The number of CES claims per year that involved self-employed physiotherapists is presented in figure 3. This data show an increasing number of claims up to 2015/2016 where the number of claims peak. Claims then begin to decrease, before starting to rise again in 2018/2019.

For the non-NHS employed group, raw data provided by one of the employers was as a total number for 2012–2021, thus the aggregated data for this group could not be displayed at yearly time intervals (table 2).

Table 2 Number of CES claims retrieved from FOI requests and personal communication

Employment category	Location submitted	Number of CES claims per year
NHS	NHS England	2015/2016: n=113 2016/2017: n=110 2017/2018: n=65 2018/2019: n=26 2019/2020: n=19
NHS England total 2015–2020 n=333 (population 56.3 million. ONS)		
NHS	Scotland	2015/2016: n=<5 2016/2017: n=<5 2017/2018: n=<5 2018/2019: n=6 2019/2020: n=<5
NHS Scotland total 2015 – 2020 n =10* (population 5.5 million. ONS)		
NHS	Wales	2015/2016: n=4† 2016/2017: n=8† 2017/2018: n=6† 2018/2019: n=4† 2019/2020: n=7†
NHS Wales total 2015–2020 n=29† (population 3.2 million. ONS)		
NHS	Northern Ireland	2015/2016: n=5‡ 2016/2017: n=4‡ 2017/2018: n=2‡ 2018/2019: n=8‡ 2019/2020: n=4‡
NHS Northern Ireland total 2015–2020 n=23‡ (population 1.9 million. ONS)		
Non-NHS	two non-NHS large employers of physiotherapists	2012–2021: n=15§
Non-NHS large employer total 2012–2021 n=15		
Self-employed		2012/2013: n=1 2013/2014: n=4 2014/2015: n=6 2015/2016: n=10 2016/2017: n=6 2017/2018: n=1 2018/2019: n=2 2019/2020: n=6
Self-employed physiotherapists 2012–2020, n=36		
Grand total=446		

*Where < is indicated, these were calculated as n=1.
†Includes aggregated data for seven health boards; where data were recorded <5, these were calculated as n=1.
‡Includes aggregated data for five health boards, where data were recorded <10, these were calculated as n=1.
§Data from two Non-NHS employers were aggregated to ensure anonymity of the data.
CES, cauda equina syndrome; ONS, Office for National Statistics.

Process of CES litigation in relation to physiotherapy in the UK

With regard to the legal process, there was no clearly articulated overarching information for the UK describing the process of litigation for physiotherapists. From the previously conducted scoping review (method I), 11 records related to the CES legal process, 5 of these were specifically associated with physiotherapy and were from the CSP website (https://www.csp.org.uk/).[10] These related to insurance for physiotherapists and whom physiotherapists should contact if they become involved in a claim. One record gave advice on how to write a legal statement.

Through personal communication with the CSP (method II), it was clarified that the CSP are only involved

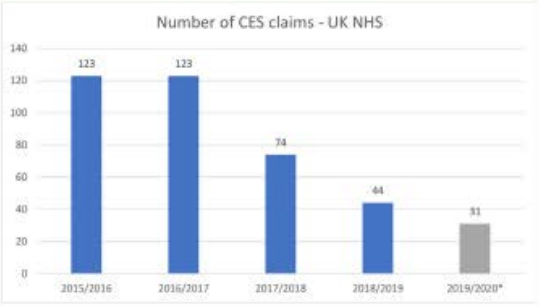

Figure 2 Number of CES claims per year for all healthcare professionals in UK NHS (England, NI, Scotland, Wales). *Data collected during 2020 therefore, some data may be incomplete depending on reporting periods. CES, cauda equina syndrome.

in providing support for litigation cases for self-employed physiotherapists. For employed physiotherapists (NHS and non-NHS), their employers are vicariously liable for CES claims by their employees in the course of their employment.

Information provided via a CSP gatekeeper (method II), described the litigation process followed by the solicitor firm used by the CSP. The information highlights three elements that the claimant must prove for negligence in healthcare:

1. that their healthcare practitioner owed a duty of care.
2. that their healthcare practitioner was in breach of the duty of care.
3. that as a result of this breach, an injury or loss has been suffered.

Each of these three elements must be demonstrated in order for the claim to be successful. An infographic summarising the five-step process of clinical negligence claims for healthcare professionals in the UK, including those relating to CES litigation and physiotherapy, has been created to illustrate this process (figure 4).

Figure 3 Number of CES claims per year for UK self-employed physiotherapists in UK (England, NI, Scotland, Wales). *Data collected during 2020 therefore, incomplete data presented for this time period. CES, cauda equina syndrome.

Duty of care means that the healthcare practitioner must provide 'reasonable care'. This is based on medical judgement whereby if a healthcare practitioner is treating their patients in accordance with an approved medical practice, they cannot be found negligent. This is known as the Bolam test.[15] Importantly, the healthcare practitioner must follow a reasonable and reputable body of medical opinion, and the court must be satisfied that the medical body used by the practitioner can prove that their decisions are reasonable. Furthermore, the healthcare practitioner must ensure that their patient is aware of any material risk to ensure they obtain informed consent prior to treatment.

If the claimant can fulfil these conditions, then a pre-action protocol follows. The pre-action protocol allows for negotiations to take place to avoid unnecessary court proceedings. The pre-action protocol highlights that NHS Resolution should be involved at an early stage in the claim process to facilitate a resolution of the dispute.[16] NHS Resolution is an arm's-length body of the Department of Health and Social Care in England. They provide expertise to the NHS on handling negligence claims, resolving disputes and sharing learning from litigation.[17]

Claims can be resolved in multiple ways. Options for resolving disputes include discussion and negotiation, mediation and arbitration.[16] Settlement offers can be made informally; round-table meetings can be convened between the councils for the defendant and the prosecution; mediation can be organised with solicitors and an impartial mediator.[18] While most cases are resolved through this process, where a dispute has not been resolved, court proceedings may be issued against the healthcare practitioner.[18] If the claim goes to court trial, the Judge will decide whether the claim succeeds and on what grounds. If the claimant is successful, the Judge will decide how much compensation should be paid.[16] Depending on the complexity of the case, a clinical negligence claim may take approximately 18 months to settle.[18]

Physiotherapists may be involved in a claims process as a witness of fact. This is where the treating physiotherapist comments on their treatment records and their recollection of the facts as they recall them.[19] It is important to note that no training is required by the physiotherapist to be a witness of fact and they cannot decline the request to be involved.[20] Furthermore, physiotherapists can be involved in a litigation case as an expert witness, who is independent of the patient. Physiotherapists may choose to take up work as an expert witness for the prosecution or defence if they have expertise in certain areas of physiotherapy. An expert witness can accept or decline a request to provide a report for the case. Expert witnesses must be practising their profession, which can be in any context, including through direct patient care, education or research. They are required to have additional training for clinical negligence report writing and in order to understand their role and responsibilities as an expert witness.[20]

Figure 4 Litigation process.

The claim process consists of two phases: the preclaim phase and the claim phase. Figure 5 summarises the process of the different phases of a claim that an NHS employed healthcare professional can be involved in. In the preclaim phase, the legal team for the claimant contacts the healthcare professional's employer to undertake preliminary checks. This includes considering if there was a duty of care and whether there was a breach of the duty of care (figure 4). If this is not found, then the case does not proceed. It is during this phase that many claims are dropped. During this phase, the healthcare professional involved may not have been notified of the potential claim. Where there appears to be grounds for a case to proceed, the claim phase begins. When a letter of claim is received, this may be the first time the healthcare professional becomes aware of the claim.

DISCUSSION

Extent of CES claims

The extent of CES claims was investigated through multiple methods. From all methods, the total CES claims recorded in the UK between 2012 and 2021 was 2496. Of these, 51 CES claims could be specifically attributed to physiotherapy (15 from method I, 36 from methods II–IV).

Figure 5 NHS process for phases of litigation claim (adapted from Machin *et al*[37]).

From methods II–IV, a total of 446 CES claims in the UK were recorded between 2012 and 2021. This number is comprised of 395 claims against all NHS healthcare professionals between 2015 and 2020, 36 CES claims relating to self-employed physiotherapists between 2012 and 2020 and 15 CES claims for all healthcare professionals from the non-NHS employed group between 2012 and 2021.

The previously conducted scoping review (method I) identified records dated between 2009 and 2020, which included a total of 2050 CES claims.[10] Results from the scoping review found that CES extent claim data were mostly NHS based. Data for NHS based studies were obtained via FOI requests to NHS Resolution (or its predecessor the NHS Litigation Authority). Data that included both NHS and non-NHS came from the Medical Protection Society, Medical Defence Union or the CSP.[13 21–25] Awards for CES claims frequently ranged between £200 000 and £400 000, however some were much higher, at over 1.5 million.[26] There was not enough data to distinguish how the sums awarded in damages against physiotherapists compare to other professions such as GPs or surgeons.[10] The findings from the scoping review highlighted that failure or delay in diagnosis was often the top factor which led to the most expensive CES claims.[10 14 26–28] Results from the scoping review found that only 15 (0.7%) claims were specifically identified as physiotherapy related, all of which were solely related to self-employed physiotherapists due to the focus of that study.[10]

Challenges to obtaining CES litigation data

Obtaining data to ascertain the extent of CES litigation in relation to physiotherapy was complex and lengthy. Furthermore, the claims data obtained for this study were not consistently reported. This was largely due to varying time periods in which the claims were recorded. In addition, how CES claims were recorded varied across the UK and were also inconsistently recorded within the NHS and other institutions.

Data obtained from the NHS were via FOI requests. When submitting FOI requests to the NHS, several issues became apparent. The main issue was the overall fragmentation and subsequent opacity of the system leading to submission of 42 separate FOI requests. The process for submitting FOI requests was unclear and inconsistent across the devolved UK administrations, making it difficult to retrieve data. It is interesting to note that on the Information Commissioners Website for the UK titled 'How to access information from a public body' there is no suggestion that differing processes may need to be employed for FOI requests across the devolved UK administrations.[29]

Recording of CES claims

NHS data for England were retrieved via FOI requests to NHS Resolution. Due to the way claims were recorded in the NHS Resolution database, CES cases were not able to be specifically identified. Litigation cases were categorised against a predefined cause, injury or specialty code, of which CES was not one.[30] Therefore, CES was not recorded as the nature of the claim, instead CES was included within a broad category, such as 'nerve damage', thus making it unclear how many claims were actually CES related.[10 31] Considering the extent and large costs associated with CES litigation it is surprising that there is no specific CES coding within the NHS Resolution database.

Consequently, to identify CES cases in the NHS in England, a review of each individual litigation case would be required to determine if it was a CES case. As the cost to do this would exceed the cost compliance limit (£450) for FOI requests, the FOI request can be rejected on these grounds.[32] In this study, the initial FOI request to NHS Resolution for CES data were rejected due to this. However, as part of an ongoing review of NHS claim data, NHS Resolution subsequently undertook a 'deep dive' of CES claims data, which meant that a later FOI request submitted by us was successful. However, in the absence of the NHS Resolution deep dive review, this data would not have been available. This potentially has serious implications for the NHS. Healthcare professionals who are unable to access data are unable to identify what the issues are and the extent of the problem. Moreover, they are unable to learn from litigation claims and where they can make a difference to improve patient care. Therefore, it is essential that this data are more readily available. As such it is recommended that the recording of claims within the NHS Resolution database is reviewed as a matter of urgency.

Recording of the healthcare professional

A further challenge to understanding the extent of CES litigation in relation to UK physiotherapy, was the healthcare professional the claim concerned was not recorded by most organisations. Requests for this information were not provided by most NHS and non-NHS organisations due to this. Therefore, it was not possible to provide exact numbers or an analysis of the CES claims that physiotherapists were involved in. The only data collected which confirms physiotherapists involvement in the CES claims was that of the self-employed group, provided by the CSP (the professional body for physiotherapists) and as such, only this data are specifically attributed to physiotherapists. Consequently, the data presented in this study are likely to be a significant underestimation of the extent of physiotherapists involved in CES litigation claims, which is a limitation of the study. Furthermore, not having an understanding of the healthcare professionals involved in these cases limits the effectiveness of any initiatives to address this issue. Therefore, it is recommended that the primary healthcare professional(s) involved in litigation cases are recorded within the claims database.

Recording of claims across the UK

For the NHS, understanding the extent of CES litigation across the UK presented further challenges. It was unclear

at the outset of this study, that each of the devolved administrations within the UK had its own separate process for submitting FOI requests. For England, requests for data were sent to NHS Resolution who had a transparent process for submitting these requests. Obtaining information about the organisation to submit FOI requests to Northern Ireland, Scotland and Wales was much less clear and it was difficult to find this information in the public domain. Additionally, Wales and Northern Ireland required a separate FOI request to each of the individual health boards (seven health boards for Wales, five for Northern Ireland). Therefore, having an equivalent body to NHS Resolution for the devolved UK administrations is recommended to facilitate the recording of claims across the UK.

Terminology of records

There may also be differences across the UK and different organisations as to what is counted as a CES 'claim'. For some, a claim may be recorded if the claim is a potential claim, for others it is only recorded once it is a confirmed claim (see table 1). Furthermore, records retrieved seldom stated if claims were open, closed, potential or confirmed, which affects the accuracy of CES claims extent data reporting.[10]

A difficulty in aggregating the data to present an overview of CES claims for the UK included, the period the claims relate to, which were different across the UK, with some running in line with the calendar year (January to December), and others in line with the fiscal year (April to March). Furthermore, some health boards/organisations gave data broken down into years and others aggregated their data over non-standardised time periods, meaning data could not be compared across data sets.

For NHS health boards there were also inconsistencies in the way the number of CES claims were displayed, as some health boards did not disclose low number of CES claims in order to ensure anonymity, whereas others did. Some health boards used a threshold of <5 when displaying low number of claims and others used a <10 threshold. For the purposes of this study, where undisclosed figures using the thresholds <5 or <10 were provided, only one CES claim was counted and presented in the results to ensure the number of claims were not overestimated. As such, CES claims data are likely be higher than the data recorded in this current study.

Process of medico-legal litigation

There was little information found from the previously conducted scoping review regarding the process of medico-legal litigation for physiotherapists.[10] Furthermore, this information was difficult to find. Eleven records were identified, with five specifically related to physiotherapy, from the CSP website.[10] These web pages discussed what physiotherapists should do if a complaint was made against them under various circumstances and who they should contact in relation to their claim.[33] However, the physiotherapist would need to search for this information across different parts of the website.[10]

Additionally, the support process for physiotherapists differs depending on who the physiotherapist is employed by (figure 1). However, this remains unclear to physiotherapists seeking support. In the UK, the professional body for physiotherapy is the CSP, with the regulatory body being the Health & Care Professionals Council (HCPC). While the HCPC investigates professional conduct complaints against physiotherapists, they are generally not involved in CES litigation and as such do not provide guidance or support for the litigation process. However, it is not clear that the HCPC do not deal with medico-legal claims. Furthermore, it is unclear that the CSP are only involved in supporting self-employed physiotherapists through the litigation process, providing professional liability insurance for clinical negligence (malpractice) claims as part of the physiotherapists' membership. Self-employed physiotherapists who are not members of the CSP are required to obtain their own clinical negligence insurance. The CSP do not support NHS employed and non-NHS employed physiotherapists, who instead, are supported by their employer who provides vicarious liability insurance for clinical negligence claims. This lack of transparency may cause frustration and confusion for the physiotherapist when seeking initial support, who may assume that it is the professional and regulatory body who provides such support. This lack of clarity around entitlement to support could cause stress and anxiety to the healthcare professional.[34]

There seems to be a clearer legal process and support for other healthcare professions such as doctors and surgeons. For example, organisations such as the General Medical Council (independent regulator for doctors in the UK) have information on their website regarding their 6-month process for concerns about doctors and their investigation process following a complaint.[35] Therefore, it is recommended that advice and support structures regarding litigation for physiotherapists should be of a similar standard to those of other autonomous healthcare professions.

With regards to legal costs in the UK (England and Wales), a conditional fee arrangement was introduced in 2013 for clinical negligence claims.[36] Commonly known as 'no win, no fee', it means the claimant can make a compensation claim without paying solicitors' fees upfront. If the claim is successful the solicitor can recover their legal costs from the damages payable to the claimant, which can be up to 25% of the total damages awarded. If the case is unsuccessful, the claimant does not pay any legal fees.[36]

Strengths and limitations

The use of multiple methods has enabled a holistic understanding of the extent and process of CES litigation in the UK with regard to physiotherapy. However, due to the issues highlighted in this study with how CES data are recorded, the data presented in this study are likely to be

a significant underestimation of the extent of physiotherapists involved in CES litigation claims.

CONCLUSIONS

This is the first study that has investigated the extent and process of CES litigation in physiotherapy in the UK using a range of methods. For all methods, between 2012 and 2020a total of 2496 CES claims were found. The extent of CES litigation appears to be high considering that CES is a rare spinal condition. A total of 51 CES claims were attributed to physiotherapists. However, it is difficult to establish the true extent of CES claims relating to UK physiotherapists under the current fragmented reporting methods. The extent of CES litigation is suspected to be much higher than the data uncovered during the current study due to the recording of CES claims.

During the multimethods inquiry it became apparent how unclear it may be for physiotherapists who are in receipt of a CES claim as there is no clearly articulated, easily accessible information describing the process and support available to them.

RECOMMENDATIONS

1. For NHS databases CES needs to have its own specific category for accurately recording claims. Furthermore, the primary healthcare professional(s) cited in the litigation case should also be recorded, in order to facilitate greater understanding of the professions involved in CES claims. For all categories (NHS, non-NHS and self-employed) claims data should specify if their data relate to a calendar year, fiscal year or other and what they count as a claim that is, do they include open/closed and potential/confirmed. This would provide more transparent data and allow for accurate data analysis in future.
2. The process for submitting FOI requests across the UK needs to be made clearer and more transparent. Having an equivalent body to NHS Resolution, for the devolved UK administrations is recommended.
3. Organisations, such as the CSP could provide clearer information on the pathway for physiotherapists in receipt of a litigation case and the support available. A single repository of clear information regarding the legal process for physiotherapists involved in claims is advised. It should be made clear that there is support for physiotherapists regardless of their employer, however where this support comes from differs based on their employment (NHS employed, non-NHS employed, self-employed).
4. Although the HCPC is not involved in the litigation process for physiotherapists, they should make this much clearer. It is anticipated that physiotherapists would assume the professional regulator would be involved in the litigation process and so the HCPC should anticipate that they will get more enquiries regarding this as litigation rises.

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Contributors GY, SG and JS designed the study. GY, SG and RL acquired the data. GY, RL, SG, EW and JS undertook data analysis and contributed to interpretation of data for the work. GY, RL, SG, EW and JS contributed to drafting and revising the manuscript. GY, RL, SG, EW and JS are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. GY is the author responsible for the overall content as the guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Ethics approval Ethical approval was obtained from Manchester Metropolitan University Faculty Ethics Committee, UK (Ref: 18122).

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Appendix 14. – Qualitative paper

PLOS ONE

RESEARCH ARTICLE

The lived experiences of UK physiotherapists involved in Cauda Equina Syndrome litigation. A qualitative study

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Abstract

Background

Cauda Equina Syndrome is a serious spinal pathology, which can have life changing physical and psychological consequences and is highly litigious. Litigation can have negative personal and professional effects on the healthcare professionals cited in a clinical negligence claim. There is an absence of research looking at the experience of the physiotherapist and as such, it is unknown the impact litigation is having on them. This study explored the lived experiences of UK physiotherapists in relation to Cauda Equina Syndrome litigation.

Methods

A qualitative design, informed by Gadamerian hermeneutic phenomenology, using semi-structured interviews was used to explore participants' lived experiences of litigation. Interviews were audio-recorded and transcribed verbatim. Findings were analysed using an inductive thematic analysis framework. Nvivo software was used to facilitate analysis. The study is reported in accordance with the consolidated criteria for reporting qualitative (COREQ) research.

Results

40 interviews took place online or over the phone, with physiotherapists and stakeholders. Four themes were found; 'litigation effects', 'it feels personal', 'learning from litigation' and 'support and training'.

Conclusion

This is the first study to investigate the lived experiences of litigation in UK physiotherapists. Involvement in clinical negligence affected physiotherapists' physical and mental wellbeing and impacted their clinical practice. Most physiotherapists felt litigation was a personal attack on them and their ability to do their job. Physiotherapists highlighted perceptions of a

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'blame culture' and perceived stigma associated with the claim, which often led to a lack of sharing and learning from litigation. Physiotherapists emphasised the need for emotional support for those going through a legal claim and that training was needed to understand the process of litigation and range of potential outcomes.

Introduction

Cauda Equina Syndrome (CES) is a rare, yet serious spinal pathology potentially requiring emergency spinal surgery. The incidence of CES ranges from 0.3 to 7.0 per 100,000 population per year [1]. Poor outcomes of CES can occur if the condition is not managed in a timely manner, which can have life changing physical and psychological consequences [2]. Due to this, CES is highly litigious, costing the National Health Service (NHS) in the United Kingdom (UK) in excess of 186 million over a 10 year period (2008–2018) [3].

Litigation in healthcare varies worldwide due to different legal and healthcare systems. Like the UK, the United States of America has an adversarial system of medical malpractice claims, although American states have different regulations related to medical negligence [4]. New Zealand, however, changed their legal system in 2005 to a less adversarial approach to clinical negligence, moving from a punitive system to one that encouraged learning [5]. In the UK, physiotherapists are increasingly being cited in clinical negligence cases, which may be related to their changing role. The role of the physiotherapist differs around the world, including their degree of autonomy and professional rights. Within a UK context, whilst physiotherapists have possessed professional autonomy for many years the role is rapidly changing with increasing numbers of advanced roles, including advanced practice physiotherapy (APP) and first contact practitioner (FCP) roles, in settings such as emergency departments and Primary Care [6]. Therefore, more physiotherapists are likely to become a first point of contact for patients who have not been screened by a medic for a serious pathology such as CES, and consequently are becoming increasingly involved in litigation claims [7, 8]. Previous research found a total of 2496 CES claims in the UK between 2012–2020 [7, 8]. Of these, 51 were attributed to physiotherapists, however this is likely to be an underestimation due to deficiencies in current reporting methods [8].

Whilst the impact of a patient safety incident on the patient and family is the key concern, for the healthcare professional (HCP) involved in a clinical negligence claim there is growing recognition of the impact it can have on them [8]. The HCP can experience a significant impact, both personally and professionally and consequently have been described as 'second victims' [9]. It has been found in other HCP that being involved in a clinical negligence claim can lead to loss of confidence, self-doubt and absence from work [9, 10], and for some, it can lead to them considering changing jobs to work in areas of clinical practice not considered as high-risk of litigation or to leave their profession all together [10].

To protect themselves from liability, HCPs may adopt defensive practice [11]. Defensive practice refers to the over-cautious management of patients, leading to excessive clinical activity including over-investigation and additional interventions and deviating away from what may be considered best practice in order to protect themselves from liability rather than advancing the care of patients [11, 12]. Defensive practice has been observed in medics and other HCP [10, 13]. It is argued that this is not advantageous to the patient or clinician, as it not only impacts costs in healthcare but the quality of the healthcare system. Furthermore, patients could be exposed to unnecessary and often invasive procedures [13]. In order to reduce harm and prevent claims from happening in the future healthcare organisations,

including the NHS, need to learn from things that go wrong [14]. When investigating the effects of litigation, it has been suggested that learning from litigation claims can help to improve patient safety [14].

Most research has focussed on the experiences of litigation among medics and midwives. There is an absence of research looking at the experience of the physiotherapist and as such, it is unknown the impact litigation is having on them. The current study aimed to explore the lived experiences of UK physiotherapists in relation to CES and litigation.

Methods

The study is reported in accordance with the consolidated criteria for reporting qualitative (COREQ) research [15]. Ethical approval was obtained from Manchester Metropolitan University Faculty Ethics Committee, UK (Ref: 18122). Informed consent was obtained verbally from all participants prior to participation. Participant consent was digitally audio-recorded by the interviewers.

A qualitative design, informed by Gadamerian hermeneutic phenomenology was used to explore participants' experiences of litigation. Semi-structured interviews were undertaken to reveal meaning through a process of understanding and interpretation, thereby addressing the research aim [16].

Participants were purposively recruited through professional networks between January-July 2021. Snowball sampling was used to recruit further participants [17]. Recruitment continued until data saturation was achieved [17]. Participants were eligible if they were a qualified physiotherapist who had been involved in CES litigation in the UK. However, to gain a holistic understanding of the phenomenon of interest, previous research indicated the need to understand the experience of UK physiotherapists at risk of CES litigation i.e., those working in advanced roles [7, 8]. Furthermore, for context and to aid understanding of the issue, we also needed to speak to a range of stakeholders, who included:

i. Other HCPs with experience of litigation

ii. Legal people involved in the litigation process

iii. Representatives of HCP professional bodies

iv. Clinical leads

In-depth one to one semi-structured interviews were undertaken using Microsoft Teams or via telephone with a member of the research team who was experienced in qualitative interviewing (GY, SG, RL), two of whom were physiotherapists, the third was a research assistant. To ensure interviews were conducted consistently between researchers, two interviewers were normally present in each interview, with one conducting the interview and a second interviewer listening and making field notes (on mute, with their camera turned off). In the initial stages of data generation, due to the volume of interviews, additional support was provided by a research associate experienced in qualitative interviewing. Participants were unknown to the interviewers or known in a professional capacity as physiotherapists. Only the research team interviewers had access to information that could identify individual participants during or after data collection. All interviewers listened to the audio-recordings, read the transcripts, and met regularly throughout data generation to reflexively discuss the interview. An interview topic guide (S1 File) was used to guide the interview to provide further consistency and to direct the interview by providing a priori topics to be explored in relation to the aim of the study, whilst allowing sufficient flexibility to explore new and unanticipated issues. The interview guide was developed from a review of the literature [7, 8] and was refined following

piloting and critical discussion with the research team and a patient and public involvement group (PPI). The PPI group included three people living with CES and a physiotherapist who had been involved in a CES litigation case. Interviews lasted between 60 and 90 min and were digitally audio-recorded. Interviews were transcribed verbatim by a professional transcriber to ensure accuracy of the transcription.

Data analysis was undertaken using Braun and Clarke's six phase framework for thematic analysis using an iterative and inductive approach to transform the data [18]. This involved the team (GY, SG, RL) independently listening to the audio-recordings and reading the transcripts. Open coding was used to code the data. This involved reading each transcript line by line to identify salient text related to the research question. Data derived codes were used to summarise the data. Codes were recorded using Nvivo software (version 20.6.1). Patterns across the dataset were then iteratively explored, and theoretically cognate codes were grouped to create sub-themes. Conceptually similar sub-themes were grouped together into emergent themes independently by the research team. The themes were then discussed, critically reviewed, and refined by the research team (GY, SG, RL, EW, JS) to create the final themes. There was concordance in the themes identified by the team and any refinement of themes related to semantics. Preliminary analysis was undertaken after each interview, which iteratively fed into subsequent data generation. Reflexive field notes of the interviewer's role and how this may have impacted on the data generated were made and fed into the analysis of the findings. Member checking was used to validate the findings and ensure the participants' experience of CES litigation were represented and not biased by the researchers' own thoughts and knowledge [15]. Participants confirmed the findings reflected their experiences.

Results

Forty participants were interviewed. Seventeen participants were physiotherapists who had experience of being involved in a CES litigation case, some of whom were involved in more than one case (Table 1). Eleven participants were physiotherapists at risk of being involved in litigation due to their role involving them being the first point of contact for patients with CES. Twelve participants were stakeholders. These included other HCP with experience of litigation, legal stakeholders who were involved in the litigation process, representatives of HCP professional bodies and clinical leads.

Themes

Analysis of the data confirmed data saturation had been achieved. Four themes were identified from the data: 'Litigation effects', 'It feels personal', 'Learning from litigation' and 'Support and training' each of which were associated with several sub-themes (Fig 1). Anonymised verbatim quotes have been included to support each theme.

Theme 1: 'Litigation effects'. **'Litigation effects'** describes the direct effects of litigation on a physiotherapists' health and wellbeing and encompasses the impact on their clinical practice.

Litigation effects: Health and wellbeing. Physiotherapists described the impact on their mental and physical health over the period of their litigation case, which commonly lasted around 2 years. Across the physiotherapists, this included stress, anxiety, insomnia, nausea, high blood pressure, gastric reflux, and a loss of appetite.

> *"I felt sick, I couldn't sleep, . . . I had to go on high blood pressure tablets for some time. I got gastric reflux, which was really bad, it affected my appetite."* (P1, physiotherapist with experience)

Table 1. Participant demographic data.

	Physiotherapist with experience of CES litigation (n = 17)		Physiotherapist at risk of CES litigation (n = 11)		Stakeholders (n = 12)
Number of claims	Claims per participant 1 case 2 cases 3 cases 4 cases	Mean n = 1.5 (SD 0.9) n = 12 n = 2 n = 2 n = 1	NA		***Other HCPs with experience of litigation*** Midwives, medics ***Legal*** Legal advisors from legal firms; MLACP; expert witness; NHS claims co-ordinators, NHS Resolution ***Healthcare professional bodies*** National healthcare improvement advisors; CSP representatives; national back pain clinical network representatives, CES national pathway representatives ***Clinical leads*** NHS physio managers; Clinical and operational leads; Clinical directors non-NHS, Clinical directors AHP NHS
Employment category	NHS SE Non-NHS	n = 16 n = 5 n = 4	NHS SE Non-NHS	n = 8 n = 5 n = 0	
Physiotherapy role	Consultant Clinical lead FCP APP AFC Band 7 SE /non-NHS	n = 5 n = 2 n = 1 n = 8 n = 1 n = 2	Consultant Clinical lead FCP APP SE /non-NHS	n = 5 n = 2 n = 4 n = 2 n = 2	
Years qualified	Mean = 24 years (SD 7.83)		Mean = 25 years (SD 7.69)		
Years in MSK practice	Mean = 20 years (SD 4.96)		Mean = 23 years (SD 8.22); range		
CES training completed	Extensive MSc Units CPD	n = 5 n = 2 n = 9	Extensive MSc Units CPD	n = 2 n = 3 n = 6	
Litigation training completed	CPD BSc None	n = 6 n = 1 n = 9	CPD None	n = 7 n = 4	

MSK = musculoskeletal, SE = self-employed, FCP = first contact practitioner, APP = advanced practice physiotherapist, CPD = continuing professional development, AFC = agenda for change, CSP = Chartered Society of Physiotherapy, MLACP = Medico Legal Association of Chartered Physiotherapists; AHP = Allied Health Professionals

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"I lost sleep over it. I was just distraught really to be honest. It was really harrowing . . . for two years. . . . Just the anxiety of remembering it, just awful". (P2, physiotherapist with experience)

This led to some 'taking time off work' due to sickness, 'turning to alcohol' (p1), and changing their role or retiring.

"Within six months, I'd wanted to go part time, and if they weren't going to give me part time, I don't know what I would've done. There's a possibility that I would have had to quit" (P33, physiotherapist with experience)

Litigation effects: Clinical practice implications

Participants told how being involved in litigation had affected their professional confidence.

"I just didn't know if I was really any good anymore. It had a huge impact on my self-confidence". (P2, physiotherapist with experience)

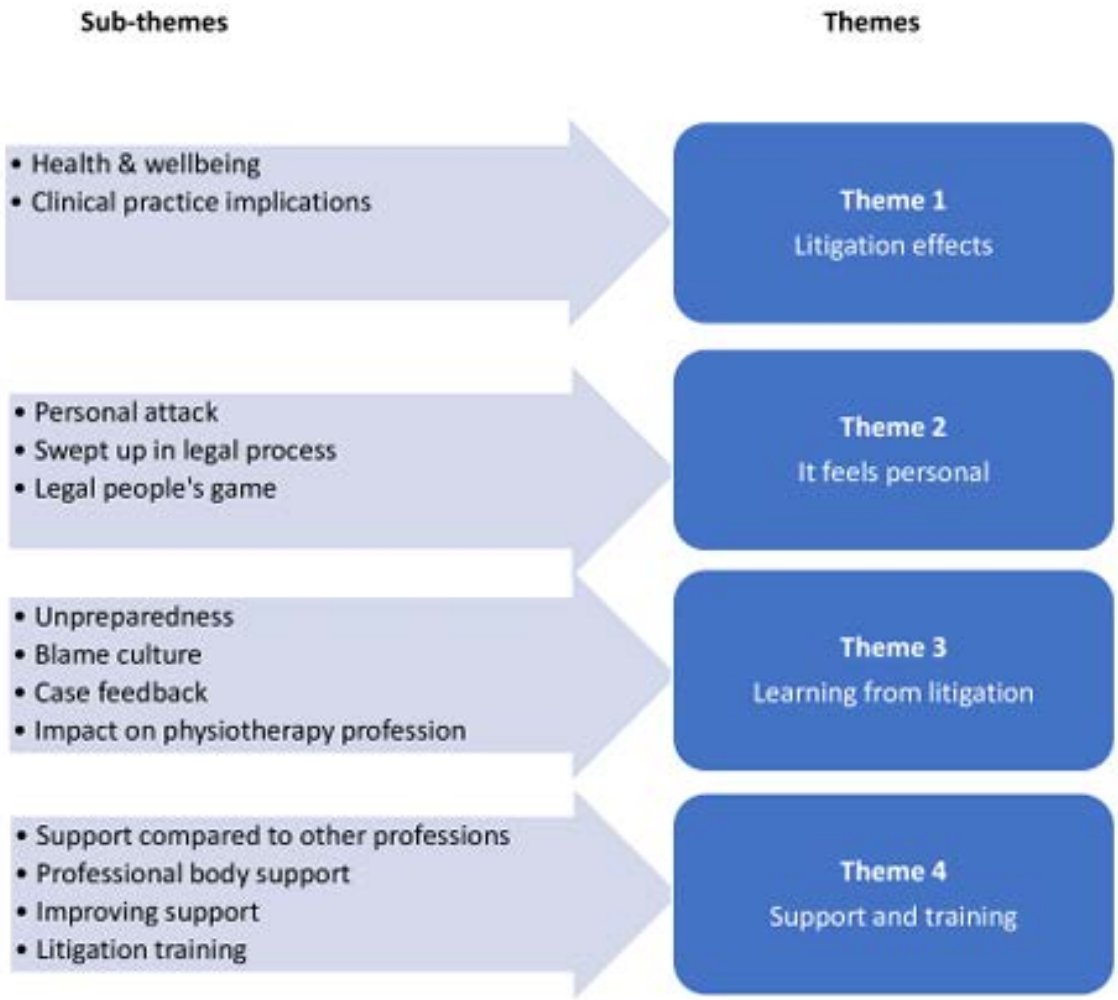

Fig 1. Themes and sub-themes.

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Those with an experience or an awareness of litigation described the impact of that on the way they managed patients, with many feeling the need to practice in a defensive manner to avoid being cited in a legal claim.

> *"It's about, "How do we not get sued?" rather than, "Let's treat the patient using the very best of me and my knowledge and skills, and the very best evidence". . . . We shouldn't really be thinking, "Okay, let's not get sued" first–which is a crying shame."* (P3, physiotherapist at risk)

As a result of litigation, some physiotherapists discussed lowering their thresholds for sending patients for further investigations due to the worry of missing a serious pathology.

> *"She said, "Well how has it changed your practice?" I said, "I scan everybody." My threshold to scan was so low because I was so worried about getting this wrong."* (P2, physiotherapist with experience)

Others talked about changes made to their documentation since being involved in a CES claim:

"I think it has changed my practice. I am a lot more aware of how I'm wording my notes and things like that, and the detail that I am going into with all the notes as well" (P15, physiotherapist with experience)

Even physiotherapists who did not have their own personal experience of litigation often expressed their awareness of it and described how it impacted their practice.

"I think I do over-assess, and I over-examine, and I over-document, and that puts on a lot of stress and anxiety [on me]." (P3, physiotherapist at risk)

Theme 2: It feels personal

'It feels personal' describes how most physiotherapists felt litigation was a personal attack on them and their ability to do their job and described feeling that the process was a personal criticism of their professional ability. Some described a perception of being 'swept up' in the legal process as one of several health professionals involved in the patient journey investigated *en masse* as part of the claim.

It feels personal: Personal attack

Several physiotherapists with experience of litigation described feeling like litigation was a personal attack on their personal integrity and their ability to do their job:

"I tried to do everything I could for this patient. I bent over backwards for this patient, and then suddenly I'm faced with this litigation. It feels very, very, very personal. It feels like this is a direct insult on my ability, on my integrity or my ability to do what I'm designed to do in terms of examining patients and dealing with patients. So it feels incredibly personal." (P2, physiotherapist with experience)

It feels personal: Swept up in legal process

Physiotherapists can be cited in a complex litigation case regardless of whether they perceive that have been negligent or not.

"We would obtain the medical records and then I would look at the medical records and I would do a chronology of care. So, we weren't just looking for necessarily where the enquirer thought things had gone wrong, we were looking where we thought things had gone wrong." (P5, stakeholder legal)

Physiotherapists who came to understand the litigation process due to their previous experience of being involved in a clinical negligence case, realised that litigation was not a personal attack on them. Instead, they realised that when a case is pursued by a claimant, every clinician in the pathway is investigated, making it feel less personal.

"I became more aware that it's a legal process where the whole pathway is looked at and everybody is swept into it." (P1, physiotherapist with experience)

It feels personal: 'Legal people's game'

Several participants described the legal process and how physiotherapists perceived that legal representatives did not understand the complexity of their job:

> *"The lawyers want black and white, and they think it's black and white because they don't understand it [CES]."* (P11, physiotherapist with experience)

> *"I think that it's very unusual that patients present with black-and-white symptoms. Patients–nine times out of ten–will have other co-morbidities or mental health issues, and lots of other things that add to the complexity and that adds to the uncertainty within my daily job."* (P3, physiotherapist at risk)

This perception of the complexity of patient care was supported by other HCP who had experience of litigation:

> *"This is what upsets me about the litigation, the legal teams—they just see it as so black and white. They don't understand. Unless you're that person, in that situation at that moment in time, you just can't understand what's going on in that moment or the emotions, the pressures, the responsibilities and the decision that will have been made at that time. There's never ever going to be any malice or anything like that. It's just so disheartening really."* (P4, stakeholder–HCP with litigation experience)

Physiotherapists also discussed experiences where solicitors described the legal process as sometimes being considered as a 'game' in the context of not taking it personally and reassuring them that if the claim was successful, it would be settled.

> *"[solicitor said] "Don't worry. We'll settle out of court.""* (P1, physiotherapist with experience)

> *"He [solicitor] was going, "You might as well stop crying. This is a game to me, you know." And he was lovely."* (P34, physiotherapist with experience)

Theme 3: Learning from litigation

'**Learning from litigation**' –In this theme most physiotherapists highlighted a reticence to talk about litigation and to share findings due to perceptions of a 'blame culture' and perceived stigma associated with the claim. Participants perceived this was also impaired by a lack of means by which to share learning more widely. This theme also describes the lack of knowledge around the process and outcome of litigation.

Learning from litigation: Unpreparedness

Physiotherapists' voiced feelings of their initial reaction to a litigation claim and throughout the course of the case. Physiotherapists unanimously described feeling sheer shock and panic, worrying about the consequences the claim may have for their career and ultimately their ability to provide for their family.

> *"I think because I had not had any experience, or training about it, it's quite a scary situation. You're worrying about, 'Am I going to get struck off? What have I done? What are the*

implications for it?' So, yes, there is a large fear there really." (P15, physiotherapist with experience)

It was highlighted by most physiotherapists that the lack of knowledge about the process of litigation and the possible outcomes exacerbated the stress and anxiety they experienced.

"It was very stressful because of the wording that was used, that you have been negligent, and those are very strong words. So yes, I mean a whole lot of emotions—the fear, the worry, the doubt, the unknown, I think. A big thing is the unknown, you don't know what I need to do next and what's going to happen, what's likely to happen but yes, it was very, very stressful, a lot of anxiety." (P20, physiotherapist with experience)

Physiotherapists also expressed their confusion of where they should go for support with the litigation process and who they were allowed to discuss their case with, which added to their stress.

"So in that minute of opening the letter when your hands are shaking, what do you do? Can you speak to people about it or is this confidential? (P1, physiotherapist with experience)

"That just added to the stress, I think if it had been made clear to me that as an employee of the Trust {hospital}, the Trust will cover you. I think if that had been made clear, that would have helped but that was never made clear to me and I felt, probably angry towards the end, that I hadn't had that information because that would have made a huge difference". (P20, physiotherapist with experience)

Learning from litigation: Blame culture

Physiotherapists talked about the stigma surrounding litigation, with many feeling embarrassed, ashamed and even blamed in their workplace for being cited in a claim.

"It was embarrassing and painful and all those things, really." (P11, physiotherapist with experience)

Some explained the importance of having a no-blame culture to facilitate feedback and learning from the claim. Adding that feedback should include both positive and negative experiences to be effective.

"We have a no-blame culture in work. . . . We look at the whole system. We look at how we can improve things. And we want staff to be able to feel that we can share patients that have gone well and not gone well. And not feel like people are going to think that they're a rubbish physio because, you know, it's not the case." (P38, physiotherapist with experience)

Learning from litigation: Case feedback

Physiotherapists talked about what they learnt through being involved in litigation and how they can use their experiences to make positive changes going forward.

"A positive impact was that I fed back to the department about the case and what we had learnt from the case, and how we may be able to change sort of future practice, and I think we got a lot tighter with the documentation as a result." (P15, physiotherapist with experience)

Some legal stakeholders reflected on how feedback from litigation cases can help to make improvements in care.

"[We undertake] what's known as a root cause analysis. So once the claim has finished, the outcomes are sent back to the service, so there'll be learning from it. So, the managers can have a look and go, "Oh, there is a gap. We need to do something about that," so that they can stop it from happening again." (P21, stakeholder legal)

However, many organisations were reticent to talk about litigation or share experiences because of the stigma attached to litigation.

"There are [organisations] just very much fearful that they don't want to share things because it looks bad on them" (P28, stakeholder legal)

Learning from litigation: Impact on physiotherapy profession

Many physiotherapists and other stakeholders perceived CES litigation to be increasing within healthcare, with some participants describing it as the 'new whiplash', which historically has been highly litigious.

"It's like the new whiplash." (P40, physiotherapist with experience)

Physiotherapists added that they think that litigation will continue to increase due to advanced roles giving physiotherapists more autonomy and responsibility in the context of patients with complex, uncertain clinical presentations.

I think it's probably going to get more and more common given that physios are seeing more of this type of patient because the doctors are seeing less of it." (P40, physiotherapist with experience)

The increasing number of high value litigation claims such as CES claims was reported to have affected insurance premiums. A legal stakeholder suggested that CES litigation may pose a risk against physiotherapists' public liability insurance (PLI), as a single claim in the future could exceed their current cover. They added that physiotherapists could see increases on their insurance premiums as a result.

"CES is a risk against the PLI because a single claim could, in the future, exceed the current cover of 7.5 million. And that could have a negative impact on [the insurance] premium". (P39, stakeholder professional body)

Theme 4: Support and training

'**Support and training**' –In this theme physiotherapists described the support needed for those going through litigation, including emotional support, and having a safe place to talk about any worries relating to the claim. It also explores training that may be needed in relation to litigation during the physiotherapists' career.

Support and training: Compared to other health professions

Many physiotherapists reflected on the experiences of their colleagues of other professions such as GPs and surgeons, in relation to litigation. They often described how people from

these professions appeared less worried when involved in a litigation claim and did not seem to take it as personally as physiotherapists. Most physiotherapists perceived these differences were because other professions had more awareness of litigation due to having clinical negligence training within their undergraduate training. As such, other HCP felt more prepared if they were cited in a clinical negligence claim.

"When I spoke to the orthopaedic surgeon, he wasn't worried at all. Part of that is because they do have that training and they do understand litigation. They see it as not a personal thing. They see it as just part of their job, this is what happens because of where we are, what we're doing." (P2, physiotherapist with experience)

Physiotherapists also described how other HCP seemed more aware of the legal processes and of the support they can receive from their employer or professional organisations and insurers, such as the General Medical Council (GMC) and Medical Defence Union (MDU).

"With GPs, it's immediately [the support], "Don't worry, because everything is fine, we are going to sort all this out, and this is how we are going to do it." (P3, physiotherapist at risk)

Support and training: Professional body support

Many physiotherapists referred to feeling there was a of lack of support from the UK professional body for physiotherapists, the Chartered Society of Physiotherapy (CSP). For most physiotherapists involved in litigation in this study, their first point of contact for support was the professional body. However, it appeared that most were unaware that whilst the professional body provide support for physiotherapists who are self-employed, it is the physiotherapist's employer who supports an employed physiotherapist. Due to this lack of awareness of the different roles in providing support to the employed and self-employed physiotherapist, physiotherapists often felt dissatisfied by the support they received from the professional body.

"I have known colleagues who have gone to the Chartered Society [CSP, professional body], asking for support and help about different aspects [of litigation], and they have just not wanted to know." (P3, physiotherapist at risk)

On occasion, due to a lack of awareness of the professional body's role in litigation, some employed physiotherapists appointed a solicitor at their own cost, to engage with the professional body to try to get support.

"So, this guy was writing official solicitor letters to the CSP, and I was getting these bills for thousands of pounds for an hour's work." (P20, physiotherapist with experience)

However, feedback from self-employed physiotherapists who were supported by the professional body, had been found to be positive.

"My understanding from the feedback [from self-employed physiotherapists] is that the support they receive is great . . . the service is there to support an [self-employed] individual who is normally, very shocked, really concerned and, often really panicking about what to do or what not to do." (P39, stakeholder professional body)

"I contacted the CSP and said, "What do I do?" And they said, "Well, we'll put you on to the legal team" . . . the solicitor that I dealt with, she was really good." (P35, physiotherapist at risk)

Support and training: Improving support

Going forward, physiotherapists discussed how they think improvements can be made to the support they received. Some mentioned a more individualised approach in their workplace, ensuring that physiotherapists feel they work in an environment where they feel supported and able to talk about their worries about litigation.

> *"I mean, number one, you obviously, you need people to feel that they're in a no-blame culture, don't you? You need to feel that people are, feel safe within their employment."* (P31, physiotherapist at risk)

Some talked about using training to make litigation processes and support more transparent and known.

> *"I think that package of support should then lead to you knowing who to go and speak to. I think you need to have organisational transparency."* (P6, physiotherapist with experience)

Others discussed how more support from their professional body could have been helpful for them.

> *"I guess I would have liked my professional body to be more supportive. I think that would have been really helpful. I guess a more formal process of support."* (P2, physiotherapist with experience)

Many also talked about the need for emotional support such as debriefing, networking and buddy systems.

> *"I think a network, a confidence that you can just talk through—that [someone's] got your back, a shoulder to cry on, somebody that you can really trust, and you can have a discussion with about it, I think that's really key."* (P8, physiotherapist with experience)

There were similar discussions around implementing support helplines.

> *"I think you should have a designated person within the CSP that has some counselling background; even has some legal understanding—maybe a helpline available."* (P35, physiotherapist at risk)

Support and training: Litigation training

Most physiotherapists believed it would be beneficial for physiotherapists to be given some basic litigation training and this could be introduced at undergraduate/pre-registration level.

> *We need training on what we can and cannot say and how we handle ourselves in these situations."* (P29, physiotherapist at risk)
>
> *"I think we need to link in with students and with institutes of higher education to prepare physios for the climate."* (P1, physiotherapist with experience)

However, some disagreed, saying that this may scare the physiotherapists and they may change career.

"You're going to frighten people and I know that you've got to be aware of these things but are we then creating more fear in the junior staff who are already quite fearful." (P9, physiotherapist at risk)

Nonetheless, most agreed that training would be beneficial for graduates to be prepared.

"I think it probably would be a scary thing at undergraduate level. I think it would probably be a lot scarier if you're going into it fresh when there's a case involving you. I know I would much rather be taught how to document things properly and have that awareness at an undergraduate level in that safe environment, rather than when the horse has already bolted, and you're being cited in a claim against you. I think that's going to be a lot scarier." (P15, physiotherapist with experience)

It was suggested that further litigation training could be implemented at postgraduate level or at different stages along their professional career by their employer.

"I think that the postgrad [litigation] training needs to be there. I think it will come in the advanced practice work that's going on. . . . I think it's at different levels, different stages along the professional journey really." (P1, physiotherapist with experience)

Many talked about the potential role for the professional body for physiotherapy (CSP) to be involved in the training.

"I think the CSP could have some sort of role, like, an e-learning package" (P16, physiotherapist at risk)

Discussion

This study explored the lived experience of clinical negligence litigation in UK physiotherapy. Four key themes were identified: 'Litigation effects', 'It's feels personal', 'Learning from litigation' and 'Support and training.'

This study found that litigation can have profound effects on physiotherapists' health and wellbeing. The impact seen in this study was similar to those seen in other health professions who had been involved in litigation including, stress, anxiety, high blood pressure and insomnia [19]. The term 'second victim' acknowledges the significant impact litigation can have on the HCP, both professionally and personally, including anxiety, distress, acute stress disorder, suicidal ideation, and reduced professional confidence [19, 20]. In turn, this can lead to sickness absence, burnout, and physiotherapists leaving the profession as found in this study [20]. This has serious implications for the wellbeing of the profession and the retention of the workforce. The impact of litigation on physiotherapists' clinical practice were also comparable to those seen in other health professions with defensive medicine being practiced, whereby interventions were being undertaken not wholly based on best practice, but instead to guard the clinician against future litigation claims [10].

The findings of this study show that physiotherapists often felt litigation personally and as a personal attack on their competence and ability to do their job. This finding is consistent with that found in health professions [19]. However, for some who had previous experience of being involved in a clinical negligence case, through this experience they realised that the whole patient pathway was investigated, which helped them realise it was not personal. Therefore, if physiotherapists had more knowledge of the legal process at the outset, this could help

reduce the feelings of litigation being a personal attack on them and may mitigate some of the negative effects on their health and wellbeing.

Throughout litigation it was evident that there were opportunities for learning that could be used to make positive changes going forward. The current findings show that physiotherapists felt unprepared for litigation and often did not understand the implications of litigation and where to go for support. These findings add to previous research which found that there was a lack of clear, easily accessible information describing the process and support available for UK physiotherapists in receipt of a legal claim [8]. Furthermore, findings from the current study highlight a lack of sharing of information in relation to legal claims. This was often linked with a reticence to share experiences due to the stigma associated with litigation and the feeling of a blame culture within the profession. This study found that litigation often made physiotherapists feel embarrassed and blamed in the workplace. A blame culture was also similarly described across the midwifery and medical professions [10, 13, 19]. Our findings and those of others [10, 21], suggest that reducing blame across the profession would lead to more openness and discussion around litigation in the workplace, which is needed to allow learning from litigation to occur. It is recommended that litigation cases are shared in the workplace so that lessons can be learned, and mistakes are not repeated [14]. NHS Resolution and the Getting It Right First Time (GIRFT) report have highlighted the importance that learning from litigation claims can have on improving patient safety [14].

This study found that when physiotherapists were notified that they were involved in a claim, they generally contacted their professional body for support and information on the legal process. However, whilst self-employed physiotherapists receive legal support for clinical negligence from the professional body, employed physiotherapists are supported through the litigation process by their employer via vicarious liability [8]. Our findings suggest that when employed physiotherapists contacted the professional body, this was not clearly explained to them, which resulted in some feeling unsupported by their professional body. In contrast, feedback on the support provided by the professional body to self-employed physiotherapists was positive. Therefore, whilst the professional body appear to be providing a good level of support to self-employed physiotherapists, more information needs to be provided by them to employed physiotherapists regarding where they should seek litigation support. Additionally, emotional support in the form of a buddy system, led and co-ordinated by the professional body, could be instigated. In recognition of the impact that litigation can have on the HCP involved, a National Institute for Health and Care Research funded UK website has been developed as a resource and to provide support [9]. It signposts to sources of support available, including profession specific support, however, notable by is absence is physiotherapy.

Including clinical negligence training in the undergraduate/pre-registration curriculum could help physiotherapists feel more prepared in the event of a claim. Although in our study there was some debate as to when the most appropriate time was to implement clinical negligence training, the consensus was that this should be included in the undergraduate physiotherapy curriculum and this learning should be built upon at throughout the physiotherapists career. This is supported by work recently undertaken by the Academy of Medical Royal Colleges [22] who have developed a National Patient Safety syllabus to improve patient safety in the NHS that could be incorporated into undergraduate and postgraduate healthcare education and continuing professional development. By improving clinical negligence training and support for physiotherapists, this may help reduce the worry and uncertainty for those physiotherapists who do become involved in a claim, as they should have the knowledge of where to go for support and what is involved in a claims process. This knowledge should also ensure physiotherapists do not feel litigation is a personal attack, as they would have better knowledge of the claims process. Furthermore, improving support in the workplace and sharing

experiences could help physiotherapists talk more openly about litigation, reduce the stigma, and to learn from litigation. This will not only benefit physiotherapists, ultimately it will benefit patients by improving patient safety.

Strengths and limitations

This qualitative study recruited a large number of participants, including physiotherapists with CES litigation experience, those at risk of litigation and several stakeholders. This provided a rich and deep understanding of the phenomenon of interest. Including participants from a range of backgrounds, allowed us to generate data from different viewpoints to create a holistic understanding of the litigation experience. However, whilst the study included physiotherapists and stakeholders who felt able to discuss their experiences around litigation, there may have been others who did not feel comfortable to do this, including those who may have left the profession as a result of their experience. Therefore, this research may not have captured the whole range of physiotherapists' experiences of litigation which is a limitation of the study.

Conclusion

This is the first study to investigate the lived experiences of litigation in UK physiotherapists. This study found that litigation impacted physiotherapists' physical and mental wellbeing and may lead them to practice more defensively or leave the profession. Physiotherapists felt litigation was a personal attack on them and their ability to do their job. Perceptions of a 'blame culture' and perceived stigma associated with the claim, led to a lack of sharing, and learning in relation to litigation. Physiotherapists were unsure who they should contact when they found out they were cited in a claim or the support available to them. The need for emotional support for those going through a legal claim was underlined. The need for training was highlighted to understand the process of litigation and range of potential outcomes, which should be introduced during undergraduate training and built on during the physiotherapists career.

Recommendations

To help support UK physiotherapists involved in litigation, it is recommended that:

- There should be a single repository of information describing who physiotherapists should contact if they become involved in litigation. Better signposting to profession specific support is needed.
- Emotional support in the form of a helpline and a buddy system should be instigated, which could be led and co-ordinated by the physiotherapy professional body.
- Training on clinical negligence should be introduced at undergraduate/pre-registration level for physiotherapists. Litigation training should then be implemented in more detail throughout a physiotherapists career.
- Feedback from litigation cases should be shared both locally and nationally for learning from litigation to occur and to reduce the blame culture and stigma associated with litigation.

Supporting information

S1 Checklist. COREQ checklist.
(PDF)

S1 File. Interview topic guide.
(DOCX)

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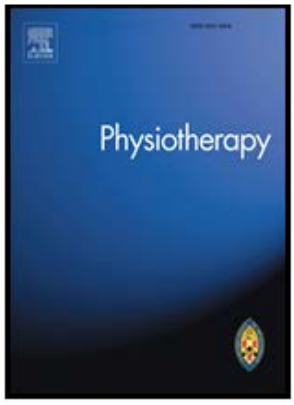
Appendix 15. – Survey paper

Journal Pre-proof

Clinical negligence and physiotherapy: UK survey of physiotherapists' experiences of litigation

Gillian Yeowell, Rachel Leech, Susan Greenhalgh, Emma Willis, James Selfe



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Clinical negligence and physiotherapy: UK survey of physiotherapists' experiences of litigation

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Word count: 3360

Summary

Aim: To investigate the extent and impact of litigation on the UK physiotherapy profession.

Design: An online cross-sectional questionnaire survey design was used. The survey was open to all qualified physiotherapists who have practiced in the UK, from any speciality, of any grade and from any setting including NHS, non-NHS, and private practice.

Results: 688 respondents completed the survey (96% CI). All UK nations were represented. 73% were female, 44% were qualified >20 Years. Most worked in the NHS (74%) and worked in a neuromusculoskeletal setting (62%). 10% of respondents had been involved in litigation. 128 claims were reported with some respondents being involved in more than 1 case. Litigation was a highly stressful experience for those who experienced it and was a source of concern for many others. The personal impact was stress (76%) and worry and anxiety (67%). The most common professional impact was defensive practice (68%). Most respondents incorrectly identified who should provide their legal support. 46% were not satisfied with the support received. Most (77%) reported that litigation training should be included in pre-registration, as well as postgraduate (68%) programs.

Conclusion: This is the first UK survey that has investigated the experiences of litigation on the UK physiotherapy profession. Ten percent of physiotherapists in our survey had been involved in litigation. Litigation impacted physiotherapists' physical and mental wellbeing and their clinical practice. Improved support, both emotional and legal is required. Clinical negligence training should be included in pre-registration and postgraduate programs.

Keywords

Litigation, clinical negligence, physiotherapy, survey

Contribution of the Paper

- This is the first national survey to investigate the extent of litigation in UK physiotherapy, across all employment sectors, specialities and grades.
- This is the first national survey to explore the impact of litigation on the UK physiotherapy profession, including physiotherapists who had been involved in litigation and those who had not.
- Recommendations have been made to improve the overall experience of physiotherapists involved in litigation with emphasis on their health and wellbeing.

Introduction

Litigation in healthcare in the United Kingdom (UK) is increasing, with an 8% increase in claims between 2012-2018 [1]. To cover the cost of compensation claims, National Health Service (NHS) trusts in England pay into the Clinical Negligence Scheme for Trusts, which costs some NHS trusts over 40 million pounds annually, representing 2% of the NHS budget [2]. However, there is a dearth of literature that has investigated litigation in UK physiotherapy. Physiotherapists are increasingly involved in litigation cases, which may be related to their changing role. With more physiotherapists undertaking advanced roles, they are increasingly likely to be the first point of contact for complex patients who have not been screened by a medic and as such, are at an increased risk of being involved in litigation [3]. The extent of Cauda Equina Syndrome (CES) claims involving UK physiotherapists has been previously investigated [3]. It was found that of the 2496 CES cases reported between 2012-2020, only 51 were attributed to physiotherapists, however, this is now thought to be an underestimation due to deficiencies in reporting methods [3]. Physiotherapists involvement in CES litigation has been found to be mainly due to delays in specialist centre referrals, recognising symptoms early, responding to Red Flag symptoms, and delays in scanning [4]. CES litigation has been reported to cost the NHS in England in excess of £186 million over a 10-year period [4]. Previous research has found a lack of information regarding the legal process and support available for physiotherapists involved in a clinical negligence case [5]. In other healthcare professions (HCP) such as midwifery, being involved in litigation has been reported to cause physical and mental ill-health [6]. The term 'second victim' has been coined to capture the trauma the HCP may experience from being involved in a patient safety incident [7]. The Patient Safety Incident Response Framework [8] recognises that for learning to occur to improve patient outcomes following a patient safety incident, systems and processes that support those involved, including the HCP, are required.

However, it is unclear how many claims involve physiotherapists, what guidance and processes are in place to support those involved in a clinical negligence case or the impact being involved in litigation can have. This is the first UK-wide national survey to explore the extent and impact of litigation on the UK physiotherapy profession. The objectives were:

1. To investigate the extent of litigation cases amongst physiotherapists
2. To understand the experiences and opinions of physiotherapists in relation to litigation
3. To understand the support needs of physiotherapists
4. To explore the potential training needs for physiotherapists in relation to litigation

Methods

Design

A cross-sectional online survey design hosted by Online Surveys was used to investigate the objectives (https://www.onlinesurveys.ac.uk). The checklist for reporting of survey studies (CROSS) was used in the reporting of the study [9].

Sample

The population of interest was all qualified physiotherapists who have practiced physiotherapy in the UK, including those currently practising and those who have retired. The number of physiotherapists in the UK in 2021 was approximately 78,000 [10]. As there was no single list of contact information for this population, to facilitate construction of a sampling frame, sampling was conducted through a variety of self-selecting snowball sampling methods i.e., twitter posts, personal and professional networks, conferences, and networking events. The minimum sample size (N=383) was calculated a-priori using an

online sample size calculator [11], assuming a normal distribution, a 5% margin of error and confidence interval of 95% [12].

Survey tool

The survey was anonymous, with no internet protocol addresses collected. Survey questions were developed based on a review of the literature, Patient and Public Involvement and the expertise of research team [3,5] (supplementary file 1). The survey was piloted by physiotherapists from various backgrounds (an NHS employed physiotherapist, a self-employed physiotherapist, a non-clinical physiotherapist, and a retired physiotherapist) to ensure questions were applicable, understandable and that the survey skip logic worked correctly and to estimate the time taken to complete. Minor changes to the survey were made following piloting, including grammatical edits and one mechanical adjustment to the number of options participants were able to choose. The time taken to complete the survey was between 5-10 minutes. The survey was live for 3 months, opening in November 2021 and closing January 2022.

Analysis

Descriptive analysis was undertaken on the data. There were no missing data as all questions were compulsory to answer and survey responses were only collected once the participant clicked the 'finish' button at the end of the survey.

Ethics

Ethical approval was obtained from [xxx] Research and Ethics Governance Committee, UK (Ref: 18122).

Results

A total of 688 respondents completed the survey (96% confidence interval, 4% margin of error). Percentage totals may vary as respondents could tick more than one response for some questions.

Demographic data

Of the 688 responses, 73% were female (n=503), 44% were qualified >20 Years (n=306). Most worked in the NHS (74%, n=507), and 62% worked in musculoskeletal (MSK) practice (n=408) (Table 1).

Table 1 – around here

Most respondents were from England (76%), 12% were from Wales, 7% from Scotland and 5% from Northern Ireland (Figure 1).

Figure 1 – around here

Extent of litigation (objective 1)

Ten percent (N=72) of respondents had been cited in a litigation case. Most respondents who had been involved in a claim worked in England (N=53), then Scotland (N=8), followed by Northern Ireland (N=6) and Wales (N=5).

There were 128 claims reported, indicating some had been involved in more than 1 case. Most had been involved in one claim (75%, N=54), 17% (N=12) had been involved in 2-3 cases. Eight percent (N=6) had been involved in ≥4 claims.

The job role at time of claim showed that 29% (N=21) were private practitioners, 21% (N=15) were junior physiotherapists, and 21% (N=15) were an advanced practice physiotherapist (Figure 2).

Figure 2 – around here

Claims were mostly settled out of court (38%, N=49), 24% (N=31) of claims were dropped, 13% (N=16) went to court proceedings. However, 20% (N=25) of physiotherapists were not informed of the outcome of the claim.

The category of health condition the claim related to was:

- 74% (N=53) Neuromusculoskeletal
- 6% (N=4) Neurology
- 4% (N=3) Paediatrics
- 19% (N=14) Other

Within the neuromusculoskeletal category, the most common claim was CES:

- Cauda Equina Syndrome (23%, N=12)
- Undiagnosed Fracture (11%, N=6)
- Manual therapy / manipulation (9%, N=5)
- Prolapsed discs (8%, N=4)

Further claims in this category related to burns (4%, N=2), Achilles-tendon ruptures (4%, N=2), osteosarcomas (4%, N=2), spinal infection (2%, N=1), and acupuncture (2%, N=1).

Fifty one percent (N=27) of respondents selected 'other' within the neuromusculoskeletal category.

Experience of litigation (objective 2)

Sixty four percent (N=46) of respondents agreed or strongly agreed that being involved in litigation impacted them personally (Table 2). This included: Stress (76%, N=55); Worry & Anxiety (67%, N=48); Low mood / depression (33%, N=24); Feeling overwhelmed (28%, N=20); Sleep problems or insomnia (28%, N=20); Struggling to make decisions (24%, N=17).

Table 2 – around here

Additionally, 50% (N=36) of respondents indicated being involved in litigation impacted them professionally (Table 2). The changes they made professionally because of being involved in a claim were: Defensive practice (68%, N=49); Changed employer (7%, N=5); Reduced working hours (6%, N=4); Additional insurance cover (6%, N=4); Changed career (4%, N=3); None (22%, N=16).

Respondents who had not been involved in a claim reported how awareness of potential litigation affected them personally (Table 3). Whilst 48% (N=277) stated it had no effect, 42% said they felt stressed, with 37% responding they felt worried and anxious. They were then asked how awareness of potential litigation affected them professionally, 69% (N=399) responded they practiced defensively (Table 3).

Table 3 – around here

Litigation Support (objective 3)

The majority (70%, N=431) of respondents who had not been involved in a litigation case said they would know where to go for support with the legal process if they found out they were involved in litigation. Most physiotherapists (57%, N=247) said they would contact the Chartered Society of Physiotherapy (CSP) for initial support, of these 74% (N=507) were employed. Thirty-nine percent (N=168) said they would contact their employer, 2% (N=7) said they would contact the Health and Care Professions Council (HCPC) or their own solicitor (2%, N=6).

For emotional support, respondents said they would turn to their family and friends (78%, N=479), their line manager (66%, N=408), followed by peer support (60%, N=368), the CSP (39%, N=240) and the HCPC (10%, N= 64).

Based on the statement *'The level of support with the legal process I received was satisfactory'*, 46% (N=33) of respondents involved in a litigation case disagreed or strongly disagreed with this statement (Table 4). The majority of physiotherapist's agreed or strongly agreed (69%, N=50) that having a debrief with an independent professional to discuss the case confidentially would be helpful (Table 4).

Table 4 – around here

Training needs (objective 4)

All respondents (with and without litigation experience), answered questions relating to training. Most (91%, N=626) said it would be useful to have more resources available for

support with the litigation process. Most preferred the resource to be online support information (91%, N=624), followed by information over the phone (30%, N=203), with 13% indicating information by mail/post would be their preference. Most indicated resources should be available on the CSP website (90%, N=617), their employers' website (46%, N=319), and Frontline magazine (monthly magazine for physiotherapists published by the CSP) 21% (N=143). Other places to access resources included NHS Resolution website 12% (N=83), Physiopedia (an online evidence-based rehabilitation knowledge resource) 10% (N=67), with 2% (N=15) indicating that no further resources were required.

Regarding litigation training for physiotherapists, the majority said that training should be mandatory (78%, N=540) and should be available at both undergraduate/pre-registration (77%, N=529) and postgraduate level (68%, N=470), with 4% (N=28) indicating there should be no training. Most thought the CSP should be responsible for overseeing the training as a condition of membership (58%, N=397), 49% (N=337) felt it should be their employer as a condition of employment, and 41% (N=285) felt the HCPC should oversee this as a condition of registration. Fifteen percent (N=101) felt that litigation training should not be mandatory.

Discussion

Extent of litigation

This study found that 10% of respondents had been involved in a litigation case, with a quarter being cited in more than one case. Previous literature highlights physiotherapists working in advanced practice roles, including advanced and first contact practitioners are at increased risk of litigation [13,14]. This was seen in this study, with 21% of respondents being an advanced practitioner at the time of the claim. However, it was surprising to find that the same percentage of junior physiotherapists were also involved in a claim. This finding has not been previously

reported and was unexpected. Whilst the reasons for a relatively large number of claims involving junior physiotherapists are not known, it could be postulated this may be related to many UK graduates working in the NHS at a time when it has undergone far-reaching reforms. It has been argued that these reforms have negatively affected NHS funding, leading to staff shortages with an associated increased work burden [15]. Furthermore, others have reported that organisational changes in the NHS have required junior staff to undertake tasks and activities that previously would have been undertaken by senior colleagues [16]. Clinical expertise develops through years of experience, with the newly qualified physiotherapist progressing through several stages from beginner to expert [17]. Thus, some junior physiotherapists may have experienced increases in caseloads, patient complexity and autonomous working that is incongruent to their stage of development and could have impacted their skill acquisition and competence [15,17,18]. However, further investigation is warranted.

This study also found that 29% of self-employed physiotherapists who responded were involved in litigation. Previous research has investigated the extent of CES claims against NHS-employed physiotherapists in England [19] and self-employed UK physiotherapists [20]. A small number of successful CES claims, irrespective of employment status were found, however, no direct comparison could be made due to limitations in data. As reported elsewhere [3,21], limitations in recording of claim data can negatively impact the exploration of patterns within the data that may highlight areas of concern. As such, more transparent recording of claim data is needed to enable patient safety concerns to be identified.

In this study, most claims were dropped or settled out of court, which mirrors what is seen in clinical negligence cases across all specialities in the NHS [22]. However, a fifth of physiotherapists from our sample who were involved in a claim were not informed of the

outcome of the claim. Not being informed of the outcome of the claim, could cause the physiotherapist involved undue stress and anxiety as they may believe the case is ongoing and would not have closure on the events relating to the claim. Importantly, failure to provide this information may result in a missed opportunity to learn from litigation. It has been found that learning from litigation is a key coping method, which allows the HCP to maintain their professional identity and enables them to move on from the claim [23].

Claims that participants were cited in were most frequently related to MSK conditions. Of these, CES was the most common. This is reflective of NHS claim data showing that CES is highly litigious with the NHS in England receiving 827 CES claims between 2008-2018 [4]. However, just over half of MSK claims in the current survey related to the category 'other'. As no open text facility was provided to record what this related to, it is unknown what category these MSK claims refer to. This result was surprising given that the options provided in the survey were informed by a contemporaneous scoping review [5], stakeholder consultation and feedback from the pilot study. As such, further research to investigate what the conditions within the 'other' category were, may be warranted.

Experiences of litigation

Respondents who had been involved in litigation revealed how it had impacted their physical and mental wellbeing, with the majority saying it caused them stress, worry and anxiety. This is supported by the findings of Yeowell et al. [24] in their qualitative study exploring UK physiotherapists' experience of being involved in CES litigation, with participants reporting, 'they felt sick', 'lost sleep over it' and describing the experience as 'harrowing'. Interestingly, these effects were mirrored by respondents in our survey who had an awareness of litigation but did not have their own experience. This highlights the far-reaching impact litigation appears to be having on physiotherapists. Similar findings in other HCPs, including midwives, medics and nurses have been reported, with litigation leading to feelings of distress and fear that can persist well beyond the claim [7,25,26].

Almost 70% of respondents said that as a consequence of being involved in litigation they practiced defensively. A similar response was found in those with an awareness of litigation but no personal experience. Defensive practice is a default management strategy that refers to the practice of over-cautious management of patients, such as increased documentation, over–investigation, unnecessary appointments, or a low threshold to refer on [27]. Across both groups in our study, this included more detailed note taking, lower thresholds for referral to another department and/or to order investigations. Defensive practice has been reported in other HCPs, for example, amongst midwives who had been involved in a clinical negligence claim and in doctors, with over half of those surveyed admitting to practicing defensively [25,28]. With lower thresholds for referral, patients could be sent for unnecessary investigations. These unnecessary investigations, appointments and additional interventions are costly to the NHS and may not lessen patient worries [13,28]. This is not only a burden for the NHS, for the

patient it can have negative health impacts especially in the case of excess radiation exposure through unnecessary imaging.

It is noteworthy that in this study, respondents had reduced their hours (N=33) or changed career (N=25) due to litigation, which has implications on the physiotherapy workforce. This is reflective of other HCPs who have reported similar findings [7,25].

Support

A key finding from the current study shows that most respondents believed they knew who to contact for support if they were involved in a litigation case. Most said they would contact the CSP. As support is based on the physiotherapists' employment, the CSP only provide legal support for those physiotherapists who are self-employed [3]. Given that the majority of respondents were employed, most should contact their employer for legal support if they become involved in a legal claim [3]. As such, clearer information and signposting should be provided to ensure physiotherapists receive the legal support required from the start. By having timely access to the correct legal support at the outset may help to mitigate some of the stress and anxiety experienced as a consequence of litigation.

In terms of emotional support, almost 70% of respondents in this survey indicated that having a debrief with an independent professional to discuss the case confidentially would be helpful. Other HCPs have found that sharing experiences with colleagues, family or friends were critical coping mechanisms [23]. However, almost one third of respondents in our survey did not receive any support. It has been reported that HCPs, including physiotherapists, have struggled to find support following involvement in a clinical negligence claim [7,29]. Given the impact that litigation can have on a person's physical and mental wellbeing reported in this

study, this is a cause of concern. Failure to support the physiotherapist through this difficult time could in part explain some of the consequences reported here, such as defensive practice and changes to role, including leaving the profession, which has been found previously in physiotherapy, and elsewhere in other HCPs [7,24,25].

Training needs

Previous research found that physiotherapists felt unprepared for litigation and often did not understand the implications of being involved in a clinical negligence claim or where to go for support [3,24]. This may explain the findings from this study where respondents reported that mandatory training should be available at both preregistration and postgraduate levels. Including clinical negligence training in the pre-registration curriculum, which is built on throughout the physiotherapists' career, could help them feel more prepared in the event of a claim. HCPC standards of conduct include duty of candour and dealing with concerns and complaints [30], therefore including clinical negligence information alongside this within the curriculum is recommended. Previous research has highlighted the potential role for the CSP to be involved in post-graduate litigation training with the provision of an e-learning package as one suggestion [24], or to include it as part of an employee's mandatory training. Given that almost a quarter of respondents involved in a legal claim had 0-5 years' experience in their role at the time of litigation, this would allow physiotherapists to have some knowledge and insight of litigation from the outset of their career and may help to mitigate some of the consequence of litigation. Additionally, most respondents thought it would be useful to have more resources available for support with the litigation process. This would be most well received in the form of online resources, housed on the CSP website or physiotherapists employers' websites.

Strengths and limitations

This is the first UK-wide national survey to investigate the extent and impact of litigation on the physiotherapy profession, leading to new knowledge in this field. Furthermore, the current survey captured a larger sample than the minimum sample determined a-priori. Nonetheless, our sample were self-selecting and there is no knowledge about non-responders, and as such, the representativeness of the sample cannot be estimated.

No open text questions were used when designing the survey; instead, participants were required to select from pre-determined options. Whilst this design was considered most appropriate where there are large numbers of respondents, this did not allow for qualitative responses, which could have provided greater insight. Moreover, it is not known what 'other' responses referred to in this study and can be considered a limitation.

Conclusion

A total of 10% of physiotherapists in the UK who responded to our survey have been involved in litigation. Having experience or an awareness of litigation affected physiotherapists' physical and mental wellbeing. It also impacted their clinical practice, including defensive practice. Clearer information is needed regarding accessing legal support and more emotional support is required. Litigation training should be included in preregistration, as well as postgraduate programmes.

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Figure 1. Where in the UK respondents worked (based on Chartered Society of Physiotherapy nation and region networks [31])

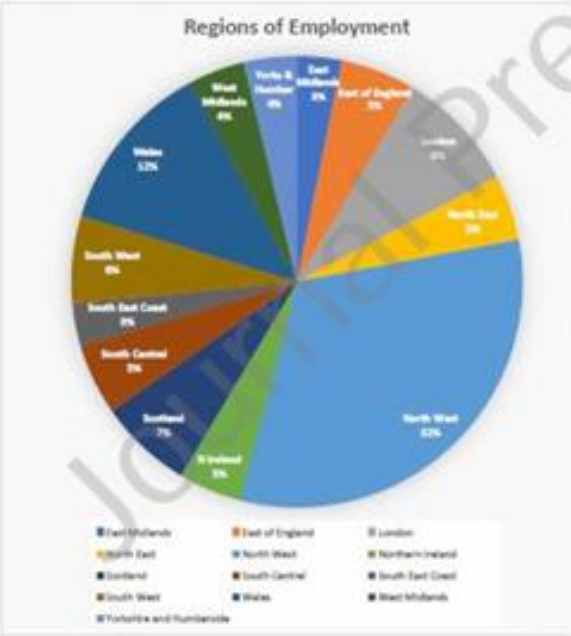

Figure 2. Job role at time of claim

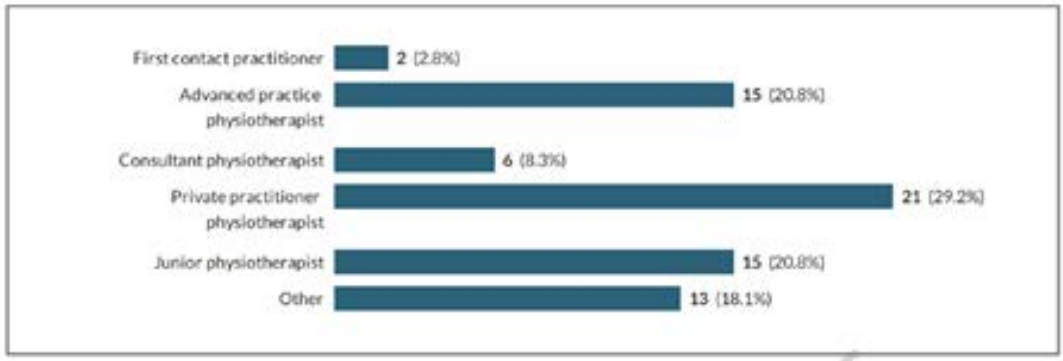

Table 1. Demographic Employment Data

Employment N (%)		Role N (%)		Area of practice N (%)	Years qualified N (%)
NHS	507 (74)	AFC* Band 8	180 (36)	Neuromusculoskeletal 408 (62)	>20 years 306 (44)
		AFC Band 7	172 (34)	Neurology 41 (6)	16-20 years 121 (18)
		AFC Band 6	129 (25)	Respiratory 20 (3)	11-15 years 112 (16)
		AFC Band 5	24 (5)	Paediatrics 19 (3)	6-10 years 73 (11)
		Other	2 (1)	Women's health 14 (2)	0-5 years 76 (11)
Non-NHS	82 (12)	Senior physiotherapist	32 (39)	Oncology 4 (1)	
		Manager/head of service	15 (18)	Learning difficulties 4 (1)	
		Advanced practice physiotherapist	12 (15)	Cardiovascular 3 (1)	
		First contact practitioner	7 (9)	Mental health 2 (1)	
		Junior physiotherapist	4 (5)	Burns 1 (1)	
		Consultant physiotherapist	2 (2)	Cystic fibrosis 1 (1)	
		Other	10 (12)	Transplants 1 (1) Other	
Self-employed	72 (10)	Private practitioner	37 (51)	143 (22)	

		Private practice owner	33 (46)
		Other	2 (3)
Non-clinical	25 (4)		
Retired	2 (1)		

*AFC = Agenda for change [32]

Table 2. The impact of being involved in litigation personally and professionally

'There was an impact on me personally as a result of litigation'								
Strongly Disagree		Disagree		Neutral	Agree		Strongly Agree	
1	2	3	4	5	6	7	8	9
N=7	N=7	N=6	N=1	N=5	N=3	N=6	N=9	N=28
'There was an impact on me professionally as a result of litigation'								
1	2	3	4	5	6	7	8	9
N=13	N=9	N=8	N=3	N=3	N=4	N=8	N=9	N=15

Table 3. How awareness of potential litigation affects physiotherapists personally and professionally

How does awareness of potential litigation affect you personally				
No effect	Stress	Worry & Anxiety	Feeling overwhelmed	Struggling to make decisions
N=277	N=245	N=215	N=102	N=90
How awareness of potential litigation affected you professionally				

Defensive practice	No effect on practice	Additional insurance cover	Reduced working hours	Changed career
N=399	N=148	N=52	N=29	N=22

Table 4. Response to statements regarding support

'The level of support with the legal process I received was satisfactory'								
Strongly Disagree		Disagree		Neutral	Agree		Strongly Agree	
1	2	3	4	5	6	7	8	9
N=13	N=10	N=9	N=1	N=9	N=2	N=12	N=3	N=13
'It would be helpful having a debrief with an independent professional to discuss the case confidentially'								
1	2	3	4	5	6	7	8	9
N=5	N=1	N=7	N=1	N=8	N=4	N=8	N=6	N=32