THESIS

Making sense of 'sport as a therapy choice' for paediatric physiotherapists working with young people with disabilities.

Susan, Joan, Booth

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DECLARATION

I confirm that this thesis and the research reported within it, comprises my own work. It was written and submitted in fulfilment of the Requirements for the Degree of Professional Doctorate, 2024.

Signed: *Susan Booth*

Date: 21.09.24

LIST OF ABBREVIATIONS

APCP - Association of Paediatric Physiotherapists

BCTT – Behaviour Change Technique Taxonomy

CASP - Critical Appraisal Skills Programme

CINAHL - Cumulative Index to Nursing and Allied Health Literature

Com-B model – Capability, opportunity, motivation behaviour model

COPM – Canadian Outcome Performance Measure

COREQ – Consolidated criteria for reporting qualitative research.

CP – Cerebral palsy

CPIP – Cerebral palsy integrated care pathway

CSP - Chartered Society of Physiotherapy

EFDS - English Federation of Disability Sport (in 2018 it became Activity Alliance)

GDPR – General data protection regulations

GMFCS - Gross Motor Function Classification System

GMFM - Gross Motor Function Measure

HDAS - Healthcare Databases Advanced Search

HCPC – Health and Care Professions Council

IA – Interim assessment

IE – Internal evaluation

ICF – International Classification of Functioning, Disability and Health

ICF-CY - International Classification of Functioning, Disability and Health (child and youth version)

IPA - Interpretative Phenomenological Analysis

JBI - Joanna Briggs Institute

NDSO's – National disability sports organisations, e.g., CP Sport

NSF – National Service Framework

PA – Physical activity

PEO - Population, exposure and outcome (or themes)

PGR – Post graduate researcher

PICo - Population, Interest, Context

PIO - People, intervention and outcome (or themes)

PIS – Patient information sheet

PLP – Physical leisure participation

SDR – Selective dorsal rhizotomy

WHO - World Health Organisation

YPwD – Young people with disabilities

ABSTRACT OF PROFESSIONAL DOCTORATE

Physiotherapy practice is affected by the challenge of maintaining patients' engagement with physiotherapy and appears in its top ten research priorities (Chartered Society of Physiotherapy, 2021b; Rankin et al, 2012, 2020). Paediatric physiotherapists have successfully employed sport and physical activity (sport/PA) to address limited engagement observed in young people with disabilities (YPwD) with the results reported in professional journals. However, limited exploration of the meanings attributed by paediatric physiotherapists to 'sport as a therapy choice' currently exists.

Therefore, this project explored paediatric physiotherapists' lived experiences to examine how they make sense of 'sport as a therapy choice' in their practice. Accordingly, a qualitative research paradigm employing Interpretative Phenomenological Analysis (IPA) was used to analyse data from semi-structured individual interviews with UK-based paediatric physiotherapists working in public and private healthcare. Findings indicated six Group Experiential Themes (GETs).

- Shaped by contexts.
- It's all about the kids.
- Relationship of physiotherapy and sport/physical activity.
- Sport/PA – a tool in the toolbox.
- Locating identity.
- Embodiment of models.

The themes highlighted how 'sport as a therapy choice' was experienced and enacted within paediatric rehabilitation. Findings will be helpful to educators and paediatric physiotherapists working with YPwD, to deepen contextual understandings when deploying sport/PA to meet therapeutic objectives.

As no study has previously explored how paediatric physiotherapists experience 'sport as a therapy choice,' this study provides a unique contribution.

INTRODUCTION

Introduction to the author

At Professional Doctorate commencement, I was a Paediatric Physiotherapist using sport within my practice and hence considered myself an ‘insider’ in relation to the community I was researching but prior to data collection, I became a Lecturer in Paediatric Physiotherapy, where my positionality changed to be ‘outside’ of this community whilst retaining ‘insider knowledge’; this therefore help mitigate some of the challenges of reflexivity through a shifting stance from ‘insider’ to ‘outsider’ (Smith & Nizza, 2022).

I hold a Masters Degree in Paediatric Physiotherapy and had completed previous mandatory research training and primary research using IPA, with young people with disabilities (YPwD) and their families for final dissertation.

Overall outline of the study

The professional lifeworld of paediatric physiotherapists is influenced by the challenge of maintaining long-term engagement with physiotherapy for YPwD. Physiotherapists have successfully employed sport/PA to selectively address limited engagement and have used the term ‘sport as a therapy choice’ to describe their approach. The approach has been supported by the professional network of Paediatric Physiotherapists (Association of Paediatric Physiotherapists – APCP, 2014) and the term ‘sport as a therapy choice’ first appeared in their newsletter. However, within research, there has been limited exploration of the meanings attributed by paediatric physiotherapists to ‘sport as a therapy choice’ among those who routinely use the term and the approach.

Therefore, this study aimed to explore paediatric physiotherapists’ lived experiences to examine how they make sense of and experience ‘sport as a therapy choice.’ This aim was realised through the completion of four objectives.

Introduction and rationale

This section introduces the background of limited engagement with physiotherapy and sedentary behaviour from the perspective of paediatric physiotherapists. The section additionally highlights the problems YPwD experience due to limited long-term engagement. An overview of how PA is currently being promoted and its links to health policies is also included to demonstrate how different thinking is being adopted by the physiotherapy profession.

Contextual background

Physiotherapists have utilised adapted sport in the rehabilitation of adults with spinal cord injuries (Williams et al., 2018), following Guttman's pioneering work at Stoke Mandeville in 1944 (Anderson, 2003), which led to the Paralympic movement. However, the use of sport/PA for rehabilitation with YPwD by paediatric physiotherapists has not been considered part of routine physiotherapy input in every service, although some services and clinicians have included it (Paediatric Pilates' - Houghton, 2005). Enhanced disability sport awareness following the

Paralympic movement and London 2012 Paralympic legacy, greater availability of adapted sports and the work of disability sports organisations has fostered awareness of sport as part of the physiotherapy 'offer'. This prompted the English Federation of Disability Sport (EFDS) and the Association of Paediatric Physiotherapists (APCP) to survey (2014) of members' awarenesses of sport. 159 members responded and shared positive perceptions about the value and promotion of sports in the lives of YPwD and resulted in paediatric physiotherapists being included in the Active Kids for All training programme. Since survey publication (EFDS, 2014), the APCP have promoted the use of sport within physiotherapy interventions on their website and professional newsletters report that paediatric physiotherapists are recognising how sport could be part of their interventions through signposting to community sports facilities or organising disability sport taster days (Priestley, 2013; Staffordshire & Stoke on Trent Partnership Trust, 2016; Starr, 2022, Stoker, 2014) and are experiencing how it enhances engagement.

Paediatric physiotherapists are influenced by the challenge of maintaining long-term engagement with physiotherapy for YPwD (Basaran et al., 2014; Beresford et al, 2018; Birt et al., 2014; Chappell & Williams, 2002). Although using PA may positively influence engagement (McCoy et al., 2019) YPwD have "PA levels which are overwhelmingly lower than age-matched typically developing peers" (Carlin et al., 2024; Leo et al., 2018, p. 3; Longo et al., 2013; O'Brien et al, 2014; Shields & Synnot, 2016; Wright et al., 2019) alongside increased levels of sedentary behaviour (Ganz et al., 2021) and only 25% participating in sport/PA at school (ParalympicsGB, 2024). Furthermore, sub-optimal PA and sedentary behaviour levels put YPwD at increased risk of future co-morbidities and hypokinetic disease (Aytur et al, 2018; Carlin, et al., 2024; Department of Health and Social Care, 2022; Ganz et al, 2021; Imms et al., 2008; Law et al, 2006; Maher et al., 2016). Worries about physical inactivity and engagement with physiotherapy are shared by the Chartered Society of Physiotherapy (CSP- the professional body) and have fore-fronted wider discussions about scope of practice, professional identity and ownership of the PA agenda (Turnbull, 2018). The CSP's 'Love Activity: Hate Exercise' campaign empowered physiotherapists to promote PA differently to adult patients by harnessing the emotional power of its label. 'Activity' was preferred to 'exercise,' as a

way of normalising PA through the meaning and purpose of loved activities, such as dancing or walking (CSP, 2019c; Dasoju & Hazzard, 2019). Latterly, the CSP 'Stronger My Way' campaign (2022b) has similarly sought to improve motivation and engagement in patients with long-term conditions through identification of person-centred optimal messaging and language (CSP, 2020).

The use of everyday mainstream PA can also be utilised within paediatric practice, including discharge or bridging strategies (Clutterbuck et al., 2022). Encouraging physiotherapists to think of PA promotion and signposting as a legitimate treatment goals (Pickering, 2021) is concurrently exemplified by Social Prescribing (CSP, 2019d; Public Health England, 2019). Social prescribing represents both changed terminology and practice, where clinical goals are addressed when PA occurs in community assets; for example, local yoga groups to ease arthritis symptoms (White, 2019) or aquatic physiotherapists collaborating with Swim England to facilitate aquatic activity for health after physiotherapy discharge (Hunt, 2018b).

The CSP has emphasised the challenge of how to create and maintain engagement with physiotherapy treatment in their top research questions (2018a, 2019a, 2021b). Paediatric physiotherapists are similarly challenged sometimes when YPwD and families perceive physiotherapy as tedious and time consuming (Booth & Snowdon, 2019), or where even the 'brand' of physiotherapy, uniform or treatment venue is negatively experienced. Physiotherapists' responses have included wearing tracksuits instead of clinical uniforms in acute settings (Turnbull, 2018) and other innovative approaches (Hitchcock, 2014; Hunt, 2018a; Priestley, 2013; Reilly, 2014; Stoker, 2014; SSOTP., 2016). These approaches are exemplified by the FUNdamentals in Athletics programme (Starr, 2022) which utilised athletics as a therapeutic medium for young people with impaired motor skills. The physiotherapist used community athletic venues and sports equipment to de-medicalise sessions and "lure children into doing physiotherapy without realising it" (Starr, 2022, p. 16). Using everyday gamification[1] (Johnson et al., 2022) to reframe rehabilitation was key and empirically, physiotherapy programmes can be analogous with mainstream

[1]Gamification – integration of games design, games style and games techniques into a non-game context, e.g., feedback mechanisms (Deterding et al., 2011, as cited in Johnson et al., 2022).

exercises, e.g., Gastrocnemius stretch in Physio Tools ® (a physiotherapeutic resource) and Run England (a community resource) respectively. Such synergies inform discussion in my study about de-medicalising physiotherapeutic exercise and are noted within CSP research priorities (2019a) which recognise that mainstream exercise approaches can help improve patient outcomes.

All of these developments were and continue to be contextualised by changing NHS delivery models, including consultant style approaches for qualified staff (Beresford et al., 2018) that delegate hands-on physiotherapy for YPwD to 'the team around the child', a drive to reduce overdependency on services (Ham, et al., 2018) and promote patient self-management (NHS England, 2019, p. 25). Such approaches may reduce the NHS workload, and are a response to economics, demographics (growing patient numbers), improved neonatal care, workforce shortages and the evolving inclusion discourse surrounding YPwD (Pickering, 2018, 2021).

The Covid-19 legacy influenced the nature of restored paediatric physiotherapy service delivery by prompting consideration of remote consultations/interventions, as in Johnstone's case review (2020) and the later recommendations of Hawley-Hague et al. (2021). Conroy and Fordham (2022) reframed the loss of acute hospital physiotherapy space as an opportunity to instead re-locate within the community to better impact health and sustainable lifestyle change; practices which are already familiar to some paediatric physiotherapists who recognise the significance to children and young people of therapy settings. It should also be noted that some community sports clubs and facilities closed under Covid-19 restrictions and did not re-open which causes practical difficulties in making 'sport a viable therapy choice' for physiotherapists.

Summary

This section introduced the study's aims, rationale and how it will be undertaken. The introduction revealed that maintaining YPwD's long-term engagement with physiotherapy is a concern for paediatric physiotherapists and that using sport/PA could positively influence this. Evidence indicates the success of the approach when paediatric physiotherapists reframe rehabilitation in innovative ways, and positive evolving societal discourses within disability, disability sport and inclusion may

support this (Hitchcock, 2014; Hunt, 2018a; Priestley, 2013; Reilly, 2014; Stoker, 2014; SSOTP., 2016). However, reduced physical activity (PA) levels and increased sedentary behaviours amongst YPwD may pose barriers to generalised implementation, along with the challenge of restoring community sport in the post-Covid-19 era. These findings provided a study rationale and starting point for the initial scoping review.

Overview of chapters

Chapter 1 - Literature review search strategy comprising initial scoping review, identification of key words, use of clinical databases and inclusion/exclusion criteria.
Chapter 2.1 - Defines key terms, conceptual frameworks and characteristics of those involved, necessary for understanding the academic literature in the topic area.
Chapter 2.2 - Literature analysis summarises the main findings into three themes, informed by surrounding societal and healthcare discourses. Key themes are then discussed with conclusions drawn about the gap in the literature.
Chapter 3 – Outlines, appraises and justifies the methodology and method used. Sequential stages of the project are described, with reference to relevant documentation within appendices.
Chapter 4 - Provides key findings and analytical interpretations of the text, which enabled the creation of GETs and PETs.
Chapter 5 - Presents discussion with a higher interpretive level and locates the findings within extant literature.
Chapter 6 - Summary of findings and conclusions regarding implications for practice, originality, strengths and limitations and suggestions for future research, alongside plans for dissemination and reflections on my research journey.

CHAPTER 1 – LITERATURE REVIEW STEPS

1.0 Introduction

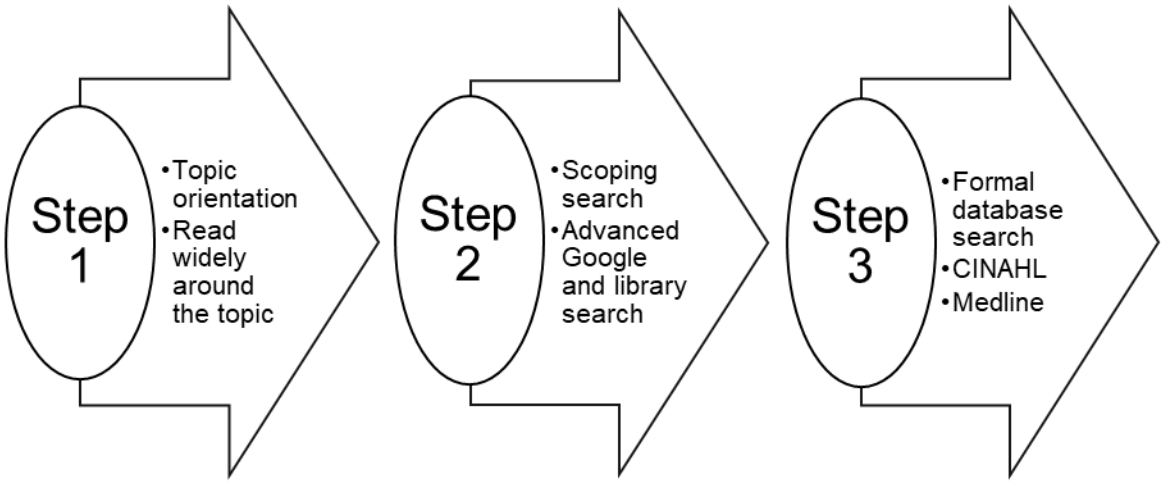
A three-step strategy was employed (Figure 1) which informed whether 'sport as a therapy choice' can be researched as a topic area (Creswell & Creswell, 2023) or as a review question (Aveyard et al., 2021), deconstructed the topic area into potential key words for later clinical database searches and explored the breadth of research.

1.1 Initial scoping

Initial reading exploring the phenomenon of 'sport as a therapy choice' in professional newsletters, journals and websites (APCP; CSP) revealed eight items referring to the EFDS report (2014), my opinion piece (Booth, 2015) about embedding disability sport/PA into everyday practice and one article (APCP Journal and Sheffield Hallam University research archive - Booth & Snowdon, 2019).

Figure 1

Literature review process

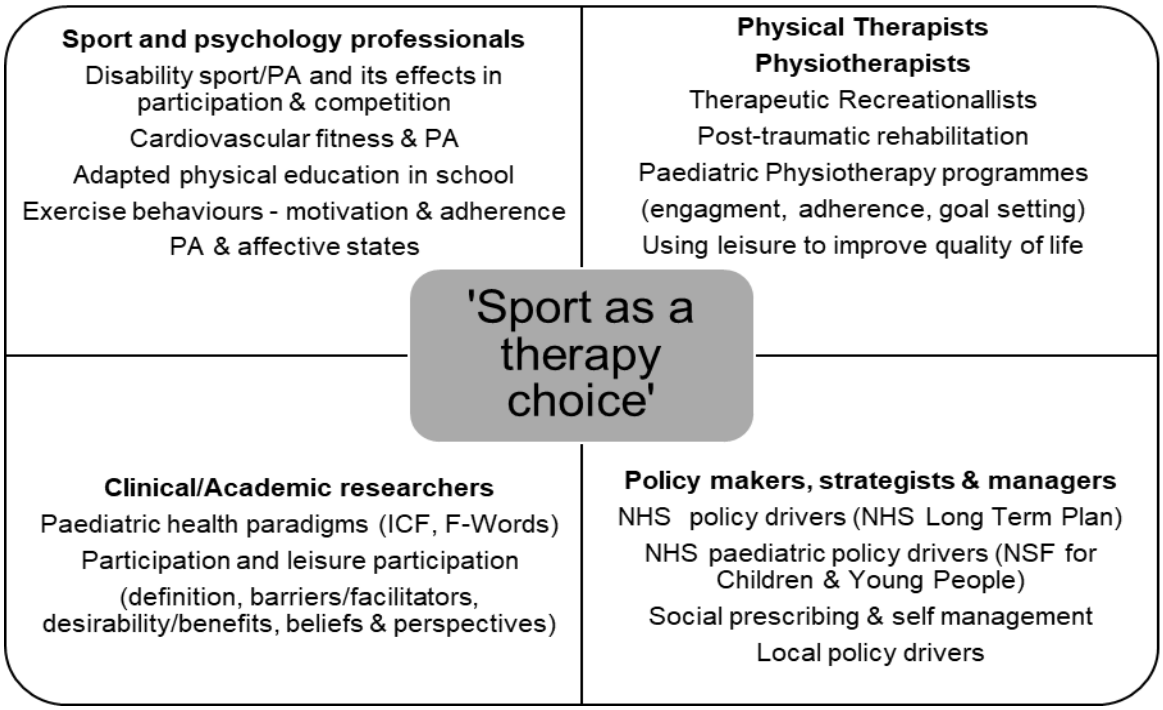


Scoping in step two used more advanced searching strategies focussed on 'who' (e.g., physiotherapist/physical therapist, children/young people with disabilities) and 'what' (e.g., engagement, adherence, compliance and PA, physical leisure participation (PLP), disability sport) and restricted to the last twenty years, when the use of sport within therapy was first gaining traction with paediatric physiotherapists.

The search also used plurals and alternative spellings to fully capture all references. Step two revealed several policy initiatives, primary research studies (employing different methodologies) and systematic literature reviews/meta-analyses focussed on single areas that bordered the topic or formed part of it. Scoping of disability sport/PA and engagement with physiotherapy programmes (Figure 2) demonstrated the involvement of diverse disciplines beyond physiotherapy, such as education and psychology. Individual stakeholders included practitioners, researchers, educationalists and exercise specialists who approached elements of the topic area through the lens of uni-professional perspectives and agendas. This understandably produced profession-specific conclusions, without comment on the potential linkage of sport to physiotherapy, or connections with other professions. A notable exception was 'therapeutic recreation', a specifically American approach, which utilises leisure participation to improve general wellbeing and quality of life. Additionally, Roberts et al. (2021a) who noted a relationship between sports participation and engagement in rehabilitation when highlighting how sports participation in the Invictus games functioned as a stimulus for further active engagement in rehabilitation services; however, findings are not generalisable beyond their specific participant subset.

Figure 2

Scoping review map of diverse stakeholders' involvement in the topic area



1.2 Search strategy – step three

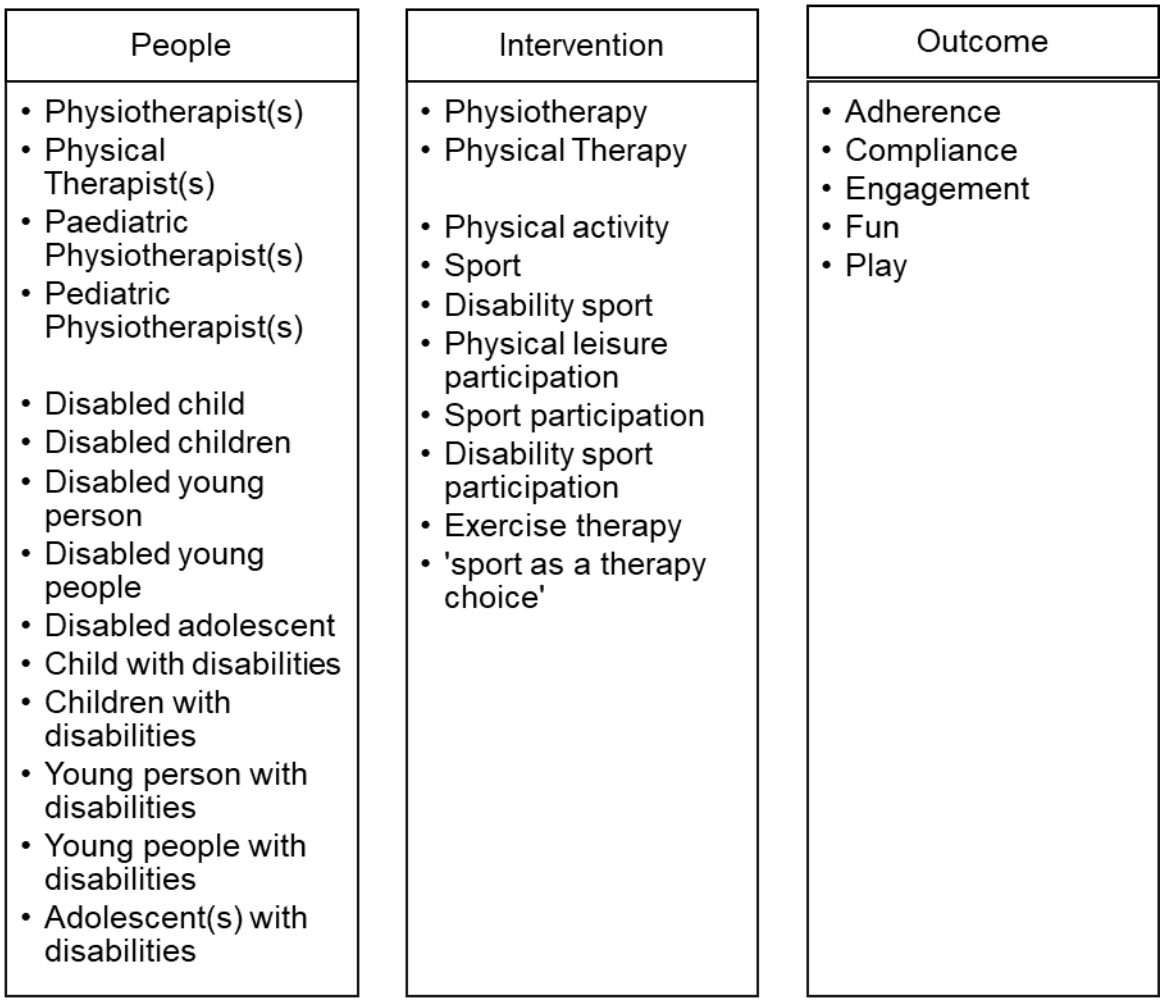
The advanced Google Scholar search informed further ideas for key word selection (Creswell & Creswell, 2023) within the clinical database searches, including a Healthcare Databases Advanced Search (HDAS) which includes the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline. CINAHL is an obvious choice, as it facilitates comprehensive in-depth searching and is the recognised source for peer-reviewed allied health professional, nursing and midwifery research. To reduce publication bias, unpublished PhD theses were also searched as grey literature (British Library - EThOS (e-theses online service) and University of Salford E-theses collection - USIR). In addition, peer-reviewed articles from professional physiotherapy journals, key NHS policy documents such as the NHS Long Term Plan (2019), relevant models ('F-Words' and International Classification of Functioning, Disability and Health (ICF) and IPA methodological literature were included. A search of the Cochrane database of systematic reviews revealed no relevant papers.

To provide a systematised identification of key words and their alternative spellings, a people, intervention and outcome or themes (PIO) framework (Aveyard, 2014) mapped to topic components was employed (Figure 3). PIO was selected as it cohered with my qualitative study. Alternative qualitative search strategies are available such as PEO (Population, Exposure and Outcome or Themes) and PICOT (Population, Intervention, Context, outcome and Type – Aveyard, 2023) which capture the views of those providing services. Keywords of 'who,' (e.g., physiotherapist, disabled children etc) were then combined with the 'what,' (e.g., physical activity 'OR' physical leisure participation), and outcomes using 'AND' to select articles for closer examination (Boolean operators - Appendices 8.5.1 and 8.5.2). Finally, inclusion filters were applied to focus the search for information as summarised in the following grid (Figure 4).

As literature searching is an iterative process, the search process was repeated to ensure no relevant articles were missed, e.g. following data analysis, new keywords (physical literacy, organisational culture and cultural relativism) and their synonyms were introduced to explore newly developed angles in the discussion (Smith et al., 2022).

Figure 3

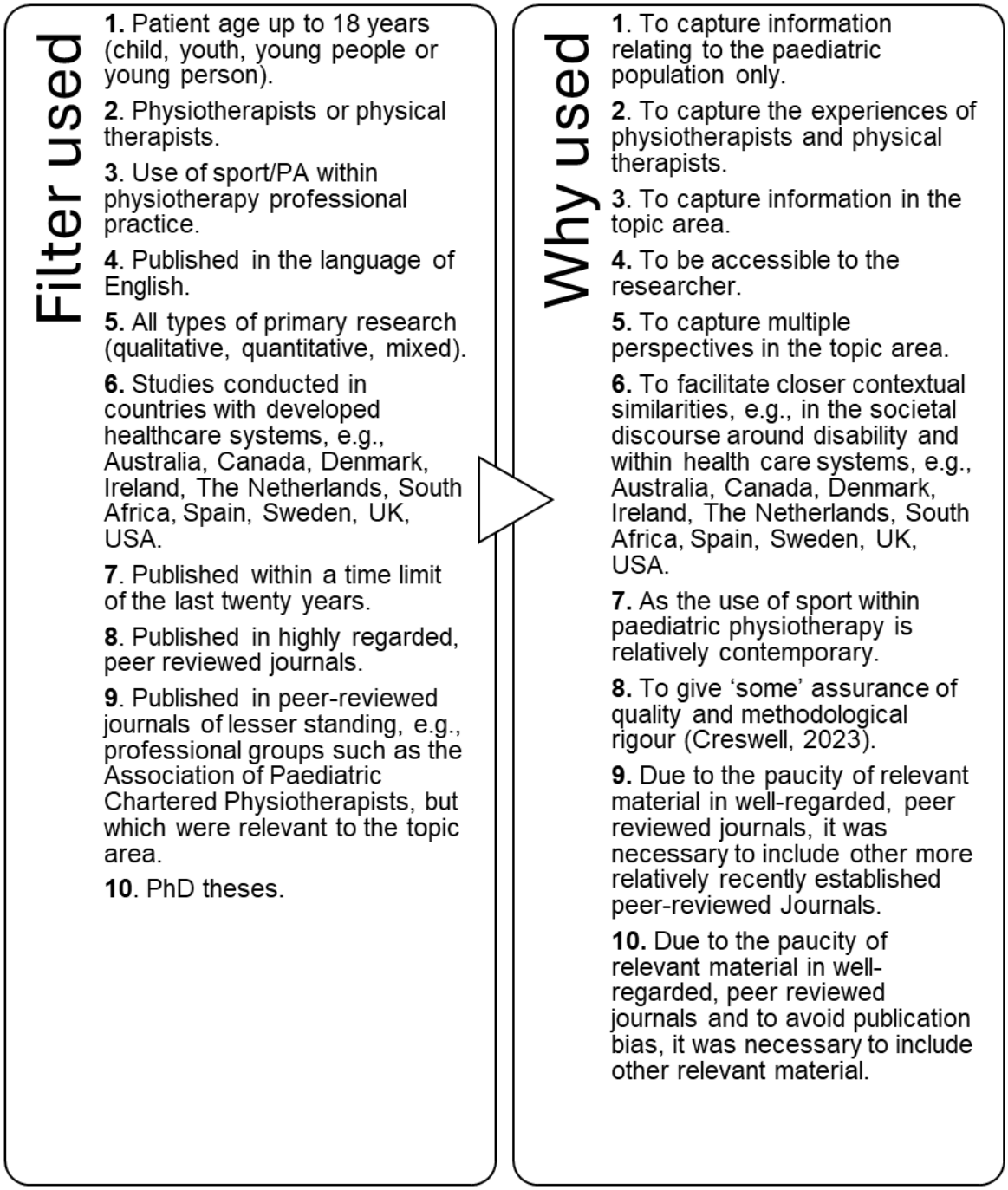
PIO framework



The filters aided methodical boundary making and justified omissions (Murray, 2017); the ‘why used?’ column provided a rationale, summarised as ensuring specificity, accessibility, chronology and academic rigour. Example searches with raw data and Boolean combinations are shown in Appendices 8.5.1 and 8.5.2. The database searches were supplemented by citation searching within the reference lists of key articles. Over 150 articles were identified, then manually checked for relevance by title. The abstracts of in-scope literature were then screened to assess relevance to the topic area and those included were critically appraised, utilising collective principles promoted within Critical Appraisal Skills Programme (CASP)

Figure 4

Inclusion filters



Qualitative Research Checklist (2018), consolidated criteria for reporting qualitative research (COREQ – Tong et al. 2007) and Joanna Briggs Institute (JBI, 2017-

Appendix 8.4.7). The tools are recognised, long-standing critical appraisal checklists which assisted in evaluating methods and methodological quality of studies, e.g., the JBI tool informed where studies lacked congruence between methodology, method(s) and philosophical perspective, had inappropriate design for the research objectives, did not represent participants' voices or ground their conclusions in the data, were not ethically conducted or had not addressed the possibility of bias. CASP acts similarly as "the most commonly used tool for quality appraisal in health-related qualitative evidence syntheses" (Long et al., 2020, p. 31).

My decision to use chosen, globally recognised keywords (from the PIO framework) was justified when a subsequent search of CINAHL subject headings and MeSH subject terms revealed no additional or alternative keywords beyond those already deployed, e.g., alternative American spellings and terms used to describe PA, adherence, compliance, engagement and sample, e.g., children with disabilities or disabled children (Appendix 8.5.3). This was a necessary verification exercise since subject terms and headings are expressly created by these databases to index articles, thus producing their own keywords and are described by Aveyard (2023, p. 86) as 'controlled key terms'. The only notable exception was the term 'therapeutic recreation' which is an American approach, so studies were not applicable within the UK for reasons of cultural specificity and overall may reflect the North American focus of the CINAHL database.

1.3 Summary

This review firstly focussed on including diverse study types and evidence to widely scope key areas and provided an overview but without appraisal of quality (step one). The reconnaissance revealed that although anecdotal evidence exists to show the success of 'sport as a therapy choice', there was only one primary research source published in a peer-reviewed professional journal. Scoping also revealed that diverse professions show interest in elements of my topic area, including disability sport, psychological benefits of sport and PA for YPwD, PLP, rehabilitation of YPwD and social prescribing. However, there was no combined consideration of these areas focussing on 'sport as a therapy choice'. In the clinical database search,

identification, verification and combination of key words using Boolean operators, alongside justified inclusion filters focussed the search and substantially reduced the quantity of results. Finally, critical appraisal underpinned identification of strengths and weaknesses, evaluating quality and then informed subsequent analysis and synthesis, which is outlined in chapter 2.

CHAPTER 2 - LITERATURE REVIEW

2.0 Introduction.

This supportive literature review is presented in the form of a simple meta-aggregative thematic analysis which included all literature types and acted to contextualise the topic area of 'sport as a therapy choice'. Aggregation is appropriate as extant research in my topic area was sparse, furthermore the practical statements produced are usable and therefore attractive to practitioners (Aveyard et al., 2021).

Firstly, key terms are defined to provide clarity.

Secondly, findings were aggregated into three narrative themes (Figure 8b).

- Problems with adherence, compliance and engagement within paediatric physiotherapy.
- How YPwD and their families have experienced sport/PA and PLP.
- The place of PLP and sport/PA within paediatric physiotherapy practice, which holds the greatest relevance for addressing the research aims and objectives.

Thirdly, important emerging trends and evolving societal discourses are noted, e.g., how inclusion of YPwD influences personal and environmental factors within ICF. Ultimately, evaluation within a thematic framework enabled identification of unexplored and superficially examined places within extant literature. Literature review is iterative and was revisited (see Gantt chart – Appendix 8.2).

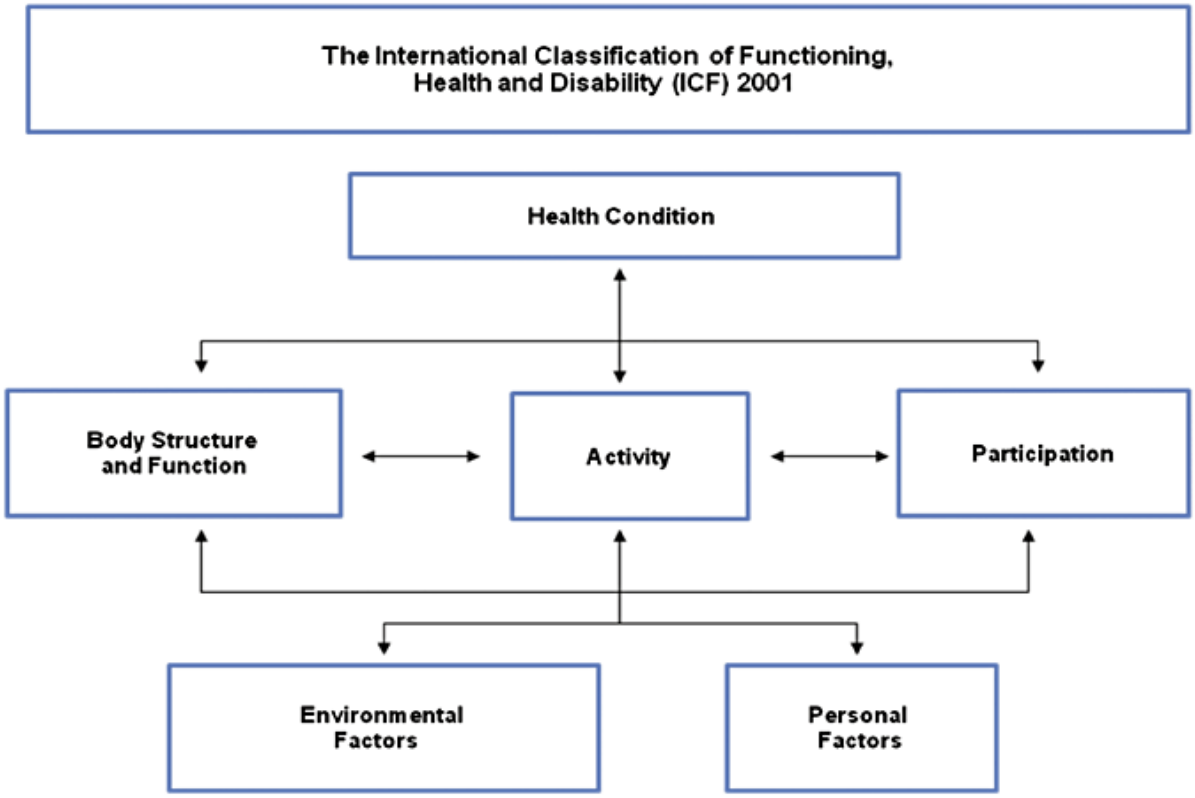
2.1.1 Defining disability for YPwD in the ICF and 'F-Words' models.

Contemporary definitions of disability now widely accepted within physiotherapy practice and research are based on the recombinant definition of the World Health Organisation (WHO, 2001, 2002, 2013), International Classification of Functioning, Disability and Health (Figure 5) and ICF's iteration for YPwD – 'F-Words' (Rosenbaum & Gorter, 2012. Figure 6). In addition to their wide acceptance within physiotherapy (Carlin et al., 2024) including my participants, these models are included since all iterations embed the non-hierarchical arrangement and

interdependency of the various domains. Thus, clinicians' epistemological assumptions underpinning the 'medical model' of disability (privileging health condition, body structure and function) are integrated with discourses based on the 'social model' of disability (solely focussed on 'disabling' environmental factors, such as access and societal attitudes).

Figure 5

ICF



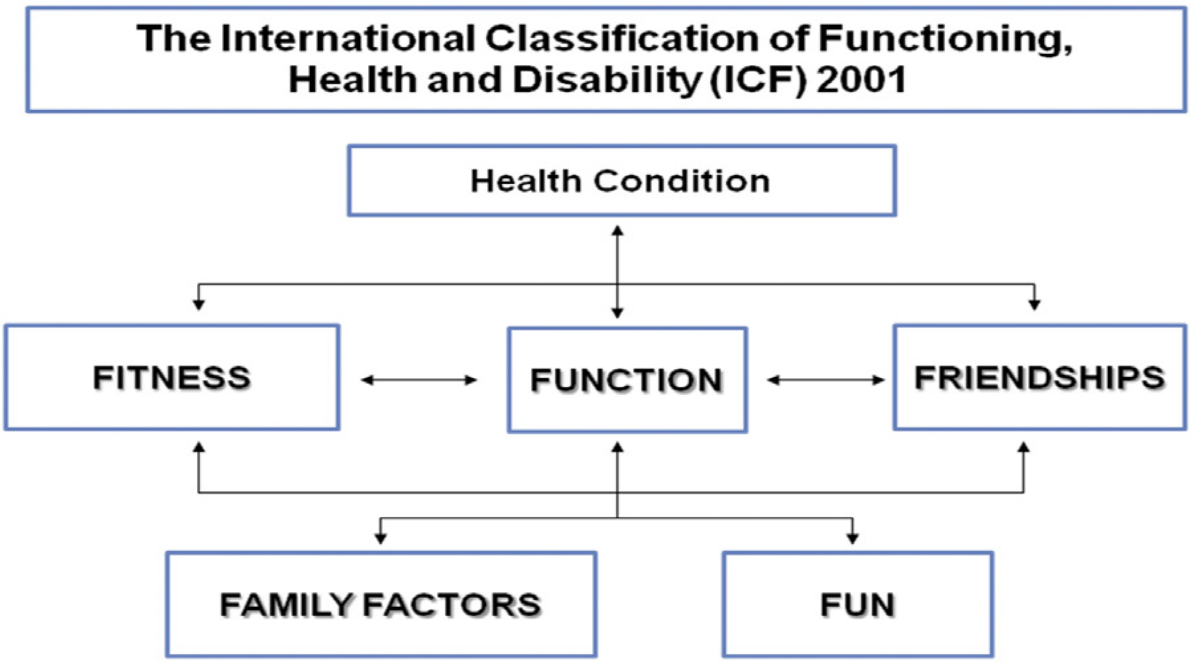
Note. From "The F-words in childhood disability: I swear this is how we should think" by P. Rosenbaum & J. W. Gorter. 2012. *Child: care, health and development, (38)*4, p. 458 (https://doi.org/10.1111/j.1365-2214.2011.01338.x). Copyright CC-BY-NC-ND licence.

Disability is a global phenomenon describing impaired body structure, function, health condition, activity and participation and more observable in how impairments cause activity limitations and participation restrictions, rather than the impairments themselves. As WHO (2013, p. 7) state "ICF puts every person in a context: functioning and disability are results of the interaction between the health conditions

of the person and their environment" and can thus affect anyone and vary over time. Contextual factors within ICF and 'F-Words' which influence a person's internal psychological state and resultant beliefs, feelings and motivations and the environmental factors may hinder or facilitate activity and participation mattered in my study because they explained how disability was differentially experienced; observable by my participants as the beliefs and behaviours of YPwD and their families and the extent of their participation in sport/PA (Rosenbaum & Gorter, 2012; WHO, 2002).

Figure 6

The 'F-Words' in childhood disability



Note. From "The F-words in childhood disability: I swear this is how we should think" by P. Rosenbaum & J. W. Gorter. 2012. *Child: care, health and development, (38)*4, p. 461 (https://doi.org/10.1111/j.1365-2214.2011.01338.x). Copyright CC-BY-NC-ND licence.

The 'F-Words' model (Figure 6) was described by Rosenbaum and Gorter (2012, p. 457) as a "global combination of ideas about childhood neurodisability, child development and the socio-ecological forces which impact children". My study involved this patient subset, making these ideas and their three underpinning

assumptions significant to my participants. Firstly, that childhood disability frequently cannot be ‘fixed’ in the biomedical sense and that sometimes children’s functioning will not look ‘normal’ (Rosenbaum & Gorter, 2012, p. 459). Furthermore, of particular significance, Rosenbaum and Gorter (2012) emphasised fitness as a ‘stand-alone’ therapeutic intervention and not solely for the remediation of disability. Secondly, ‘F-Words’ assumes that the occupation of YPwD is play and having fun, which the authors called “doin stuff” ((Rosenbaum & Gorter, 2012, p. 460). The right to play is formally enshrined in Article 31 of the United Nations Convention on the Rights of Children (United Nations Children’s Fund, 2022) and research literature addresses the importance of play for children in health settings (Koukourikos et al., 2015). The need to integrate play into physiotherapy was an ongoing theme for my participants. Thirdly, Rosenbaum and Gorter (2012) recognised family as the essential context within which children experience their disability, operationalised within parental modelling of PA and promoting engagement with physiotherapy (Beresford et al, 2018; McCoy, et al., 2019). This familial role was another ongoing relational feature expressed by my participants.

2.1.2 Defining disability by health condition, body structure and function experienced by YPwD.

YPwD may experience disability for a variety of reasons including neurological, neuromuscular, disease or trauma and some may remain undiagnosed or without precise diagnosis. Cerebral Palsy is only defined in detail here, as it is the most common cause of long-term childhood neurological disability (incidence of 2.5-3.4 per 1,000 live births - Carter et al. 2019, p.457) and largest single disability type on Paediatric Physiotherapists’ caseloads. The figure is estimated to have increased 7.5% by 2020, with predicted “significant implications on health and social services planning” (Glinianaia et al. 2017, p. 864). Cerebral Palsy is an overarching term for a collection of permanent disorders of movement and posture which cause activity limitations. Motor disorders are often associated with prematurity due to non-progressive disturbances that occurred in the developing foetal brain, or later episodes in the infant brain and are often accompanied by impairments in sensation, perception, cognition, communication, behaviour, epilepsy and future secondary

musculoskeletal problems (Rosenbaum et al., 2007a). It should be noted that other enduring paediatric disabilities associated with similar limitations were also treated by my participants. Although arising from other health conditions such as Duchenne muscular dystrophy, acquired disabilities such as spinal cord injuries, cancer, rare syndromes and congenital disorders such as Spina Bifida, they can be included as their 'non-fixable' nature posed similar challenges for my participants.

2.1.3 Defining Paediatric physiotherapy interventions for YPwD.

Physiotherapy is concerned with human function and movement, using physical approaches to "promote, maintain and restore physical, psychological and social well-being" (Needle et al, 2011, p. 44) and making PA an obvious intervention choice. Specialist Paediatric physiotherapists have skills and knowledge to optimise the functional potential of YPwD, facilitating activity and participation (ICF) by managing, rather than curing problems associated with long-term physical impairments (Rosenbaum & Gorter, 2012). Treatments range across manual therapy, aquatic physiotherapy, therapeutic exercise programmes and engagement in disability sport, including signposting (Pickering, 2021) and advice on specialist equipment to enable function, as in frame running (Figure 7a), tag rugby and frame football (Figure 7b). In 2018, APCP created a sequence of football-related routines that demonstrated their belief that physiotherapy and football could, and should be associated together and the suppliers of sports-specific K-Walkers (Quest 88, 2020) significantly found that…

> children who may have found physio routines a chore in the past are now far more engaged, as not only do the new routines benefit their development, they now make them a better footballer or rugby player.

Paediatric physiotherapists work as members of a wider multi-disciplinary team and in diverse settings, including homes, clinics, mainstream, and special schools. It is accepted they play a broad role that includes promoting PA, health education and self-management, but without prescribing how this should be done. The role includes advising and teaching families, carers, other health professionals and support workers in order to provide and sustain a coherent, consistent approach to maximising the independence and well-being of YPwD.

Figure 7a

Frame running at the athletic track.

From: https://www.Quest88.com (reproduced with kind permission of Quest 88 Ltd).

Figure 7b

Specialist K-Walker frames in use for frame football

From: https://www.Quest88.com (reproduced with kind permission of Quest 88 Ltd).

2.1.4 Defining PA, sedentary behaviour among YPwD and physical leisure participation (PLP) within ICF.

For those with typical development (TD), PA is defined as any bodily movement produced by skeletal muscles that requires energy expenditure, with exercise as a subgroup of PA where activity is planned, structured, repetitive, and aims to improve or maintain one or more components of physical fitness (WHO, 2017, as cited in Lowe et al., 2018). Whilst Ganz et al.'s (2021, p. 1) definition from a scoping review of thirty-six studies of children with physical disabilities is specific to YPwD; where moderate to vigorous PA is "any body movement using skeletal muscle that results in energy expenditure greater than 1.5 metabolic equivalent of task (MET)". The associated health benefits including improved musculoskeletal, cardiovascular and mental health and reduced adiposity apply equally to YPwD. Furthermore, Ganz et al. (2021, p. 10) highlight that the usual definition of sedentary behaviour as "any waking behaviour in a sitting, reclining or lying posture" requires re-definition for YPwD because although seated, they could still be active, e.g., self-propelling wheelchairs or reaching for objects, whilst subject to spasticity or involuntary movements.

Notwithstanding this, Ganz et al.'s review (2021) alongside other studies (Longo et al., 2013; Palisano et al., 2011; Wright et al., 2019) also confirmed that YPwD, primarily those with Cerebral Palsy and especially those with severe disabilities (Gross Motor Function Classification System levels III to V), are sedentary longer than peers with TD, and this divergence increases from the age of three. Sedentary behaviour was negatively associated with reduced motor skills and functional mobility by Ganz et al. (2021) using validated outcome measures (Gross Motor Function Measure-66 and Pediatric Evaluation of Disability Inventory respectively). Clearly these findings indicate that using PA as a physiotherapy intervention with a subset who tend to be less physically active (Vila Nova, et al., 2021) may be problematic, as YPwD may be disinclined to participate.

The concept of participation is defined within ICF as involvement in a life situation (Gorter & Currie, 2011) characterised as active involvement rather than a mere presence (Imms & Green, 2020; Imms et al., 2017). This is significant as my study explores physical participation as a legitimate goal for paediatric physiotherapists.

PLP is also defined here, as an alternative, collective term for PA and denotes leisure which includes structured or unstructured physical and sports activities involving gross motor skills and movement and cardiovascular work. This distinguishes PLP from sedentary leisure participation, e.g., socialising or arts activities (Shikako-Thomas et al., 2014). PLP is the function of a dynamic interplay between all ICF domains (Ullenhag et al., 2014). Both PA and PLP appear within my study, since both have been used by authors.

2.2 Literature review themes

This section explains how evaluation synthesised findings into a map comprising "a hierarchical structure with a top-down presentation of the literature, ending at the bottom with the proposed study" (Creswell, 2023, p. 41); the narrative review produced three broad thematic lines of interest, which are contextualised within societal discourses of healthcare and disability (Figure 8b).

2.2.1 Theme 1 - Problems with compliance, adherence and engagement

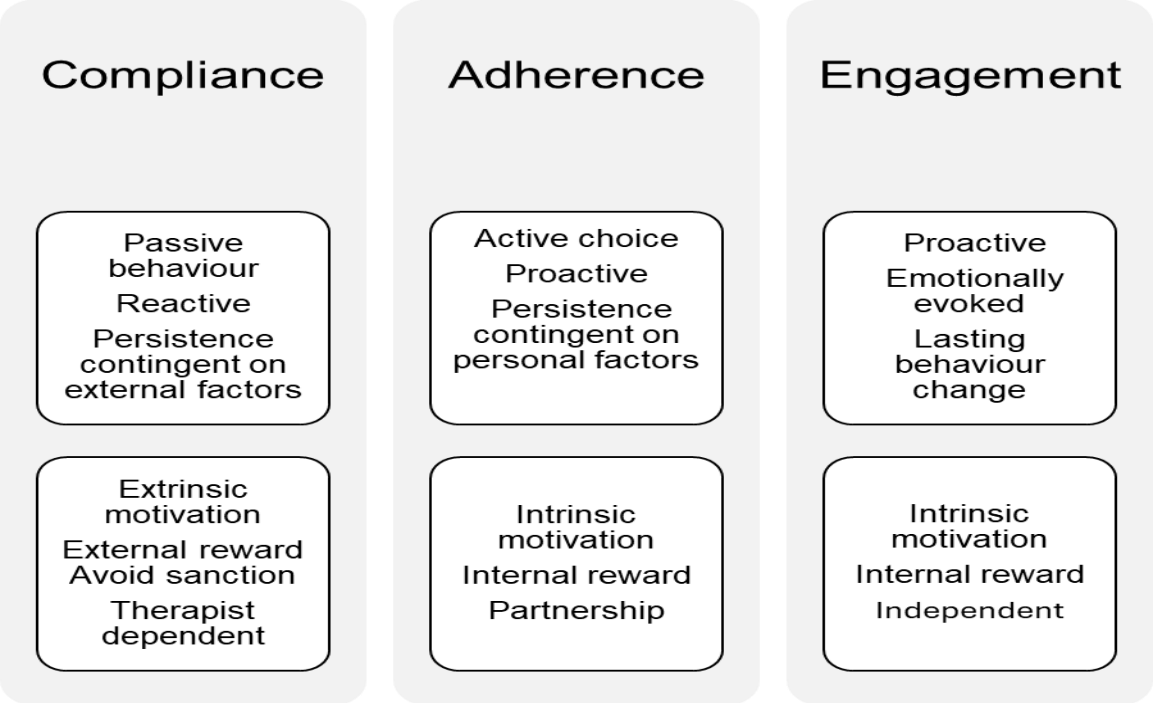
Compliance, adherence and engagement are complex, multifactorial concepts which are interdependent but different (Figure 8a) and correspond with a linear continuum of extrinsic and intrinsic motivational states and consequential behaviour change (Green-Wilson, 2017; Standage & Ryan, 2020); furthermore, although Green-Wilson (2017) noted that compliance and extrinsic motivation could create initial interest, only intrinsic motivation was associated with lasting behaviour change. Motivation describes what moves people to act (Standage & Ryan, 2020) and comprises the energizing, direction, regulation and persistence of behaviour (Ryan & Deci, 2017).

The interchangeable use of these different terms meant the quality of evaluated studies was only fair to moderate, which creates uncertainty when measuring levels of compliance, adherence or engagement, what causes it and how poor levels might be addressed. Multiple sources of error also exist, e.g., accurate measurement is elusive due to inherent bias (social desirability) within the self-report of qualitative

studies, lack of validated outcome measures and differing outcome measures, making meta-analysis of efficacy studies difficult. In addition, adherence and

Figure 8a

Compliance, adherence and engagement overview



compliance is not consistently defined as “the extent to which a person’s behaviour corresponds with agreed recommendations from a healthcare provider” (WHO, 2003, as cited in Peek et al., 2016, p. 128). Adherence and compliance may be used interchangeably and are also problematic to unpick with YPwD, due to the context of shared responsibility with caregivers as Chappell and Williams (2002, p. 138) noted “adherence to treatment regimens is a notoriously difficult concept to define and measure”. It must be noted though that this dated, pilot study had a sample under one hundred and a questionnaire response rate of 61%, so the findings cannot be generalised to the wider paediatric patient population.

Latterly, researchers have substituted the term ‘engagement,’ a derivative from mental health literature and its use as an alternative appears more appropriate for

YPwD, since it assumes an active stance and avoids the legalism associated with ‘adherence’ and ‘compliance.’ Engagement is conceived by Phoenix et al. (2020) as both tripartite and comprehensive, comprising affective, behavioural and cognitive components.

> engagement is an optimal state comprised of a hopeful stance, conviction with respect to the appropriateness of intervention goals and processes, and confidence in personal ability to carry out the intervention plan (Phoenix et al., (2020, p. 1252)

These components highlight the relevance of engagement within my study, since a positive affective state, acceptance of goals and self-management, were individually or collectively associated with ‘sport as therapy choice’ for YPwD by several participants. Furthermore, Phoenix et al.’s (2020) qualitative exploration of parental engagement with children’s developmental rehabilitation services was pertinent to my study because my participants similarly reported that parents and caregivers provided much of the essential context for the engagement of children and young people. However, it must be noted that the Phoenix study recruited parents and clinicians from only one specific therapeutic type of rehabilitation setting based in Canada, so the findings may not be completely transferable to the UK and to older children and mainstream settings.

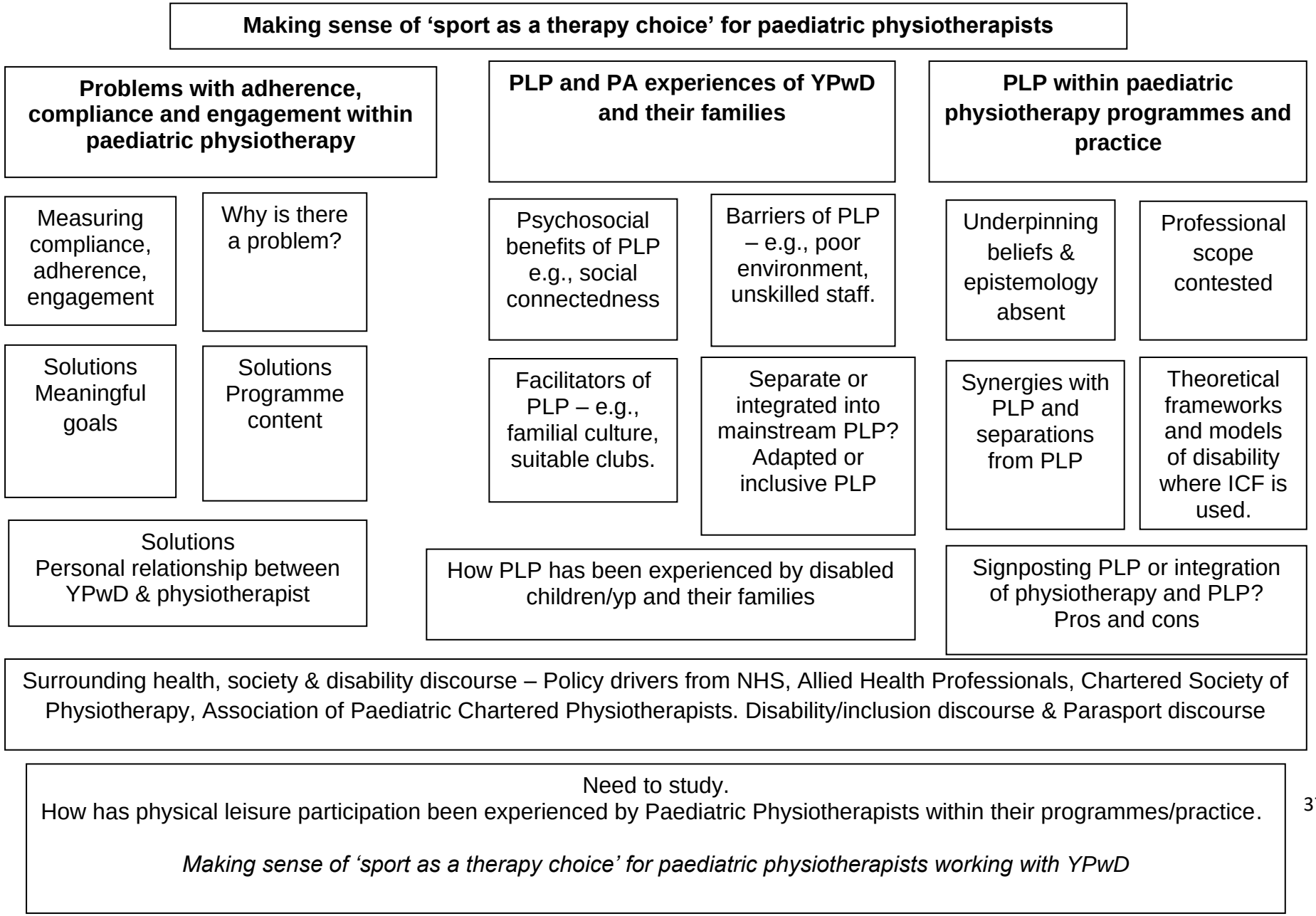
Research elsewhere revealed a consensus among both practitioners and researchers that engagement with paediatric physiotherapy remains an ongoing problem, as Birt et al.’s (2014) qualitative study found, where respondent validation within the data analysis, along with sharing and checking emergent themes with fellow researchers improved its quality. The study focussed only on joint hypermobility, so transferability could be questioned, however joint hypermobility is a long-term condition and so it could be argued that similar challenges exist in terms of maintaining long-term therapeutic engagement. However, the same issues for YPwD are highlighted in other studies (Basaran et al., 2014; Beresford et al., 2018; Chappell & Williams, 2002; Redmond & Parrish, 2008). Paediatric physiotherapists may be specifically challenged by YPwD and families’ perceptions of physiotherapy programmes as tedious and time consuming (Booth & Snowdon, 2019), or where even the ‘brand’ of physiotherapy, uniform or treatment venue is negatively experienced.

Consequently, research has attempted to identify factors that might improve engagement e.g., personal qualities and relational factors (King et al, 2020). Relationships and interpersonal skills such as empathy and trust were also identified by Redmond and Parrish (2008) within the concept of a therapeutic alliance. However, the study setting within a specialist residential college with a sample of young people aged 16-25 years of age must be noted when assessing the generalisability of the conclusions; although they might apply to some of my participants who shared experiences of relational closeness within their non-residential special school settings. In other studies, the therapeutic relationship was actually valued above technical skills (Crom et al., 2020; Reeder & Morris, 2018). However, the methodological limitations of Reeder and Morris's study must be noted, as it was a single 'insider' study, so may be subject to researcher-bias, and the sample were self-selecting and came from a single healthcare organisation.

Adherence was perceived to be positively influenced by a sample of twenty-eight Spanish parents of young children with disabilities when the physiotherapist's style and programme content was positively experienced (Lillo-Navarro et al., 2015). However aforementioned research limitations must be noted, as focus groups utilised retrospective self-report, which can be prone to recall bias, as well as the possible unconscious or conscious pressure to report what is expected in the company of other parents (social desirability bias); therefore, caution must be exercised in generalising results to my unrelated settings and sample.

Although sources of error within research create uncertainty concerning the engagement levels of YPwD and ambiguity around what is being measured, it remains a persisting problem for clinicians, as evidenced by inclusion within the CSP's (2018c) key research priorities, highlighting its importance for achieving desired outcomes.

Figure 8b. *Literature review map*

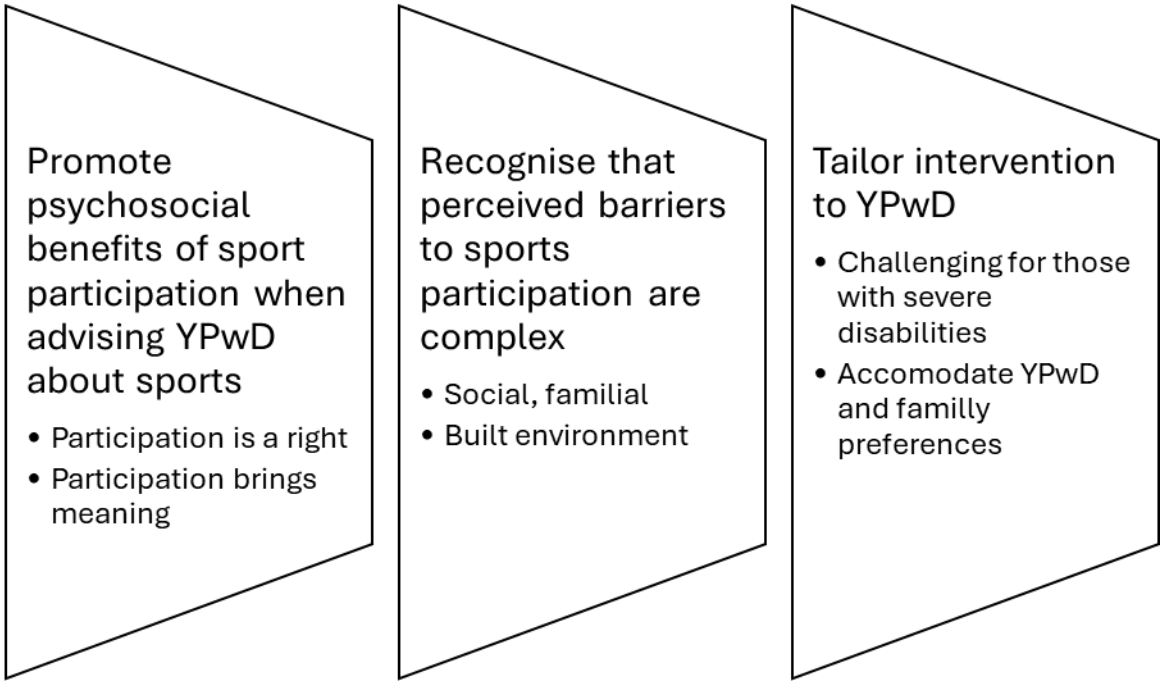


2.2.2 Theme 2 - PLP and PA experienced by YPwD and their families.

Theme two explored physical participatory experiences of YPwD and their families characterised by diverse psychological perspectives; these were supported by permissive environments but might be challenged by impairment and fatigue. Nevertheless, YPwD and their families acknowledged the health benefits of PLP, in terms of strengthening one's physique and improving a physical impairment (Kristen et al., 2002) which also figured prominently as a facilitator of PLP in quantitative studies. Research of all types and ICF (WHO, 2001. Figure 5), 'F-Words' (Rosenbaum & Gorter, 2012; Figure 6) and 'F-Words' movement (CanChild, 2022) has created a precise terminology and common language for researchers to frame PLP and PA as participatory experiences. Several authors reflected on the complexity of sport/PA participation for YPwD and implications for rehabilitation stating that "therapists should design sports interventions with physical, cognitive, social and psychological content" and outcomes in mind (Table 1 – Clutterbuck et al., 2022, p. 956; Jaarsma et al., 2015; Shikako-Thomas et al., 2014; Shimmell et al., 2013; Ullenhag et al., 2024).

Table 1

Implications for rehabilitators – key messages summarised.

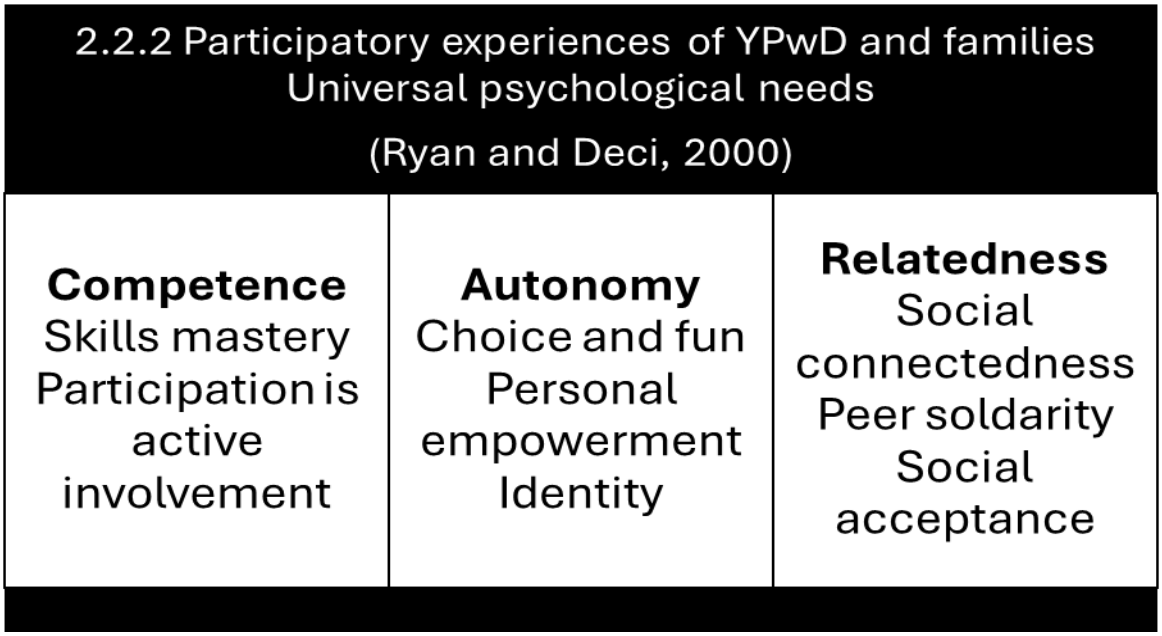


There was a consensus across all study designs that PLP is lower in the paediatric 'disabled population' compared to peers with TD. However, whilst the majority of studies within Ganz et al.'s scoping review (2021) were observational and used accelerometery to quantify PA in ambulant YPwD, earlier literature reviews (Longo et al., 2013; Palisano et al., 2011) included studies which used questionnaires or interviews. These methods are prone to self-report and recall bias and the structural modelling used often did not account for all the determinants responsible, meaning causation could not be attributed, e.g., in Longo et al.'s research (2013), the reliable and validated self-report measure of participation (Children's Assessment of Participation and Enjoyment - CAPE) asked participants to report PA activity in detail from the past four months. Furthermore, the cultural specificity of Longo's Spanish setting may differentially impact child and youth participation and this influence was not recorded in the study.

An additional area of consensus across all research types was how PLP was valued, along with evidence of its beneficial effects across social, psychosocial, quality of life and physiological dimensions (Van Der Linden et al., 2022). The qualitative literature within childhood disability explores meanings attached to PLP by YPwD by using ICF's corresponding participation domain as the lens through which they are explored. Ryan and Deci's Self-Determination Theory (SDT - 2000) was chosen as an appropriate aggregative framework (Table 1a) in this respect because YPwD and families PLP experiences can be accommodated within its three universal psychological needs of competence, autonomy and relatedness. When these needs are met, intrinsic motivation is created, which is a recognised psychological component of lasting healthy behaviours (Evans & Hickey, 2017; Green-Wilson, 2017), furthermore motivation is most acutely embodied within sport/PA participation (Standage & Ryan, 2020). Further evidence of SDT's fit is found in its broad meta-theory explaining "human motivation, personality and emotion that addresses motivated behaviour within and across life domains" and acknowledges social contexts will influence this process (Standage & Ryan, 2020, p. 36). However, a critique of SDT is that it does assume people are self-motivated and proactively seek psychological growth from optimal experiences, which may not be the case.

Table 1a

Theme 2.2.2 Participatory experiences of YPwD and families



Clutterbuck et al. (2022); Lauruschkus et al. (2015); Martin et al. (2020); Nyquist et al. (2020); Roth et al. (2022) highlighted psychological benefits as feelings of competency through skills mastery with a mixture of ages (eight-to-nineteen) and disabilities in their samples. Although sport participation initially arose from a basic psychological need for social acceptance (Allan et al., 2018), their increasing ability had motivated them further, sometimes into competitive sports (Lauruschkus et al., 2015). However, competition without ‘winners and losers’ could be perceived negatively, as did consistent experiences of defeat which impacted motivation (Lauruschkus et al., 2014) and within competition, sometimes physiotherapy programmes were perceived as integral to achievement. Andersen and Winther (2023, p. 9) identified an additional phenomenon of vicarious mastery when seeing peers succeed – “it always gives me some inspiration when I see how the others do it. It helps me a lot. Because if they do it, I can do it too”. Self-evidently, mastering skills requires active involvement beyond mere attendance and participation is conceptualised for YPwD in situated contexts as both a process and an outcome

within theoretical research (Imms & Green, 2020; Imms et al., 2021; Nyquist et al., 2020). As one participant shared, "There's no point being there if you're not involved" (Kilgour et al., 2023, p. 5); notwithstanding, these authors found involvement was a rapidly changing continuum and reminded rehabilitators that high levels were contextual and unsustainable over long periods.

Lauruschkus et al. (2014) identified YPwD (sixteen participants aged eight-eleven with Cerebral Palsy) felt competent and proud when they were independently proficient in chosen PA and showed this to others, which sharply contrasted with their usual dependent experiences. Using interviews and focus groups, the authors additionally highlighted children's desires to be physically active and have fun, to rehabilitators treating similar cohorts. Jaarsma et al. (2015); Nyquist et al. (2016, 2020); Roth et al. (2022) Ullenhag et al. (2024) and Lauruschkus et al. (2014, p. 287) identified the concept of fun as an intrinsic motivator to participate, even though it could be fatiguing " I'm getting tired the fun way ". Ullenhag et al. (2024) further underlined to rehabilitators the need for enjoyable activities and Shikako-Thomas et al. (2013) framed their study around this same need for adolescents with Cerebral Palsy. Making PA choices was important (Clutterbuck et al. 2022), related to activity type or whether it was experienced as a singleton or in groups (Ullenhag et al. 2024). Andersen and Winther (2023) found further psychosocial benefits during a multi-day sports camp via empowerment through role reversal, when participants became a resource to help others. However, they did highlight the difficulties of translating these experiences from a segregated sports setting into everyday PLP.

Allan et al. (2018); Anderson (2009); Badia et al. (2013); Booth and Snowdon (2019); Bragg et al. (2020); Clutterbuck et al. (2022); Chaapel et al. (2013); Groff and Kleiber (2001); Jaarsma et al. (2015); Lauruschkus et al. (2015); Martin et al. (2020); Moore et al. (2018); Pickering (2021); Pickering et al. (2012); Roth (2022); Shikako-Thomas et al.(2014); Shimmell et al. (2013); Te Velde et al. (2018); Ullenhag et al. (2024) identified psychosocial benefits of PLP including alternative identity formations, linked to the 'personal factors' domain within ICF. This was underlined by Shimmell et al.'s (2013) participants who stated health benefits alone did not motivate them to be physically active. Collectively, study samples represented a mixture of disabilities, primarily Cerebral Palsy but also Spina Bifida and other physical disabilities with

ages ranging from eight to nineteen. As individual studies, their differing data collection tools, sample sizes and particular compositions should be noted when attempting to generalise findings beyond the specific samples involved but as a collective the evidence becomes more representative of all YPwD. Andersen and Winther (2023); Groff and Kleiber (2001); Nyquist et al. (2020); Roth (2022) additionally highlighted how social identity was more readily developed with the 'safe environment of a 'disability sports' settings where feelings of inadequacy or stigma were minimised. Whilst Allan et al.'s (2018) qualitative interviews identified powerful psychological meanings attached to parasport involvement where sports participation experiences evolved from a basic psychological need for social acceptance as children to the shaping of an adult identity and self-concept as a person with a disability. These findings led Allan et al. (2018) to conclude that parasport involvement extended existing conceptualisations of full and effective participation. This is meaningful for my study since it supports participation as a legitimate outcome for physiotherapists and underpins psychologically informed practice, such as promoting YPwD's autonomy.

Hammer et al. (2019); Groff et al. (2009); Martin et al. (2020); Shapiro and Martin (2010); Scarpa (2011) noted the formation of an alternative athletic identity was a phenomenon for participants engaged in competitive and elite disability sport, indicating a specific approach is required for this YPwD subset to enable a

> nuanced understanding of psychological processes involved in experiencing post-traumatic growth among paratriathletes [and] provide healthcare specialists […] with information on the development of therapeutic interventions (Hammer et al., 2019, p. 675).

Hammer et al. (2019) studied fourteen elite para-triathletes with acquired life-changing disabilities that challenged their innate psychological needs for social relatedness, competence and autonomy. These psychological needs speak to ICF's personal factors and are meaningful for my study since physiotherapists need to address these domains, when developing therapeutic interventions for children who have acquired disabilities. Following acquired disability, the actual or perceived losses associated with diminished social networks, ability to execute previously easy physical tasks and feelings of lost control inevitably impact the therapeutic alliance (Crom et al., 2020). Appropriate interpersonal skills to maintain an effective

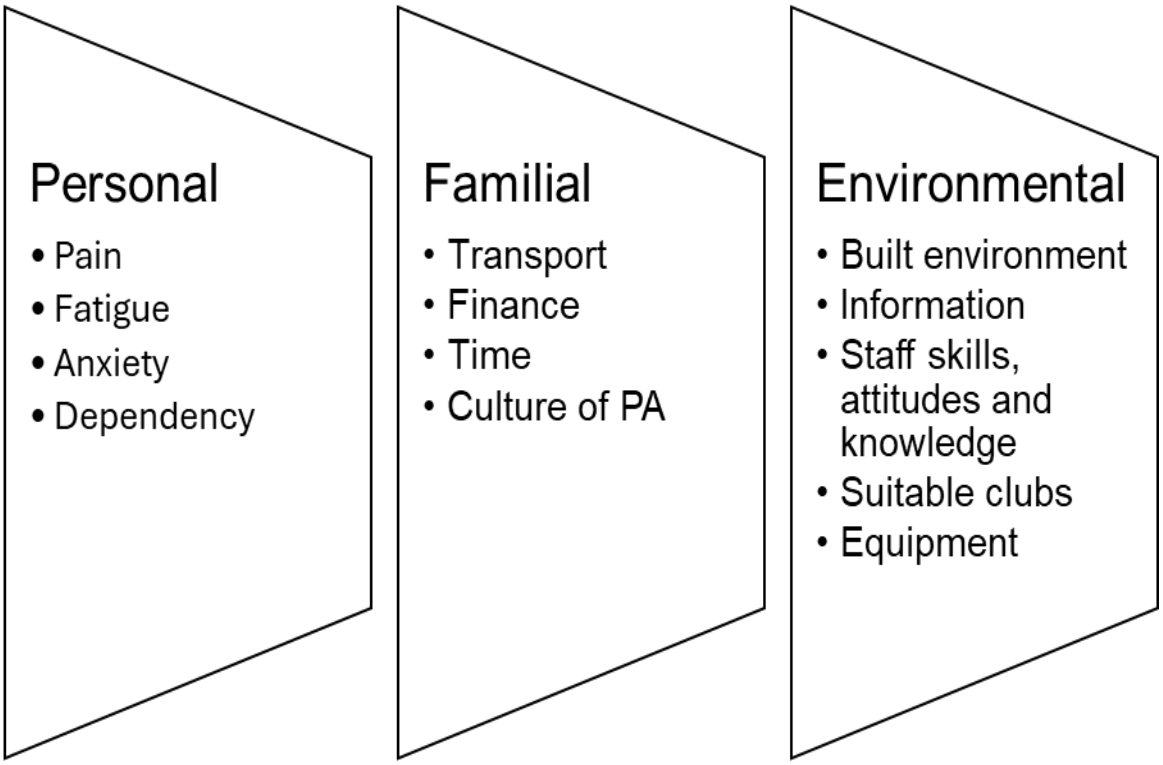
therapeutic alliance between physiotherapist and these subsets of YPwD and Hammer et al.'s (2019) comments suggest that rehabilitation professionals educate patients about the potential of PA and parasport to effect post-traumatic growth, particularly for those with pre-existing backgrounds in sport. However, as Martin et al. (2020, p. 1159) note, it should be remembered that athletic identities are complex, fluid, may have negative or positive effects and can only be understood as a product of multiple social and cultural discourses.

De Sousa et al. (2023); EFDS (2014); Jaarsma et al. (2015); Kilgour et al. (2023); Lumsdaine and Lord (2023); Nyquist et al. (2020); Shapiro and Martin's (2010); Ullenhag et al. (2024) identified social connectedness within sport participation as an extrinsic motivator for YPwD, in contrast to intrinsic motivation needed for home physiotherapy programmes. This was observed in all PA but particularly within team sports, where it reinforced belonging and was more valued than physical gains by YPwD and their parents. Social connectedness was also associated with improved social skills and social acceptance in adapted settings through shared characteristics, reduced isolation, recognition of self in others (Aggerholm et al., 2017; Ullenhag et al., 2023) and sharing knowledges as a community of interest; however, Anderson and Winther, (2023) found these phenomena were not solely setting-dependent and naturally, some YPwD preferred PA alone (Kilgour et al., 2023).

Adams et al. (2018); Jaarsma et al. (2015); Pickering (2021); Schleien et al. (2014); Shields and Synnot, (2016); Shimmell et al. (2013); Sivaratnam et al. (2020); Steinhardt et al. (2021); Ullenhag et al. (2023); Verschuren et al. (2012); Wright et al. (2019) explored the diverse perceived and actual barriers and facilitators of PLP using observation, participant diaries, limited option questionnaires, interviews and focus groups with mixed samples of parents, recreational staff and children and young people with differing physical disabilities. Collectively, this facilitated triangulation of common influencing factors (Table 1b) across studies, several of which also appear in Table 1c, based on Verschuren et al.'s comprehensive results (2012). Shields and Synott (2016); Verschuren et al. (2012); Wright et al. (2019) reflected on barriers and facilitators for PA, however in their samples, physically active young people with Cerebral Palsy and Spina Bifida were over-represented

Table 1b

Common factors influencing sport/PA participation.

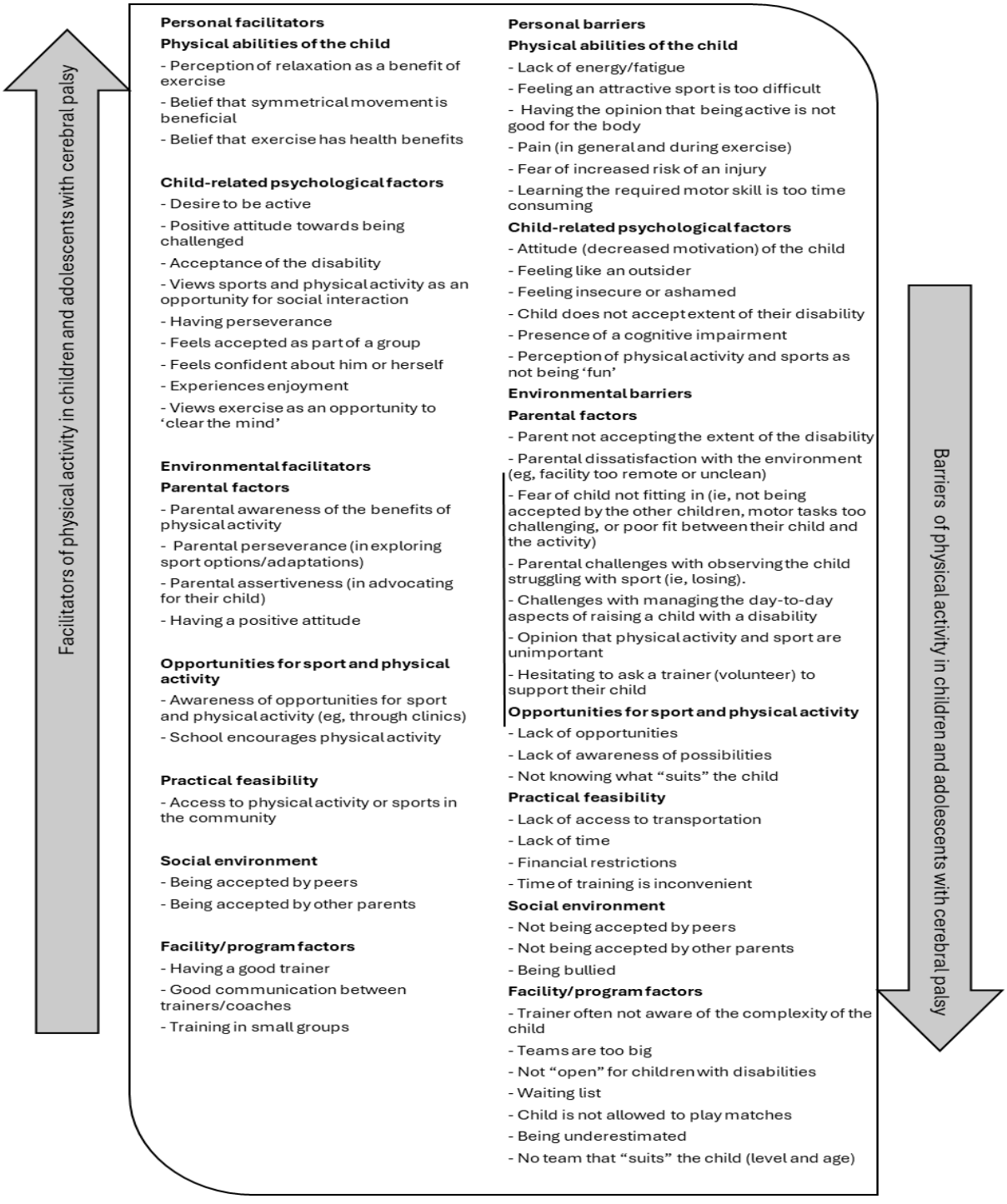


and so not representative of all YPwD, who tend to be sedentary. Furthermore, Adam's (2018) and Jaarsma et al.'s (2015) studies were set in the Netherlands and Steinhardt et al.'s (2021) in Norway, where sporting opportunities for YPwD are organised differently to the UK, such structural differences impact generalisability. Additionally, differing sample characteristics should be noted, e.g., Adam's (2018) studied children with developmental co-ordination disorder. Notwithstanding this, staff attitudes and familial factors were universal factors across study settings.

Although research in this theme informed physiotherapists perspectives when promoting PLP for YPwD (table 1) and suggestions for their role and conduct within it (Columna et al. 2020), it did not directly explore how physiotherapists experience PLP and make sense of its use within their practice, which is the focus of my study

Table 1c

Personal and environmental barriers and facilitators of physical activity in children and adolescents with CP



Note. Barriers and facilitators of physical activity. Based on Verschuren, et al., 2012, p. 490, (https://doi.org/10.1016/j.jpeds.2012.02.042 .)

2.2.3 Theme 3 - PLP and PA in paediatric physiotherapy practice

Theme three examined beliefs about the use of PLP by paediatric physiotherapists within practice and was the key theme in relation to the research aim and objectives of my study. It is framed by an acknowledged need to sustain long-term PLP so YPwD achieve associated optimal health benefits (Morris et al., 2019); and by the holistic principles of ICF (WHO, 2001, 2013) and F-Words (Rosenbaum & Gorter, 2012).

Models of practice

Research by Bult et al. (2011); Clark et al. (2015); Kang et al. (2014); Rosenbaum and Gorter (2012); Sharp et al. (2012); Shirazipour et al. (2020) integrated ICF's personal and environmental factors alongside activity and participation domains without apportioning hierarchy and legitimises physiotherapy practice epistemologies and scope, e.g., Shirazipour et al.'s systematic review (2020) assumes participation is a benchmark indicator of successful rehabilitation. Whilst Bult et al. (2011, p. 1528) concluded that improved participation in leisure activities was a function for the "whole rehabilitation team", undertaking interventions that concurrently addressed physiological, psychological, individual and social factors. These findings contrasted with more dated literature where paediatric physiotherapists practiced solely within the biomedical model of impairment, solely focussed on therapeutically 'fixing' YPwD (Rosenbaum & Gorter, 2012, p. 457). The notion of 'fixing' arose from beliefs that motor activity had to be done 'normally' using TD as the benchmark (Rosenbaum & Gorter, 2012). In reality, atypical motor patterns exist, including those used within disability sports, which are still functional, and my study explored whether while making sense of 'sport as a therapy choice', physiotherapists "may have sacrificed developmental progress in activities and participation on the altar of 'normality" (Gibson et al., 2011, as cited in Rosenbaum & Gorter, 2012, p. 459).

The limitations of participation studies are noted, e.g. Kang et al.'s (2014) participation model, although based on contemporary theories and frameworks, empirical research and practice knowledge, was unable to definitively establish the efficacy or feasibility of interventions. Similarly, Clark et al.'s (2015) sample of two children severely limits its power as a quantitative study to generalise any findings and was included because it was the only study located which aimed to

quantitatively assess the effect of integrating physiotherapy intervention into a local sports and leisure format. Whilst Sharp et al.'s (2012) literature review was small-scale and systematised, which introduced the possibility of researcher bias, evidence from Bult et al.'s (2011) systematic review design was more trustworthy as it utilised more databases to capture all relevant sources; such triangulation therefore facilitated wider generalisation to children and young people participating in adaptive PA.

Integration of sport/PA and physiotherapy

Limited research has so far recognised any direct synergy between paediatric physiotherapy interventions using sport/PA and any possible impact on engagement with programmes. This is despite a historical culture of physiotherapists utilising sport to attain physiotherapeutic objectives (improvement of body structure and function) within the rehabilitation of injured, adult military veterans (Brittain & Green, 2012; Chockalingam et al., 2012; Roberts et al., 2020) and spinal injuries (Williams et al., 2018). Research literature styled the relationship between sport/PA, PLP and physiotherapy in diverse ways, e.g. Sharp et al. (2012) described the benefits of PA promotion. Alternatively, signposting to PA (Pickering, 2021) or cross-sectoral partnerships with community providers was conceived as an appropriate incorporation into clinical practice within Hartley's (2018) discussion paper, with functions similar to the navigator role explored by Iverson et al. (2021). Sivaratnam et al. (2020) additionally highlighted clinicians' role in educating coaches about practical strategies for inclusion and the health condition of children with Cerebral Palsy.

Gorter et al. (2016); Rowland et al. (2015); Shikako-Thomas et al. (2014); Verschuren et al. (2012) enlarged the PA promotion role to formally integrate PA into the work of rehabilitation professionals. Although Shikako-Thomas et al.'s (2014) systematised summary addressed neurologists, its 'key take home messages' were generalisable to all health care professionals treating Cerebral Palsy. Using ICF to frame conclusions, it highlighted the limited research measuring the influence of personal and environmental factors upon leisure participation, in contrast to that quantifying impairment and activity limitations; and so encouraged integrative approaches. Gorter et al. (2016) made valid recommendations for clinicians to

incorporate PA within practice and allow its use as outcome measures by capturing data in mixed ways to enable triangulation. However, study limitations should be noted, e.g., Rowland et al.'s., (2015) report is based only on expert opinion and findings should be interpreted against the cultural specificity created by the insurance-based healthcare system of the USA. A further factor is the USA's practice of therapeutic recreation which would support and influence an integrative approach. Similar cultural specificity caveats apply in the work of Gorter (Canada) and Verschuren (Holland).

Ganz et al. (2021) and Kolehmainen et al. (2011) acknowledged how ongoing disability influenced integration of PLP and how this should modify implementation, so physiotherapists emphasised activity change behaviour with prior motivational and self-efficacy strategies for YPwD and their families, rather than promoting PLP as a 'fix' for impairment. Their studies focussed on creating theoretical models and practical mechanisms for physiotherapists to encourage YPwD towards PLP, rather than by directly focussing on physiotherapists' sense making of these approaches. However, Kolehmainen et al. (2011, p. 4) did acknowledge the need of a focus group of physiotherapists and occupational therapists "to discuss the assumptions underlying the hypothesised relationships between the various strategies and the predictors" [of PLP]. Wiart et al. (2015, p. 84) explored deeper understandings about integration, if impairment goals were privileged over PA's psychosocial benefits when utilising community-based fitness programs within clinical rehabilitation. The mixed method study and mixed sample of parents and representatives of fitness programmes and facilities brought some triangulation to their conclusions. Their exploration crystallised into one question, "are we at risk of medicalising community-based fitness programs?" Their warning is legitimate and should be heeded but assumes that all practitioners attend solely to the impairment domains within ICF; when all ICF domains are embraced, it could be counter argued that 'normalisation' of clinical rehabilitation is created. My study aimed to provide participants with an opportunity to share how they make sense of such questions in their everyday practice, recognising that multiple realities may exist.

<u>YPwD and parental perspectives.</u>

Qualitative research using a mixture of interviews and focus groups and mixed

disabilities (primarily Cerebral Palsy) by Booth and Snowdon (2019); Bragg et al. (2020); Moore et al. (2019); Peplow and Carpenter (2013); Pickering (2018, 2021); Wiart (2010) provided YPwD and family perspectives concerning how they make sense of sport/PA within physiotherapy interventions, by highlighting their need for meaning, context and relevance within physiotherapy programmes. Parents felt programmes needed to be holistic and consider child and family preferences instead of the current prescriptive style focussed on the child's impairment (Peplow & Carpenter, 2013). Whilst power wheelchair athletes emphasised moving away from 'fixing' motor functioning to focus on meaningful activities; alongside a clear need for fun and play to obtain engagement (Bragg et al., 2020, p. 647) – "Exercises were boring, why do you want me to pick up a weight? Then she [therapist] started to take a different approach, okay, now we're going somewhere…teach kids the way they want to be taught, through play".

Where relationships between sport/PA and physiotherapy have been specifically explored, YPwD and their families had conflicted opinions about the merits of separation or integration. Some parents conceived of physiotherapy as a separate activity that had to fit into already busy family routines (Booth & Snowdon, 2019). Elsewhere, Pickering (2018, 2021) and Wiart et al. (2010) collectively showed YPwD and families in focus groups and interviews recognised a symbiotic blurring between sport/PA and physiotherapy goals…

> Therapy activities were viewed as a potential strategy for enhancing physical fitness, and sometimes recreational activities were viewed as having therapeutic benefits (Wiart, et al., 2010, p. 252).

In addition, integration of sport/PA into physiotherapy was valued for several reasons, that extended beyond restoration of physical function…

> Rehab has to include sport. I think it is vital on so many levels because it's one thing we can do for their morale … give possibilities … it is important for physiotherapy to integrate sports into therapy … versus silos where lines don't cross. There are benefits of such … it's not about fixing (Bragg et al., 2020, p. 647).

Verbatim extracts from YPwD and their families illuminate their lived experiences of sport/PA and my study sought likewise for physiotherapists; a space to reflect amid busy professional lives and provide their perspectives.

Moore et al. (2019) found beneficial impact when translating aspects of football activities for YPwD into clinical practice when physiotherapy stretching and strengthening activities were contextualised within football team training.

> compliance with formal physiotherapy exercises, such as stretching and muscle strengthening, frequently a challenge for YPwD, was not an issue when they were training in the football team (Moore et al., 2019, p. e212).

Moore et al. (2019) also highlighted additional economic and physiotherapy service delivery implications by concluding that YPwD who are more active and enjoy PA are less likely to depend on formal physiotherapy, thus reducing the burden on physiotherapy services.

Caveats apply when generalising the findings of individual qualitative studies to all YPwD, as their collective situated samples comprised fourteen children and young people with Cerebral Palsy and fifty-eight parents. Cumulatively, they provide more trustworthy information on integrative perspectives for the Cerebral Palsy subset; however, it should be noted that integration of sport/PA and physiotherapy and the implications of that was not the primary research question in the studies, excepting Booth and Snowdon, 2019. Bragg et al.'s (2020) study with power footballers was included, as full-time wheelchair users may undertake chair-based PA and, equally, ambulant YPwD may choose to engage in power wheelchair football as well as ambulatory PA. Furthermore, Moore et al.'s (2019) study was a published abstract of a poster presentation and full source material was not accessible to interrogate. Finally, it is important to note that data may be subject to self-reporting bias in focus groups and interviews in all of the studies; only Pickering (2021) additionally used photographs, observation and participant diaries to strengthen conclusions about YPwD's participation in recreational activity.

Perspectives of physiotherapists

There is no extant research exploring paediatric physiotherapists sense-making about 'sport as a therapy choice' for YPwD and their families. The reasons for this literature gap remain speculative and the sole investigation of this area (EFDS, 2014) was not designed to capture the meanings participants brought to their lived experiences. The brief online survey shared quantitative data using descriptive

statistics in a non-peer reviewed professional newsletter. A 99% participant agreement rate concerning utility of the approach, suggested respondents were a self-selecting sample of paediatric physiotherapists who had positive experiences of the phenomenon and enthusiasm for the intervention. Therefore, it appears that the term ‘sport as a therapy choice’ has been integrated into the paediatric physiotherapy vocabulary without adequate exploration of the meaning(s) attributed to it by practitioners. The time is therefore ripe for deeper explorations of personal meanings within everyday practice, including any implications of ‘sport as a therapy choice,’ including whether physiotherapists might undergo role confusion or loss of professional identity?

Wright et al.’s (2019) study exemplified the missing knowledge in qualitative studies with paediatric physiotherapists using PLP within their practice. It focussed only on their perceptions of barriers and facilitators to PA for YPwD (environmental or person related) with recommendations for best practice (see also Table 1). Furthermore, it was clear when discussing barriers (time pressures) that physiotherapy was seen as a separate additional commitment to PA, and so any implications of PA’s usage upon physiotherapy remained unexamined. In addition, there was no exploration of physiotherapists’ lived experiences when using sport/PA and preferred epistemologies, which my study sought to capture. It should be noted that Wright et al. (2019) exhibited certain methodological issues, e.g., the profession(s) of the six allied health and sports development professionals interviewed was unidentified and was necessary to judge applicability. Furthermore, reporting issues were possible in terms of whether clinicians would report any negative findings as they came from one setting, which limits the possible pool of responses.

Scope of practice

The legitimate scope of practice of paediatric physiotherapists in relation to sport/PA is both evolving and sometimes contested, e.g. Noyes et al. (2017) in a nursing journal, described YPwD as ‘confused’ for conflating fitness and physiotherapy and argued that clearer delineation would reduce misconceptions and increase YPwD’s self-management of fitness; their suggestions assumed the exclusion of physiotherapists from physical exercise. Noyes et al.’s (2017) longitudinal study undertook two rounds of qualitative interviews with children and families which

provided more trustworthy data collection, alongside triangulation through a variety of respondents. However, child participants were already physically active, meaning the responses of physically inactive children were not captured, nor those who use wheelchairs. It is possible thinking has since evolved; paediatric physiotherapists do not regard physical fitness as an area 'out of bounds', they utilise sport/PA and are aware of their unique suitability and knowledge to undertake these practices.

> Clinicians have expert knowledge of their client's disability and are a trusted source of information for families. They are therefore, "perfectly poised" to create links with community sport and recreation providers and provide them with training and support, as well as to actively empower young people and their family to enjoy an active lifestyle (Wright et al., 2019, p. 1500).

2.3 Societal and cultural discourses – healthcare, disability sport and disability

The literature review revealed three interdependent discourses (healthcare, disability sport and disability) which contextualised my study within larger sociocultural and historical landscapes (Martin et al., 2020). Elements relevant to my participants' lived experiences are highlighted, as IPA's meaning-making is "always already enmeshed with language and culture" (Smith et al., 2009, p. 194). Discourse awareness facilitates enhanced appreciations of how situated and related human understanding arises.

2.3.1 Healthcare discourse

The healthcare discourse influencing physiotherapeutic interventions for those with long-term conditions, such as YPwD is evolving. This is backgrounded by neoliberal reforms driving healthcare systems (Nicholls, 2018), where the growing influence of economics and marketisation of delivery is privileged over the right to health (Sakellariou & Rotarou, 2017). Such reforms disproportionately disadvantage those with disabilities (Sparke, 2017; Yates, 2015) who have increased or long-term healthcare needs and the marketisation inherent within neoliberalism negatively evaluates them as "costly bodies" who use up limited healthcare resources (Sakellariou & Rotarou, 2017, p. 3). Although Sakellariou and Rotarou (2017) used

Chile and Greece as the basis for their discussion and conclusions, the study is included since neoliberalism is a global phenomenon.

Further evolution is observable within changing delivery models for YPwD, including consultative styles, reduced clinical resourcing and 'hands-on' physiotherapy by qualified staff and more delegation (Nicholls, 2018) to the 'team around the child' (therapy assistants, education staff and families) as reported within an extensive, UK-based National Institute of Health Research (NIHR) qualitative scoping review (Beresford et al., 2018). This study captured authentic accounts from multiple respondent types using diverse study designs to triangulate data which improved the strength of its conclusions. The emergence of individual responsibility is an aspect of neoliberalism operationalised in the NHS's focus on patient self-management and visible within strategic NHS policy documents (e.g., NHS Long Term Plan – NHS England, 2019) as well as policy commentaries from respected sources such as the Kings Fund (Ham et al., 2018). However, when pursued exclusively, this approach ignores social determinants (Keleher & MacDougall, 2009), individual's capacity and structural disadvantages which disproportionately affect and stigmatise some YPwD and their families.

> negative evaluation can be further exacerbated by the neoliberal 'responsibilisation' for one's health, which widely ignores social determinants of health – including factors such as poverty, inequality, poor built environment, social exclusion, and poor public policies and services – that create and perpetuate health inequalities, and lead to compromised access and utilisation of healthcare services by people with disabilities (Sakellariou & Rotarou, 2017, p. 3).

Neoliberal models may reduce NHS workload, and respond to budgetary restraints, demographics (growing patient numbers), medical advances (greater morbidity amongst YPwD) and workforce shortages; but paediatric physiotherapists may be unaware of underlying discourses driving these policies or understand the implications of self-management approaches that ignore the wider social determinants of health or individual's capabilities.

2.3.2 Disability sport discourses

Research literature focussed on disability sport highlighted social discourses that reflect the empowerment of people with disabilities in society generally and within sport specifically. The discourses also revealed ongoing tensions about how adapted sports affect societal inclusion, but without comment about impacts upon 'sport as a therapy choice.' Bragg et al. (2020) found diverse beliefs among YPwD and families

> [Who] challenged the dominant conceptualizations of inclusion which are reflected in the discourse about inclusive versus specialized adapted sport. While some consider specialized sport as a form of segregation and exclusion from the mainstream, others posit that inclusion is an individual experience that is rooted to the subjective experience of belonging (Bragg et al., 2020, p. 648).

This speaks to Kiuppis's commentary (2018, p. 4) concerning the need "to attribute each approach equal importance and validity instead of discrediting segregated structures and glorifying supposedly inclusive ones". However, Hutzler et al.'s (2013) post-intervention questionnaire study with ninety basketballers found improved quality of life and perceived social competence was greatest in inclusive settings. This emphasises how multiple realities may similarly emerge when analysing the influence of sport/PA settings in my study. However, methodological issues should be noted within the composition of Hutzler's four intervention groups alongside a sole outcome measure, i.e., questionnaire, which is prone to reporting bias. If additional measures such as observation and in-depth interview had been employed, several data collection methods would have enabled triangulation and strengthened the conclusions.

Societal discourses surrounding elite disability sport, exemplified by the increasing valorisation (Pack et al., 2017) and media profile of the 'supercrip' (Channel 4, 2012; Martin et al., 2020) may influence physiotherapists working with YPwD who compete at elite levels. Pack et al.'s (2017) qualitative study explored how swimming affected Paralympians perception of self and identity development through positive transformative experiences of elite disability sport; however, the resultant discourse created may not be translatable to most YPwD seen by physiotherapists. Furthermore, Berger's (2008) qualitative narrative interviews with thirteen university wheelchair basketball players (mostly male), coaches and a physical therapist trainer noted how the 'supercrip narrative' has the potential to be a dominant discourse and

where this is so, it may have divisive effects and negative influences on the lower-level PA participation undertaken by YPwD. Media portrayals of elite disability sport such as the 2012 London Paralympics played an influential role in creating and maintaining societal discourses such as the 'supercrip narrative' and Rees et al.'s (2019) systematic review summarised several valid conclusions about how media shapes the disability sport discourse by embedding medical models of disability and societal perceptions of disability and inclusion.

> the media has a powerful role in defining norms and creating opportunities for changing perceptions of disability […] recent studies have documented an emphasis on athleticism rather than disability, but a narrative underpinned by the medical model of disability remains […]. Furthermore, the tendency for the media to promote elite athletes with disability as "superhuman" has the potential to create further division and disadvantage within the disability community (Rees et al., 2019, p. 379).

The 'supercrip' narrative reinforces a view of disability defined by the medical model (unlike the social model of disability or ICF used in physiotherapy) since disability is portrayed as a deviation from the normal and a personal tragedy in need of rectification. It reinforces the classification system of competitive disability sport by emphasising physical difference and quantifying impairments to enable a 'level playing field' and fair competition and this presents a conundrum for physiotherapists who wish to work holistically with YPwD. Finally, Allan et al. (2018) was typical of studies which located a social justice dimension, beyond existing disability sport narratives of 'restitution' and 'quest'. When this lens was used to view participants' 'discovery' narratives, it framed a wider conceptualisation of sports participation as a quest for social justice.

Disability sport research informed my study because it revealed sports participation discourses that illuminated how 'sport as a therapy choice' was being operationalised, e.g., framing PA participation as a right deepened my interpretation when my participants talked of more socially just and equitable participatory experiences for YPwD and their families. Ultimately, collective awareness of these discourses and their influence provided a juxtaposition to an "idealised and idealising view of disability sport" as a simple rehabilitative panacea (Swartz et al.,2018, p. 40) My study explored if these disability sport discourses contextualised participants sense-making of 'sport as a therapy choice' and avoided deductive approaches that

posit sport/PA in rehabilitation as a universal solution for engagement with physiotherapy.

2.3.3 Disability and societal discourses surrounding YPwD.

Societal discourse surrounding YPwD has evolved in recent decades, particularly observable in their increasing inclusion into mainstream educational settings enshrined in law by the Warnock Report (1978) and the 1981 Education Act, emerging as a concept and social practice in the 1990s (Dunne, 2009) and extending to PA in school as well as academic activities. The significance of these changes for my study relates to how paediatric physiotherapists might frame and present sport/PA within mainstream educational or community settings. The use of ICF in preference to previous models that defined YPwD solely in terms of impairment and deviation from peers with TD has blunted the discourse which formerly informed an ideology for segregation within education and society (Pickering, 2018, 2021). Furthermore, Pickering et al. (2012) advanced an additional ethical imperative to position and define YPwD not by their impairment, and with a right to access PLP in the same way as their peers with TD. My study will explore whether such an ethical dimension was advanced by my participants when exploring aspects of professionalism in relation to ‘sport as a therapy choice’.

The second discursive change was mediated by shifting social attitudes towards those with disabilities and their place in society when viewed through ethical, legal and moral lenses and undoubtedly “the socially dominant culture shapes the way disability and impairment are viewed and has contributed to the oppression of disabled people” (Riddell and Watson, 2014, p. 1). It could be said that existing social attitudes were challenged by evolving models of disability when 1960’s civil rights ideologies prompted disability activists to question their own exclusion from society and create the social model of disability. Since then, this model of disability has continued to be a referent for societal discourse to challenge ongoing bias, stigma and discrimination, underlining the point made by Riddell and Watson (2014, p. 1) that “culture is both a source of liberation and oppression for disabled people”.

Certain issues of bias, stigma and discrimination within societal discourse are operationalised through the terms used in academic writing and demonstrate the power of language. In my study, I used the person-first term ‘young people with disabilities’ (YPwD) in preference to ‘disabled young people’. This was prompted by needing to identify the particular subset of service users involved (young people with long-term conditions that were not ‘fixable’ through physiotherapy) to both readers and potential participants. Secondly, the use of ‘person-first’ language is taught in health professional programmes and mandated in scholarly journals (Crocker & Smith, 2019; Gernsbacher, 2017) as opposed to ‘identity-first’ language; with the aim of referring to everyone equally as a ‘person’. However, as Gernsbacher (2017) found, because this has not been applied equally to those with TD, it reinforced difference rather than eliminating it; and several disability scholars have alternatively argued for identity-first terminology (Dunn & Andrews, 2015). Therefore, I chose to consistently use a well-intentioned core principle by referring to ‘peers with typical development’ rather than ‘typically developing peers.’ Dunn and Andrews (2015) have argued that both identity-first and person-first terminology can be accommodated within ICF’s definition of disability (WHO, 2007 - previously outlined in 2.1.1.). However, I accept that my terminology, as a person with TD (health professional), using ‘YPwD’ may itself constitute an environmental factor indicative of an attitudinal position (Dunn & Andrews, 2015).

2.4 Literature review summary

The literature review revealed three main themes which are contextualised by changing societal discourses ranging across health, disability, and disability sport.

Firstly, long term engagement with paediatric physiotherapy was problematic for YPwD, co-existing with reduced PA and sedentary behaviour amongst YPwD.

Secondly, growing research is exploring the PLP experiences of YPwD and their families from multiple perspectives and sometimes researchers have briefly explored any implications for paediatric physiotherapists and included advice; but it has not been the focus of their study.

Thirdly, the role of paediatric physiotherapists in relation to PLP has received attention and there is a growing body of literature encouraging physiotherapists to promote and signpost YPwD towards community-based PLP (Pickering, 2021) with several suggesting integration of PLP into physiotherapeutic approaches. Researchers have rationalised this by drawing on changing healthcare discourses, models and approaches which privilege physiotherapeutic goals equally, embracing impairment, activity and participation (F-Words, 2011; ICF, 2001; Majnemer, 2009).

Gap in knowledge

Research suggesting paediatric physiotherapists use PLP in practice did not include any exploration of the approach or the meanings they might bring to 'sport as a therapy choice.' There is therefore a gap in current knowledge as to how paediatric physiotherapists experience and report PLP which merits further enquiry.

The experiential gap expressed as the missing beliefs and values, implies an epistemological gap. For each individual participant, making sense of 'sport as a therapy choice' will be derived from their beliefs and values and will underpin what knowledge is legitimised, how they came to this knowledge and with what certainty. Limited research exists in this area with only two questionnaire-based studies by Bientzle et al. (2014, 2019) and Beenen at al. (2018) who made the general observation that clinicians who possessed more sophisticated epistemic beliefs were better placed to deal with the complexities and uncertainties of everyday practice and multiple evidential resources; this came with experience in professional practice, where it was exercised in more flexible and dynamic ways. Beenen et al. (2018) also found greater epistemic sophistication in Northern European countries. Unfortunately, these studies were conducted in Europe, not the UK and the specialities were not revealed. In addition, some of the subgroups (countries and educational levels) within the Beenen et al. (2018) survey were small, which challenged statistical power. All of these factors means any results must be interpreted accordingly and may not be generalisable to UK physiotherapists. Therefore, an absence of studies exploring the epistemological beliefs of UK physiotherapists would indicate a particular gap in the literature.

The literature review has identified the limitations of current knowledge and established a gap, highlighting the need for my study and its position within extant literature. The limited content within research literature about the relationship of PLP to physiotherapy and how paediatric physiotherapists experience and operationalise it are only partially informed by existing qualitatitive studies. Acquiring qualitative data and subsequently interpreting paediatric physiotherapists' experiences about how they make sense of PLP and physiotherapy, would start to bring clarity and aid everyday physiotherapy practice.

Justifying the study topic leads onto consideration of an appropriate methodology and methods in chapter 3.

CHAPTER 3 – METHODOLOGY, METHOD AND PROCESS

3.0 Introduction

This chapter outlines the research process and justifies the methodology and methods selected. The literature review revealed missing knowledge about paediatric physiotherapists lived experiences which prompted selection of a specific qualitative methodology and method to address the research aim and four research objectives. Sequential stages are described, e.g., recruitment, sample selection and size, interview design, ethical considerations and data analysis. A mitigation strategy of remote interviewing avoided face-to-face interviews (suspended due to Covid-19) and documentation was revised accordingly (see Appendices).

3.1 Selecting and justifying a methodology.

My study sought to explore the aforementioned knowledge gap by deeply focussing on paediatric physiotherapists' experiences with YPwD, specifically how they make sense of the phenomena of 'sport as a therapy choice'. As Greenhalgh (2019, p. 170) states "If the objective of the research was to explore, interpret or obtain a deeper understanding of a particular clinical issue, qualitative methods were almost certainly the most appropriate ones to use". A quantitative approach would therefore be methodologically unsound, as the phenomena was unexplored. I needed to explore how participants made sense of what was happening and the meaning of that happening for them (Smith et al., 2022) before quantification of *what happens* such as causation, efficacy of intervention or predicting outcomes (Creswell, 2023), could take place. Furthermore, my experiences in study and professional practice have led me to philosophical worldviews which do not align with positivistic epistemologies underpinning quantitative approaches. In contrast, a qualitative approach could underpin the study of 'things' in their natural setting, and attempt to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2017, as cited in Greenhalgh, 2019, p. 165). Gibson (2012) explained how such qualitative methodologies are key to expanding the knowledge base within physiotherapy, as the profession matures and becomes increasingly complex.

My choice of a specific qualitative approach was influenced by the need to achieve coherence between the research approach and the research itself (Holloway & Galvin, 2017) acknowledging four key areas.

- The research aim and objectives, which are directed towards making sense of individual's lived experiences.
- My epistemological commitment of interpretivism and constructionism towards emerging data, e.g., accommodating multiple meanings and showing reflexivity.
- My professional background, which aligned with participants and generated 'insider' knowledge and a shared 'insider' identity.
- My in-depth interest in the phenomenon of 'sport as a therapy choice,' whilst simultaneously aiming to remain open-minded towards participants' lived experiences.

Alternative qualitative methodologies were considered but a methodological choice underpinned by the philosophical approaches of phenomenology appeared most appropriate, since I was focussed on the idiographic and the experiential (Smith et al., 2022). My role and position within the process of phenomenological exploration was integral and I did not aim to generate an explanatory theory (Creswell, 2023), which discounted Grounded Theory. Regarding discourse analysis, although the influence of the discourse within participants' use of language was recognised, my primary focus was hermeneutic analysis to make sense of participants' sense-making concerning 'sport as a therapy choice'. Finally, although thematic analysis shares some similarities with IPA in terms of theme generation, it has wider focus beyond the experiential and is better suited to group data collection (Braun & Clarke, 2021).

The next step involved identifying the most appropriate philosophical tradition within phenomenology, which crystallised into a choice between Giorgi's structural descriptive method, utilising the Husserlian philosophy of careful description, or the interpretative, hermeneutic approaches of Smith (King & Horrocks, 2010) influenced by the work of Heidegger. The hermeneutic phenomenology of Interpretative Phenomenological Analysis (IPA) was selected because it assumes an

epistemological and ontological position of social constructionism to collectively explore and give meaning to complex phenomena through an inductive reasoning process. IPA's phenomenological approach, underpinned by an Interpretivist philosophy appropriately accommodated the multiple realities shared by my participants (Nicholls, 2009) in an unexplored area (Smith et al, 2009). IPA's double hermeneutic approach also cohered, as the aim was to examine what the topic area meant to both participants and author (Finlay, 2006b; Finlay, 2011), and to interpret it through the prism of their perceptions (Larsson et al., 2012). In contrast, Giorgi's method of descriptive phenomenology accepts "the researcher can stand aside from their own assumptions in analysing the data" (King & Horrocks, 2010, p. 198), further underlining its unsuitability for me. IPA addresses these tensions and Heideggerian hermeneutic phenomenology has been termed a reflexive co-construction of data within a continuous conversation where…

> The researcher is considered inseparable from assumptions and preconceptions about the phenomenon of study. Instead of bracketing and setting aside such biases, an attempt is made to explain them and to integrate them into the research findings (Robson, 2011, p 151).

My beliefs and previous positive experiences of using 'sport as a therapy choice' to promote engagement of YPwD, plus my shared professional lifeworld made me both a 'passionate participant' and an 'insider'. My location further enabled the 'fusion of horizons', a hallmark of hermeneutic phenomenology which envisages the intersection of the text with its interpreter and originates within Gadamer's work on intersubjectivity (Holloway & Galvin, 2017). Thus, the Heideggerian approach to IPA facilitated both transparency and reflexivity whilst accommodating my theory of mind (Goldstein, 2017). Goldspink and Engward (2019, p. 291) visualised this reflexivity as participants' and researcher's words resonating with each other as "echoes" in the research process and helped me understand how reflexivity aided my dual perspective of being a researcher who dwells both inside and outside of their research.

In summary, IPA's idiographic, contextualised and phenomenological approach accommodated rich data and provided an interpretive mechanism to explore the meanings of complex and ambiguous lived experiences (Finlay, 2006a). The phrase 'sport as a therapy choice' was deliberately chosen to cohere with an Interpretivist

philosophy because it accommodates multiple realities about sport/PA in relation to paediatric physiotherapy programmes and any influence on patient engagement.

3.1.1 Selecting and justifying a qualitative method.

Qualitative methods cover a range of approaches including ethnography (passive or participant), semi-structured interview, narrative interview and focus groups and all aim to achieve analyses as close to the truth as possible. The semi-structured individual interview with interview guide was selected as it is recognised to provide optimal access to a detailed, rich, first-person account, with participants speaking freely and enough time for considered responses (Smith et al., 2009, 2022). Smith and Nizza (2022, p. 9) noted that this method is the best way to elicit “first-person subjective accounts of specific embodied life experiences”. Crucially, individual interviews also facilitate the co-construction of data within a continuous conversation between researcher and participant (Smith & Nizza, 2022) and are the preferred method in IPA (Smith et al., 2009, 2022). The topic area was not appropriate for narrative interview and focus groups bring complex analytical challenges to the phenomenological process, as well as loss of anonymity and potential of social desirability bias.

3.1.2 Addressing quality.

Qualitative researchers recognise the importance of demonstrating quality within their research; and rigor is desirable whatever methodology is employed (Morse et al., 2002); but they also recognise the inappropriateness of appraising qualitative research using criteria designed for quantitative research. Criteria should also be congruent with the philosophical underpinnings of specific qualitative approaches and be coherent with constructivist styles of subjective inquiry. Lincoln and Guba (1985) alternatively advanced ‘trustworthiness’ comprising four aspects of credibility, transferability, dependability, and confirmability, in preference to quantitative criteria of truth, generalisability, and reliability and such appropriate criteria are fundamental in achieving accurate appraisal. One evaluative option are qualitative appraisal tools (CASP; JBI) or the COREQ methodological checklist (Appendix 8.4.6 shows my

completed COREQ checklist) which are useful starting points but Smith et al. (2009, 2022) note they may create mechanistic assumptions between method and outcome and miss more subtle features (Smith et al., 2009, 2022).

My study aimed to demonstrate validity in several ways, summarised as my responsiveness, methodological coherence, sample and sampling adequacy, a rigorous analytic approach, and data saturation (Morse et al., 2002). Morse et al.'s (2002) mechanisms parallel four broad principles outlined by Yardley (2000, as cited by Smith et al., 2022, p. 148) for assessing quality. Firstly, regarding *sensitivity to context*, my study sought to produce a rich exploration of lived experiences of 'sport as a therapy choice,' through an idiographic focus and was responsive towards the particular contexts shaping meaning-making among my participants, alongside interactional co-construction during interviews. Secondly, *commitment and rigour* were shown through the use of verbatim extracts, data immersion and careful data-driven analysis ensuring participants' voices were heard; such systematic data analysis proportionately presented only data-supported themes. Thirdly, *transparency and coherence* were demonstrated through clearly describing the research process, organising themes into coherent 'families' whilst accommodating divergence and demonstrating close adherence to IPA principles of phenomenology, idiography and hermeneutics. For example, testing the validity of analytic stance by sharing initial findings from four interviews with both supervisors, as a form of interim mini audit (Smith et al., 2022). Finally, in keeping with the aims of a professional doctorate, I aspired to produce a study with *impact and importance* to paediatric physiotherapists working with YPwD.

Verification

Focus groups were not used after data collection to verify themes, as this would have removed participant anonymity. However, individual, initial analyses were shared with each participant as an informal way to include them as co-analysts, an innovative approach described by Smith et al. (2022). Member checking to develop experiential understandings and triangulate themes is promoted as one validity strategy (Creswell, 2023; Lincoln & Guba, 1985). However, as Morse et al. (2002) cautioned, checking an analysis with participants can actually reduce trustworthiness because it may prompt a more descriptive analysis, or in more developed analyses

following abstraction and synthesisation, individuals may not recognise themselves or their experiences. Therefore, member-checking in my study was cautiously undertaken at the initial analysis stage only, whilst being cognisant of these dangers.

Exploring bias

The need to recognise and understand bias is regarded as crucial in the production of evidence-based health research (Galdas, 2017) to avoid distortion of results and ensure quality; with potential bias included within the CASP qualitative appraisal (2018). However, the term bias originates in quantitative research and it is arguable that it is incompatible with the philosophical underpinnings of qualitative research, nor the reflexive, subjective nature of its enquiry (Thorne et al., 2016). Therefore, in order to obtain rigor and trustworthiness, I instead aimed to demonstrate reflexivity and transparency about my preconceptions, relationship dynamics, and analytic focus, including the processes by which data was collected, analysed, and presented (Galdas, 2017, p. 2).

Within my study, reflexivity was operationalised by providing examples of critical reflections from a reflective field journal based on notes created during the data collection process (Appendix 8.6.4). These extracts critically illustrated the influences and assumptions brought to the data analysis and represented a critique of my own theoretical and methodological techniques, procedures, and notions. Journalling is a practical way of capturing reflexivity, helping distinguish my thoughts from participants during the process of co-construction and data analysis, e.g., internal caveats about the use of sport/PA or where I had imported theory about moral relativism to understand Jessica's experiences. The notes also provided a record of initial reflections after data collection, which could be explored later during data analysis to assess the impact on both research process and outcome (Brocki and Wearden (2006, p. 92).

3.2 Data collection method and data analysis

The project timelines are seen in Gantt charts (Appendix 8.2). Data was gathered through co-constituted interviews with paediatric physiotherapists, who were not past or present colleagues, to mitigate unconscious bias. One participant working at a

local tertiary centre had been occasionally contacted concerning patients when I was working as a paediatric physiotherapist. An interview guide including resources and introduction was employed (Appendix 8.4.5). Participants were a mixture of NHS and privately employed and were utilising sport/PA to varying degrees. In addition, a reflective journal using Gibbs reflective cycle (1988) and reflexive content was included. Participants joined remote interviews with me from their workplaces or homes and these were recorded as video and audio or just audio by me utilising the Microsoft Teams platform hosted within my secure University of Salford account. The choice of single individual interview was dependent on participant's preference and any legal requirements regarding social distancing that were in force at that time (see 3.6). Field notes were made whilst interviews were in progress which contributed to a reflective journal (example extract Appendix 8.6.3).

My options concerning manual or computer assisted qualitative data analysis software data analysis (CAQDAS) including NVivo, were considered through consulting key sources (Smith et al., 2009, 2022; Wagstaff et al., 2014). Wagstaff et al. (2014, p. 9) categorised CAQDAS as beyond standard IPA convention and that it "was a personal decision […] based largely on comfort and familiarity with working electronically [stating] IPA cannot be satisfactorily implemented with software, and that software use cannot replace active analysis with automatic coding in qualitative research generally". In addition, certain practical difficulties have arisen when implementing dual level coding of exploratory notes and experiential statements and managing the transition from individual to whole sample analysis, when using NVivo. CAQDAS is more suited to descriptive thematic analysis, than making sense of other's sense making and is not fore-fronted within key IPA texts (Smith et al., 2009, 2022) with their focus on manual analysis and data immersion. Similarly, Holloway and Galvin (2017, p. 296) "believe the researcher is more intimate with the data when the analysis is not computerised".

Smith and Nizza (2022) underline the analyst's interpretative role within IPA's double hermeneutic and my interactions with fellow IPA researchers (Appendix 3) mirrored this, identifying manual techniques as essences of IPA, e.g., printing out and moving text around to experiment with the interpretation and identify spatial relationships. Similar connections arose for me, when others shared how 'physicality' within the

analysis necessarily deepened their relationship with the data, making it more real and dynamic; such comments speak to the embodiment described by Merleau-Ponty which Smith et al. (2022, p. 14) noted “For qualitative researchers in general, and IPA researchers in particular Merleau-Ponty’s view, that the body shapes the fundamental character of our knowing about the world, is critical”. I aimed to dwell with the data, both transcripts and video recordings, which captured facial gesture, upper body posture, ‘false starts’ and paralinguistic features such as tone of voice as these features enhance the richness of the data and therefore of my analysis. Having considered all these factors, I judged that NVivo was not in keeping with the essence of IPA’s philosophical interpretivism. Furthermore, I had successfully used manual transcription and data analysis in a previous IPA study to facilitate data immersion.

Recordings were repeatedly viewed and then transcribed with meanings explored using the core IPA principles of phenomenology, hermeneutics and idiography, (Smith, et al., 2009, 2022). Deep familiarisation through repeated reading facilitated immersion (Larsson et al., 2012) within the text in an iterative and inductive cycle. Initial analysis was captured in three columns accommodating the transcript, and exploratory noting (descriptive, linguistic, and conceptual) which were differentiated respectively through use of standard font, italicisation and underlining – Smith et al., 2009, 2022; Smith & Nizza, 2022).

An additional analytical stage then followed with individual sharing of participant’s initial analysis document (Jack’s extracts Appendix 8.6.1), seeking to verify their meaning making. It was divided into three columns…

i) <u>Raw data summary</u>
   of interview content; mostly in chronological order but also clustering topics when mentioned multiple times during the interview. Direct quotes were also included, where they epitomised what was being expressed.
ii) <u>Meaning making</u>
   Initial interpretations about how they might have been making sense of ‘sport as a therapy choice’ (study research aim).
iii) <u>Making initial links</u>
   between the interpretations of those experiences and possible theoretical models and extant research.

The document constituted ‘member checking’ for factual inaccuracies and to ensure the initial analysis authentically represented participants sense making of ‘sport as a therapy choice;’ examples included what assumptions underpinned their choices, activities or beliefs or why they valued the approach. I additionally offered them further clarification and the option of another video call interview if they wished. I felt that sharing initial analysis was an appropriate alternative to full transcript checking (Creswell, 2023).

As the analysis proceeded and descriptions synergised with interpretations, experiential statements were added (Pope & Mays, 2020; Smith et al., 2022; Smith & Nizza, 2022) into the third column (Jack’s extracts Appendix 8.6.2). This phase sought to capture any contexts that were influencing the meaning making and self-reported behaviours. The next stage aimed to identify connections (clustering) between experiential statements for each case (Smith et al., 2022; Smith & Nizza, 2022), especially using contextualisation, polarisation and abstraction to create a personal table (Appendix 8.6.3 for Jack’s personal experiential themes - PETs). This process was then replicated across all cases.

Finally, spatial connections within clustered statements were identified across PETs for all cases through visual data comparison. This process facilitated the identification of first level themes and thus underpinned the creation of a master table (Table 2b) comprising GETs and PETs (Smith et al., 2022; Smith & Nizza, 2022). The multi-step process assisted in making sense of participant’s sense making and is termed the double hermeneutic (Smith et al., 2009; 2022). Data immersion rendered participants complex life worlds visible revealing their richness and the ‘how’ of what is experienced.

To manage greater data amounts and capture recurrence levels across cases, a summary table identified themes present for each participant (Table 2c), identified GET status, and assisted in balancing convergence and divergence (Smith et al., 2022) within the group. Smith et al. (2022, p. 106) also noted that this was one way to enhance “transparency of findings” within a large corpus. Certainly, a sample of sixteen did require greater skill in balancing an idiographic focus alongside group analysis, but the idea of ‘constant back and forth’ within data analysis is a recognised

feature of IPA's 'hermeneutic circle.' This meant selecting only sentinel, representative extracts essential to participants meaning making and it was not possible to use verbatim extracts from every participant to represent every GET.

Simultaneously, it was important to ensure every participant's voice was heard (Smith et al., 2009: 2022), whilst capturing specific contexts that influenced their meaning making; this included returning to the recordings and exploratory noting within the transcript…another expression of the hermeneutic circle. Watching as well as listening enabled particular grounding in participants' data and refreshed my reflexivity concerning any fore-structured knowledge about 'sport as a therapy choice' which might have influenced me at that moment. For example, I had previous successes as a practitioner but, like my participants, I was conscious that using sport/PA might not obtain engagement with all YPwD and their families. Also, my Masters research with YPwD and their families had underlined that not all had a culture of or interest in sport/PA (Booth & Snowdon, 2019). This was a definite benefit of using the synchronous video platform as a data collection tool.

3.3 Sampling and recruitment

3.3.1 Sample and sample justification.

A purposive, homogenous sample of experienced paediatric physiotherapists was recruited, with participants approached because they could provide in-depth insight into the research topic (Greenhalgh, 2019; Smith et al., 2022) and be 'information-rich'. This aligns with the idiographic nature of IPA studies which aim to understand particular phenomena in particular contexts using small and carefully situated samples (Smith et al., 2022), as the intention is not to make a statistical generalisation to any population beyond the sample type surveyed (Britten, 2008; Robson, 2011). Smith et al. (2022, p. 105) noted how around ten interviews is "gaining currency" for a Professional Doctorate, to enable a detailed analysis of each individual case, adequate reflection and then subsequent micro-analysis of similarities and differences. Although my research proposal envisaged five to nine participants, the potential existed for this sample size to be exceeded until the dataset had reached recurrence across cases and ultimately it was felt that the

sample of sixteen would provide “greater leverage in the claims that could be made” Smith et al. (2022, p. 105).

3.3.2 Recruitment procedure

As the term ‘sport as a therapy choice’ first appeared in a survey jointly organised by the APCP, it was appropriate to recruit through its membership. Membership of the APCP professional network and research participation are voluntary for paediatric physiotherapists and therefore represented an ethical recruitment source. Following initial contact with the administrator and provision of ethical approval letter, an invitation advert was provided with concise study details (purpose, data protection arrangements, participant anonymity, time commitment and my email contact details), which the administrator emailed to APCP members on the research list.

Once participants expressed interest; they were thanked in a brief standardised email message which also explained there was a pause period to allow time to consider the patient information sheet (PIS - Appendix 8.4.3) and decide if they still wished to proceed. A research privacy notice (Appendix 8.4.2) was also attached. If participants subsequently responded, indicating their wish to continue, a further email and consent forms (Appendix 8.4.4) were attached. A minimum of twenty-four hours and a maximum of two weeks was planned as sufficient for the participant to read the PIS, indicate if they wish to participate and respond with one signed consent form. The comprehensive PIS (Appendix 8.4.3), research privacy notice (Appendix 8.4.2) and associated ethical procedures enabled participants to be fully informed including what participation entailed and study duration which facilitated an informed consent. Once consent was received, a mutually convenient interview time was identified and invitation created via Salford University Microsoft (MS) Teams platform. Participants were also asked to select a pseudonym from a provided list which had been checked to ensure it did not contain any participants’ names.

3.4 Interview guide

The full interview guide and accompanying resources (Appendix 8.4.5) was created using three main resources (King & Horrocks, 2010), these were my personal and

professional experiences of utilising sport as part of physiotherapeutic intervention; the research literature concerning qualitative interviewing in general and IPA interviewing in particular; and informal conversations with colleagues about the interview guide. The questions were designed to be “exploratory rather than explanatory” (Smith et al., 2022, p. 41) to elicit meanings about ‘sport as a therapy choice’, and the guide stated before starting that there were no right or wrong answers. Smith et al., (2022, p. 57) recommended between six and ten questions would fill an interview lasting between forty-five to ninety minutes for articulate adults, like my participants, which roughly accorded with my PIS (forty-five minutes to one hour). However, this was an estimate and participants’ circumstances plus the nature of remote interviewing meant deviations were possible. This represented a reasonable duration for health professionals who have freely volunteered their time and likely have busy personal and professional lives.

The interview sequence commenced with descriptive, easily answered background questions designed to build rapport and help participants feel comfortable and it is possible this is more readily achieved when participants were at home, rather than at work (Engward at al., 2022). Later questions were more evaluative and analytical, culminating in a summary question (Engward at al., 2022) that re-focussed on ‘sport as a therapy choice’ and confirming participants had nothing else they wished to say; throughout no assumptions were made regarding participants’ experiences. The need to avoid leading questions meant the interview guide may appear simplistic and abstract (Smith et al., 2009) but prompt questions were embedded throughout to clarify, without making participants feel a certain answer was required (King and Horrocks, 2010). Examples from physiotherapy practice were included to encourage sharing about participants’ everyday lives. Probes for more information including ‘can you tell me more about that’? or ‘how did that make you feel’? were a useful strategy to obtain the necessary depth required for an IPA study. Although the guide existed, I envisaged a flexible approach to the participant’s natural flow, accepting their unplanned sequence, providing all areas were eventually covered.

The supporting resources comprised examples of sport being used by a paediatric physiotherapist, and an identical exercise originating from mainstream athletics and a physiotherapy programme, respectively. These were available in case clarification

was required; but in actuality the materials were not required as all participants had knowledge of adapted sport and Physio Tools software. The interview guide was reviewed during the study based on insights gained (King & Horrocks, 2010) but no changes were made as it was capturing rich data and prompting deep reflections and I felt that maintaining content would assist the subsequent cross-case data analysis.

3.5 Ethical considerations

Key ethical principles associated with research governance were addressed through the stringent process of successfully applying for ethical approval from the University ethical committee and are outlined below. I am additionally bound by ethical codes within regulatory Health and Care Professions Council (HCPC) standards (2023, 2024); NHS Health Research Authority (2022) and professional documents (CSP, 2019a).

Ethical considerations associated with my study, which involved no physical interventions with participants, were met and ethical approval was received (reference number HSR1920-070; Appendix 8.4.1). Informed consent and strategies supporting it throughout, are outlined above (Section 3.3.2). The principles of beneficence and participant autonomy underpinning voluntary participation, information governance, anonymity and the right to withdraw were fully outlined in key documents supporting the ethics application (data protection checklist, PIS, consent form and privacy notice). A key part of research governance is the principle of non-maleficence and this was also addressed in supporting documents, alongside the completion of a risk assessment that addressed the possibility of any physical or other harms coming to anyone involved.

Specific ethical issues associated with remote interviewing highlighted by Engward et al., (2022) such as digital exclusion were considered and it was judged reasonable to assume digital capacity in my sample of health professionals who would be routinely utilising digital platforms within their work.

3.6 Potential problems and risk mitigation strategy

Prior to Covid-19, face-to-face interviews had been anticipated; however social distancing regulations enforced remote interviewing and adhered to practice suggested by the University at the time. Although remote interviewing in qualitative research is not new, it had previously been regarded as a lesser substitute for in-person encounters by qualitative methodologists (Keen et al. 2022). However, synchronous video interviewing has recently interested qualitative researchers who have re-evaluated it as a 'different' rather than a 'lesser' form of data collection due to its ability to reproduce natural conversation and establish rapport, over other virtual methods (Keen et al, 2022).

Consequently, disrupted data gathering was mitigated by the availability and suitability of synchronous video interviewing as a feasible and acceptable alternative to face-to-face interviewing. The ubiquity of video calling and increasing digitisation of professional and personal interactions through Zoom and Microsoft Teams was necessarily 'supercharged' by Covid-19. Remote interviewing increased my pool of recruits because it facilitated easy participation (no travel), furthermore participants appeared comfortable to share their information remotely, as evidenced by the fact that no-one opted for audio-only recording, which was only used twice when technical difficulties caused low band width. Several benefits associated with synchronous video interviews (Roberts et al., 2021) such as building and maintaining rapport, with subtle off-screen checking of interview schedules, which I positioned on a document holder adjacent to my camera, and possession of a combined video and audio interview record capturing facial gesture and upper body postures to create a richer data source, were borne out in my experiences (Engward et al., 2022).

3.7 Summary

This chapter provided a justification of my selected methodology and methods alongside a transparent account of the process from methodological conception to data analysis. I also aimed to forefront the congruence between IPA and my epistemological position of interpretivism and constructionism. The data analysis is detailed and my role within it is clearly framed within IPA's double hermeneutic.

Overall, the transparency shown and reflexivity shared has hopefully evidenced the procedures, underpinning philosophy and assumptions within my work.

The next chapter presents findings including PETs and GETs supported by transcript extracts alongside detailed analytic interpretation of the text (Smith et al., 2022).

CHAPTER 4 – FINDINGS

4. Recruitment outcome

This chapter firstly outlines the recruitment outcome. The research advert had been designed to recruit paediatric physiotherapists from diverse clinical settings who had a perspective on 'sport as a therapy choice' and their locations ranged across England and Wales, within acute and community services and treating neurodevelopmental disabilities, life-altering and life-limiting conditions. Although thirty-six paediatric physiotherapists expressed initial interest via email, sixteen did not return consent forms. In addition, two chose not to proceed and two had to be declined due to practicing outside the UK and one being a former colleague, which resulted in an eventual number of sixteen being interviewed (Figure 9). The first interviews began twenty-three days after initial invitations, continuing for five weeks and lengths ranged from fifty minutes to one hour and ten minutes. All participant emails were stored within my secure University of Salford outlook account.

Figure 9

Recruitment flowchart

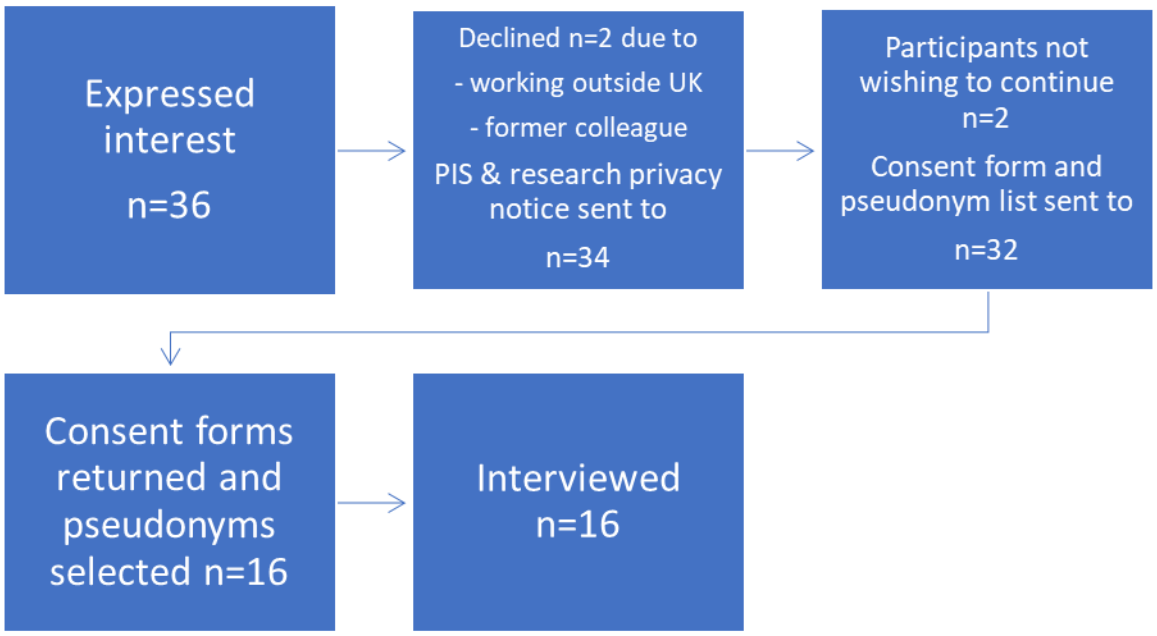


Table 2a - Participant demographic table

Participant pseudonym	Gender	Age	Years as qualified PT	Years as paediatric PT	Work sector	Qualifications
Harry	Male	54	12	5	NHS Community	BSc Physiotherapy
Nigel	Male	44	16	8	NHS Special school	BSc Sports Science BSc Physiotherapy MSc Advancing Physiotherapy
Paul	Male	33	11	10	3rd Sector special school	BSc Physiotherapy
Amy	Female	73	45	42	3rd Sector	Diploma in physiotherapy Bobath Halliwick
Ava	Female	35	14	9	NHS & private practice	BSc Physiotherapy
Amelia	Female	36	15	9	NHS Community & a little private work	BSc Physiotherapy
Ella	Female	53	30	28	NHS Community	BSc Physiotherapy
Emma	Female	41	20	17	NHS Tertiary	BSc Studying MSc
Grace	Female	55	34	28	Private practice	MSc
Ivy	Female	44	24	22	NHS Community	BSc Physiotherapy
Jack	Female	35	14	5	NHS Community	BSc Physiotherapy
Jessica	Female	30	7.5	7	NHS Community	BSc Physiotherapy
Kelly	Female	53	32	20	NHS specialist services & rehabilitation	BSc Physiotherapy MSc Research & Evaluation
Ruby	Female	37	15	13	Private practice	BSc Physiotherapy
Sarah	Female	54	32	30	NHS Tertiary	BSc Physiotherapy
Sophie	Female	48	9.5	9.5	NHS Community	BSc Sport, fitness

The purposive, homogenous nature of the participating sample (Table 2a) was demonstrated by its composition with fifteen paediatric physiotherapists and one paediatric physiotherapy assistant practitioner (Sophie) operating at an advanced level who could "grant access to a particular perspective on the phenomena under study" rather than be representative of a population (Smith et al., 2022, p. 43f). Sophie's inclusion is merited as physiotherapy assistants increasingly adopt roles previously reserved for qualified staff (Nicholls, 2018). Two physiotherapists held managerial responsibilities alongside clinical roles and one was retired from the NHS. The gender balance of the participants (three males and thirteen females – table 2a) approximately reflected that of the physiotherapy profession, where between 2017 and 2020, CSP members identified as 26% male and 74% female (Beswetherick, 2021). Practice locations in acute (18.75%) and community (81.25%) settings closely matched those on the EFDS (2014) survey. All participants self-reported their paediatric experience ranging from five years to thirty years, with an average of sixteen years. Thus, the sample was theoretically consistent with a qualitative paradigm in general and IPA's orientation in particular.

4.0 Overview of findings

This chapter provides a comprehensive narrative account and transparent evidentiary base (Smith et al., 2022) alongside interpretation of what participants said without reference to extant literature. Aligned with IPA's 'double hermeneutic' process, findings address the descriptive 'what' or 'hermeneutics of empathy' and combines with the interpretative 'why' or 'hermeneutics of suspicion and questioning' (Ricoeur, 1970, as cited in Smith et al., 2022, p. 30) to create an enhanced interpretation in a centre ground, enabling me to locate as both an 'insider' and as one who 'stands alongside'. Analyses at individual and group level, noted convergences and divergences in how each theme was experienced and selected verbatim extracts captured the breadth of experiences and themes. Tabulation (Tables 2, 2a and 3) provided a valuable way of cross-referencing the large data set. Analysis revealed several recurrent themes, which were outlined within individual initial analysis documents shared with participants (3.3). This was designed to improve the validity of the analysis and show "sensitivity to context" (Yardley, 2000,

as cited by Smith et al, 2022, p. 148) and is also known as member checking or respondent validation. Although lengthy documents, fifteen participants responded and confirmed the initial analysis was an authentic representation of their 'sense-making' based upon their responses. Three provided additional factual background information about technical aspects of their interventions and corrected typographical errors.

Recurrent themes crystalised into six GETs (Table 2b), with PETs nested below (idiographic level in Table 2c). Due to my sample size, it was important to quantify the level of recurrent GETs across cases and it was judged that recurrence should be occurrence in more than half of the sample and this was achieved to varying levels for all GETs (Table 3). Quantifying recurrence of themes aimed to enhance the validity of findings across a large corpus and tabulation of GETs is suggested (Smith et al., 2022, p. 106, 110). I was the sole data analyst, but themes were reviewed by the participants in their initial analysis documents and later by both supervisors.

Table 2b - Group Experiential Themes (GETs)	
Theme	**Participants**
Shaped by experiences and contexts. • Personal • Institutional • Healthcare system • Geographical • Environmental • Familial • Social	*n=14*
It's all about the kids. • Our kids with disabilities and their engagement • Kids who compete in sport	*n=15*
Conceiving and experiencing the relationship of PT and sport/PA • Signposting • Alongside - Physiotherapy is physical literacy • Active integration. • Rebadging physiotherapy	*n=14*
Sport/PA - a tool in the toolbox • Utility • A tool to create engagement? • Effect on service delivery and care pathways. • Psychological perspectives	*n=14*
Locating identity • Dual identity • Secure identity • Relational identity • Epistemological identity	*n=12*
Embodiment of models • Philosophy, epistemology and legitimacy • Relational aspects	*n=13*

Table 2c - Group Experiential Themes – at idiographic level	
	Participant
4.1 Shaped by contexts.	***n=14***
4.1.1 Personal (Amelia, Ava, Harry, Jack, Nigel, Ruby, Sarah)	*n=7*
4.1.2 Institutional (Emma, Ivy, Kelly, Nigel, Paul, Sarah, Sophie)	*n=7*
4.1.3 Healthcare system (Amelia, Ivy, Jessica, Nigel)	*n=4*
4.1.4 Geographical (Emma, Jack, Ruby, Sophie)	*n=4*
4.1.5 Environmental (Amelia, Ella, Emma, Ivy, Jack, Jessica, Kelly, Nigel, Sarah)	*n=9*
4.1.6 Familial (Amelia, Ava, Ella, Emma, Harry, Ivy, Jessica, Kelly, Nigel, Ruby, Sarah, Sophie)	*n=12*
4.1.7 Social (Ava, Ella, Harry, Ivy, Jack, Jessica)	*n=6*
4.2 It's all about the kids.	***n=16***
4.2.1 Our kids with disabilities and their engagement (Amelia, Amy, Ava, Ella, Emma, Grace, Jessica, Harry, Ivy, Jack, Kelly, Nigel, Paul, Ruby, Sarah, Sophie)	*n=16*
4.2.2 Kids who compete (Ava, Emma, Grace, Jack, Kelly, Sarah)	*n=6*
4.3 Conceiving and experiencing the relationship of PT and sport/PA.	***n=14***
4.3.1 Signposting (Ella, Emma, Jessica, Ruby)	*n=4*
4.3.2 Alongside - Physiotherapy is physical literacy (Ella, Grace, Paul, Sophie)	*n=4*
4.3.3 Active integration (Amelia, Emma, Harry, Ivy, Kelly, Nigel, Paul, Ruby, Sarah, Sophie)	*n=10*
4.3.4 Rebadging physiotherapy (Amelia, Ava, Ella, Grace, Kelly, Nigel, Paul, Ruby, Sarah, Sophie)	*n=10*
4.4 Sport/PA - one tool in the toolbox.	***n=16***
4.4.1 Utility (Ella, Harry, Jessica, Kelly, Nigel, Paul, Ruby, Sarah)	*n=8*
4.4.2 A tool to create engagement? (Amelia, Ava, Harry, Nigel, Paul, Ruby, Sarah, Sophie)	*n=8*
4.4.3 Effect on service delivery and care pathways (Amelia, Ava, Ella, Jack, Ivy, Grace, Jessica, Sarah, Sophie)	*n=9*
4.4.4 Psychological perspectives (Amy, Ava, Ella, Emma, Ivy, Kelly, Ruby, Sarah, Sophie)	*n=9*
4.5 Locating identity.	***n=13***
4.5.1 Dual identity (Ella, Harry, Ruby, Sophie)	*n=4*
4.5.2 Secure identity (Amelia, Ava, Grace, Ivy, Jack, Kelly, Paul, Sarah)	*n=8*
4.5.3 Relational identity (Grace, Harry, Ivy, Jack, Kelly, Ruby, Sarah)	*n=7*
4.5.4 Epistemological identity (Emma, Ivy, Nigel, Sarah)	*n=4*
4.6 Embodiment of models.	***n=14***
Introduction (Amelia, Harry, Kelly)	*n=3*
4.6.1 Philosophy, epistemology and legitimacy (Amelia, Ava, Ivy, Ella, Emma, Jack, Nigel, Paul, Ruby, Sarah)	*n=10*
4.6.2 Relational aspects (Amelia, Ava, Emma, Grace, Jack, Ivy, Nigel, Sarah)	*n=8*

Table 3 – Recurrence of themes across cases

Theme	Sophie	Ella	Paul	Grace	Nigel	Kelly	Sarah	Amy	Present in over half of the whole sample. (n=16)
Context	√	√	√		√	√	√		YES
The kids	√	√	√	√	√	√	√	√	YES
Relationship between PT and sport/PA	√	√	√	√	√	√	√		YES
Tool in toolbox	√	√	√	√	√	√	√	√	YES
Locating identity	√	√	√	√	√	√	√		YES
Embodiment of models		√	√	√	√	√	√		YES

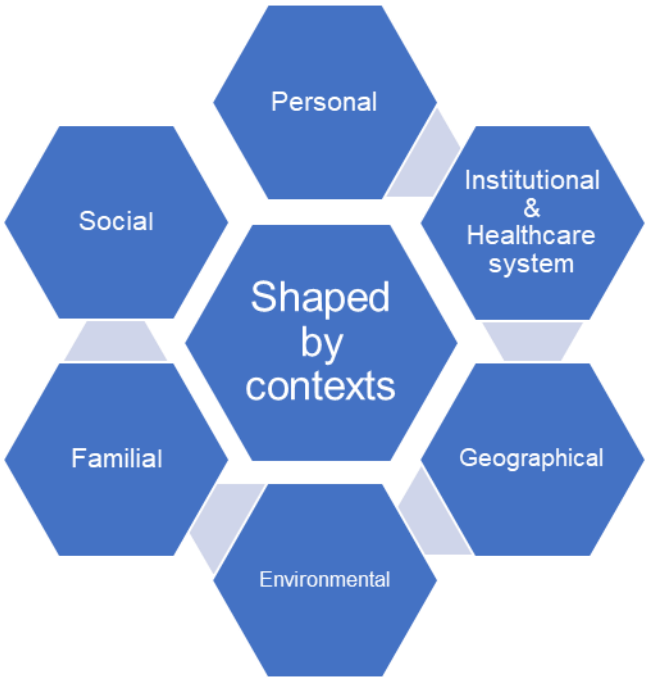
Theme	Ava	Ruby	Emma	Jack	Amelia	Harry	Jessica	Ivy	Present in over half of the whole sample. (n=16)
Context	√	√	√	√	√	√	√	√	YES
The kids	√	√	√	√	√	√	√	√	YES
Relationship between PT and sport/PA	√	√	√	√	√	√	√	√	YES
Tool in toolbox	√	√	√	√	√	√	√	√	YES
Locating identity	√	√	√	√	√	√		√	YES
Embodiment of models	√	√	√	√	√	√	√	√	YES

4.1 Shaped by contexts.

Past experiences and present contexts influenced participants current life-worlds and therefore how they made sense of 'sport as a therapy choice.' There was definite expression of how previous experiences of sport/PA had shaped current values and beliefs and this was especially prominent within patient narratives. This group experiential theme can be categorised as shown in Figure 10.

Figure 10

Shaped by contexts



4.1.1 Personal context

As theoretically possible in a self-selected sample who were likely to be enthusiastic users of sport/PA within their physiotherapy practice, several participants consciously drew upon positive, personal experiences of sport/PA to establish their positionality. Often these experiences were life-long and current but even when temporally distant, they remained deeply embedded as 'hot' cognitions. Jack and Ruby expressed the deep significance sport/PA plays in their lives, thereby creating identity, distinct belief systems and meanings around the *fusion* of sport/PA and

therapy; they, along with Nigel (male, 44), felt these positive experiences could and should be transferable to YPwD and so blending sport/PA into their physiotherapy 'offers' made 'perfect sense'.

> I suppose it depends where you call it sport and where you call it therapy, but I think the two are quite interlinked from my perspective and that's probably because I come from, like I've done a lot of sporting backgrounds [Ruby, female, 36].
>
> always been a sporty person so have always naturally gravitated towards and promoted [sport] [Jack, female, age 35].

Sarah and Harry recognised how their 'emotional or hot' cognitions (Smith et al., 2022) embedded the idea of sport as a precious gift that expanded them as people. Although Sarah knew it was producing a conscious bias, it still felt acceptable to utilise sport/PA and for Harry, the potential transferability of profoundly positive and enriching experiences legitimised his actions.

> Sport has always been an important part of my life and I suppose I come at it from a slightly biased perspective. It's something that's always been important to me and has offered me a great deal [Sarah, female, age 54].
>
> because sport has given me so much, I'm always encouraging the kids to take on that role [Harry, male, age 54].

The deeply personal meanings and importance of sport/PA was further shown in Harry's emotionally laden and embodied narrative of running creating release at a difficult point in his life. Harry's dyslexia diagnosis whilst at university caused him to consider reducing his running time in favour of study. However, his tutor advised against this because running was Harry's release and this had shaped him ever since…" I still get a bit emotional about it, sort of thing".

Ava additionally drew upon past and present narratives of competitive sport, where lived experiences as a para-athlete created highly developed 'insider' perspectives as physiotherapist, athlete and rehabilitating patient.

> I feel like I'm a physio, whether that's through my own sporting background and I've always kind of put my physio thoughts around sports that I'm doing and injuries that I've had in the past [Ava, female, 35].

4.1.2 Institutional context

Participants frequently referred to their embedded organisational culture and whether sport/PA was valued and legitimised within the rehabilitative space or not. As a clinical manager, Ivy (female, 44) summarised meanings at service level as deeply internalised…"it's high on our agenda, it's…I would say it runs through us like a stick of rock". Her hesitation before answering indicated a thoughtful conceptualisation of sport/PA exhibited by the whole team as a defining, embedded characteristic beyond mere mental assent; whilst use of the collective 'us' indicated all staff reinforced this service culture and tended to perpetuate it.

For Ivy and Nigel, the conducive institutional context of a special school community created a discrete clinical location within a non-clinical environment and Ivy deeply characterised her adapted cycling project as collective endeavour both ideologically and practically, within a permissive environment. Adapted cycling flourished in a 'microworld' underpinned by close relationships and educational support, indicated by Ivy's repeatedly naming school staff who conducted the project each day and school leaders who endorsed it.

> Any ideas we come up with, they're happy to go with from the beginning and this project has just grown and grown because then they've employed people from within the school to co-ordinate the project [Ivy].

Within Sarah's previous work in a sports college and for Paul in an independent special school setting, the institutional ethos created the same conducive context by facilitating daily integration of sport/PA with physiotherapy, compared to 'siloed' physiotherapy approaches. Paul's agency and flexibility characterised his experiences and confirmed his perceptions that this was a permissive context.

Furthermore, structural institutional culture in terms of service organisation and staffing allocated to sport/PA was experienced by participants as tangible signs it, and indirectly they, were valued. Some services, like Sophie's, used physiotherapy assistants to deliver sport/PA, which indicated a binary where 'non-clinical' sport/PA was worth staff time but only within a skill mix framework with highly skilled 'clinical' work reserved for qualified staff. Alternatively, Emma's highly specialist inpatient physiotherapy service employed a sports professional as an exercise and PA therapist (EPAT) to work alongside physiotherapists to promote activity. This post was externally funded by Public Health England rather than NHS England, which

indicated a division in thinking between those roles and activities which are regarded as health promoting and those which are rehabilitative. This division was observed in practice within Emma's highly specialist service which typically provided specific activities when children were acutely unwell whilst the EPAT functioned as liaison with the community physiotherapy services and similarly in Nigel's setting.

> within our Trust we've recently just have someone brought on board for exercise and […] fitness, not therapy as such, but to lead that engagement with the children in the service where we're looking to encourage more physical activity and with children across the disability range, so looking at using exercise and sports will be part of that [Nigel].

Kelly's experiences of institutional context completely exemplified a permissive environment where sport was fundamentally interwoven into physiotherapy beyond both cognition and mental assent…" Sport is embedded in our culture and our ethos" [Kelly, female, 53]. Kelly practiced in a Trust associated with the birth of the Paralympic movement, so it is unsurprising that this profound historical legacy completely and unconsciously permeated professional practice, causing her to feel that "sport is so plugged in; I almost don't need to think about it". Her experiences and use of the words 'plugged in' suggests sport/PA is operating systemically, deeply influencing it's expression by clinicians and possibly overshadowing their individual characteristics. The institutional predisposition towards sport/PA thus influenced all phases of Kelly's physiotherapy intervention pathway, being integral to her diagnostic, functional evaluation and treatment processes. Therefore, even during initial encounters, Kelly found herself automatically envisaging children participating in an appropriate sport…"It's just part and parcel of how we suss our kids out through the medium of what sport we are going to plonk them in".
Kelly's institution used traditional clinical uniforms unlike other paediatric physiotherapy services which use polo shirts to reduce anxiety and de-medicalise clinical environments for children. Kelly acknowledged this as a restriction beyond her locus of control feeling "bound by the corporate identity that surrounds us", since she felt uniforms could present a barrier to developing therapeutic relationships with the children and young people…"A uniform means somebody quite frightening who's going to come and put needles in you and do all sorts of horrible stuff that they've been through". This issue further reinforced for her the usefulness of sport/PA as a mechanism to break down the barriers created by a uniform and build a relationship.

4.1.3 The healthcare system context

Wider healthcare systems, whether NHS or private, privileged existential values and knowledge concerning sport/PA which impacted its legitimisation and justification for my participants. Ivy's experiential knowledge led her to challenge these assumptions and justify alternative conclusions about sport/PA for YPwD.

> The assumption is our children don't have the physical capability to do that [physical activity participation] and obviously what we found is that they do. So, that's kind of where I'm coming from with my investment into physical activity for that particular client group really [Ivy].

Healthcare system values impacted everyday practice and might also be mediated through the resources allocated to physiotherapy services. The underlying message perceived by several participants, like Nigel, was inadequate resource allocation meant your service was not valued or simply not 'visible' within the wider healthcare system, "you might not always have the, the best equipment through funding or costs"; this allied with feelings that greater attention was focussed upon other more visible sectors or staff groups within healthcare.

Systemic financial healthcare contexts, experienced as barriers to the purchase of adapted cycling equipment, particularly exercised Ivy. The historical NHS practice of automatically funding postural management equipment (a passive treatment intervention for YPwD), felt nonsensical and 'blocked' the innovation represented by her assistive cycling project with a patient group previously thought incapable of exercise. Furthermore, existing NHS financial frameworks created to give personal choice and support PA were inaccessible as funding sources to her, which felt contrary and caused palpable annoyance. Her frustration was further evidenced in the legalistic comment 'we're not allowed' which demonstrated awareness about both her lack of control and the hierarchical nature of NHS funding models.

> I feel like what we'd like to do is become real advocates for this population of children and you know thinking about things like personal healthcare budgets. I would be advocating that instead of perhaps spending, because you can spend two and a half, three and a half thousand pounds on a standing frame and yet we're not allowed to push through a bike that costs three and half thousand, whereas I would say that will fit them for a lot longer, you don't need to keep changing the size, it will give life-long health benefits and actually it just doesn't factor in the teaching or the thought process for our children. Certainly, our equipment budget in the NHS doesn't cover that […] we can't get them approved through our NHS equipment panel [Ivy].

The differing service operation experienced by participants reflected varying demands on them. The unrelenting pressure on free at the point of use NHS services and limited staffing was perceived to be prioritising interventions focussed on physiotherapy's 'core business' of body structure and impairment. This phenomenon was well described by Jessica where lengthy waiting lists made her feel that including sport/PA within the physiotherapy offer was unrealistic and unattainable.

> For me in an ideal world and none of the external factors were faced towards us. 100%, sport would be such an ideal way for physiotherapy and participation…yeah in an ideal world that would be 100% the way we would go forward.[ ] if we had more funding, if we had all the parents on board, if we had all of these things and everything was just flowers and daisies, like yeah, we would 100% be pushing forwards for that because there are so many things I feel like sports […] would just help children become so independent, but we've just got lots of road bumps.
>
> I know, I feel like this is going to be the case of like […] our waiting lists are beyond 18 weeks and just trying, I think trying to keep all of that, without the water going like overflowing [Jessica, female, age 30]

Jessica's language starkly contrasts her ideal utopian 'flowers and daisies' world with her real world of rocky journeys with 'road bumps.' Her personal frustration was palpable and when later adopting the collective voice of her whole service, although the goal of using sport/PA remained in plain sight, the current healthcare context still made it annoyingly unachievable. Jessica repeatedly used the word 'stretched' when referring to herself and colleagues which indicated an intense desperation and also likened waiting list pressures and the constant patient flow to "overflowing water." The obvious fear here was a feeling of being potentially 'drowned' by a constant need to attend and overwhelmed by relentless referrals; Jessica was fully aware that there is no mechanism to turn off or moderate the metaphorical 'flow'' of patients.

> we're just, we're stretched. We're just stretched and [pause] we don't have the, the time or like or…we just don't have, erm…we're just stretched. I just feel like we're stretched. We couldn't have, we couldn't have one physio aside just dealing with… oh let's do a project for, for this because we would be, we would then feel all of his, all of their caseload on us [Jessica].

In contrast, this was not the wider context shared by participants working privately who might not accept a referral or utilise episodic interventions. When parents/carers were self-funding, it was only limited by the parent's ability to pay for treatment;

however, where case managers are involved, the number of treatments might be quantified.

Some participants, like Amelia, were justifying and fashioning their current use of sport/PA with an additional, realistic future focus on poorly resourced NHS physiotherapy services for adults with disabilities. The limited resources allocated to these adult services meant participants created urgency to exploit the self-management potential of sport/PA now. The deprecating use of 'hand holding' also indicated participants' expectation that by adulthood, YPwD ought to be self-managing anyway and indicated that responsibilisation for health was assumed within adult services.

> Self-management for long-term conditions really is…has to be the goal, because whether we like it or not, the adult service does not and is not going to be hand holding from twenty to ninety to one hundred [Amelia, female, age 36].

4.1.4 Geographical context

Participants worked across diverse geographical locations from highly rural to the inner city and each setting contextualised their varying sense-making about the use of sport/PA.

Participants working in rural settings keenly understood the implications of rurality for their families who had to invest more to participate and possibly valued activities more because of the distances travelled. Ruby shared how she had purposely located her frame-running club within an existing mainstream athletics club, as the rural setting would have made a stand-alone club unviable. Whilst Sophie reported some 'great' outcomes from the use of sport/PA within her service despite the practical access barriers created by her rural location. Widely scattered and sparse populations of YPwD also made it difficult for them to sustain community clubs and raise teams to undertake competitive activity. Participating involved car journeys of forty-five minutes or more which created temporal and financial pressures; however, it was tempered somewhat by the fact that as rural dwellers themselves, they shared an altered perspective on what constituted a long journey. As Sophie (female, 48)

phlegmatically stated…"It's a way of life here and you don't consider it, you don't think about it.

Jack experienced the close-knit communities created within an island setting which facilitated immediate and responsive communications, shared visions for inclusion and facilitated promotion of the sport/PA offer which were described as "a unique advantage of where we live." In sharp contrast, Emma's setting within a tertiary treatment centre of a regional city created personal challenges signposting to suitable, local sport/PA opportunities for YPwD who might live eighty miles away.

4.1.5 Environmental context

The venue hosting intervention was experienced as highly significant by several participants as they perceived diverse environmental contexts were experienced differently by YPwD and their families.

Although Sarah was uncertain about the significance of a non-clinical venue contributing to success in her summer sports taster event, Ivy, Nigel and Jessica were less ambiguous; they felt it created alternative context, different expectations and motivation in YPwD, as they regarded activities within health centres as 'clinical' and those in leisure venues as 'naturalistic.' Jessica believed hosting activities using the Olympic Park would be more favourably received by YPwD and their families because she directly linked non-clinical venues to a preferred identity formation for YPwD, summarised in positives about feeling 'cool,' whilst simultaneously abandoning negative identification as 'patients' and decreasing recognition that they were doing physiotherapy at all. For Jessica, all these purposes were realised by disassociating from 'the clinical' mediated through presence at non-clinical venues.

> because you are taking them out of that area of coming to the [hand gesture inverted commas quote], health centre, when people come into the health centre, they automatically know they're a patient there or a client there, if say I was able to do sessions in the park, they wouldn't see it as a physiotherapy session, they would say, yeah, this is so much fun, I really enjoy this[…] they would say wow that's cool and it would make them feel a lot less patient-like… and I'm being a cool teenager [Jessica].

Negative ideas of patient-hood and physiotherapy and of health centres as stigmatising locations for YPwD are assumed within Jessica's account. In contrast,

she forefronts how non-medical, community sports venue and normalisation of everyday PA would create additional benefits for the self-efficacy and self-management of YPwD.

> And this is why, if we can be physios in ['animated' hand gestures and excited tone of voice] in actual community settings, like in gyms, if gyms are able to allow us to use their facilities, if I'm allowed to go into the Olympic swimming pool and do sessions there, then it takes that stigma away of the kids coming 'oh I'm going to the physio session at the healthcare centre' [dull monotone voice] to oh wow, I've got a physio session at the Olympic pool [excited voice] that's so cool and I think it would then bring more confidence to those children to then go off and do their own things [Jessica].

However, for Emma and Kelly, working in tertiary specialist inpatient settings, it was impossible to relocate their interventions to non-clinical community venues. Despite this, Kelly had experienced the positives of providing sport/PA outdoors during brief moments of ward leave. Kelly's patient narrative exemplified how sport/PA generally supported therapeutic relationships between staff and YPwD and specifically how cycling outside with a teenager reluctant to engage, had functioned as a neutral place to connect in conversation and 'get to know each other,' that was impossible during formal physiotherapy in a clinical environment. Kelly's explanation of why it worked as 'being out and being moving' was suggestive of escaping an institutional entrapment that was almost prison-like but also the liberation of physical movement unconnected to the clinical.

> It was about being out and being moving and being…doing something non-hospital [beyond] kind of convention of hospital exercises [Kelly].

Emma similarly recognised the significance of outdoor hospital spaces and wanted to re-shape them to create environments that would encourage meaningful PA behaviours through "little outdoor spaces that are just not used, you know, there's no reason why there can't be tracks on the floor or stuff on the walls, targets or anything" [Emma, female, 41]. Similarly, Emma worked with art teams in the hospital, to build PA behaviours into indoor environments, "when we have ward redevelopment […] we've been speaking with them about how we make that interactive […] how we use the space to encourage activity".

Jack agreed with Jessica's idea that venues acted to reinforce discrete identities as a patient or as an athlete and then took the sense-making deeper by explaining how

venues impacted the fluidity of gross motor movement. Jack felt non-clinical settings were ‘pure nature’ and had been hugely beneficial to her in terms of accurate assessment and evaluation of treatment efficacy because they improved engagement and encouraged children to move authentically in a way that was ‘normal’ for them.

> it’s so much more natural to the kids, there’s more engagement, even their movement patterns are a lot more fluent and you get a more honest assessment of their movement patterns without them trying to move in a way they think is the correct way […] Making things more natural is in everybody’s interests and gains better results. Yeah, normalised and naturalistic, I think is hugely important. […] You take away a lot of the pressure and the scrutiny and you get a lot more natural, erm, development and a lot more natural assessment [Jack].

In contrast, Jack felt clinic settings had made children’s self-regulation issues worse by heightening perceptions of why they were there. Jack’s account emphasised ‘kids’ experiences of the clinic encounter being characterised by scrutiny of their physical skills, in order to quantify the level of their impairment. This intensive scrutiny involved dissecting each motor component in detail, which Jack described as “we absolutely pull them to pieces”, which also reinforced their status as impaired persons. As children were aware of this, they tried harder and their natural level of ability was not captured. For Jack this also meant clinical environments and clinicians reinforced the power of the clinician, intimidation, anxiety or even fear in children. The power imbalance phenomenon between clinicians and children within clinical environments had been underlined for Jack since moving from adults to children’s services and was further reinforced by her experiences with a child who had an extreme fear of health settings and health personnel.

In using the word scrutiny, Jack displayed apprehension about the negative feelings experienced by children through her forensic comparison of their motor skills and functional performance against recognised ‘norms’ in a clinical setting. She felt it more acceptable to subject adults to this, but it created unease in Jack to see children multiply oppressed in the encounter, as child versus adult, patient versus therapist and clinic versus non-clinical setting. In saying this, Jack did not deny her legitimate role as a physiotherapist to assess motor performance, but she needed it to feel more natural through using sport/PA in a non-clinical setting. Finally, on a

practical level, absent built environments mattered and Amelia, Ella, Sarah and Sophie all highlighted the basic lack of access to appropriate community facilities or clubs as one of their biggest barriers to offering sport/PA.

4.1.6 Familial context

Family is the essential context of children's lives and my participants appreciated their interventions must accommodate variable situations and be family-centred. As Ruby concurred…

> it has to be inclusive of the whole family, you can't just do physio on the child and not know about their siblings and their parents […] because that is going to have such an impact on what they can and can't do [Ruby].

Twelve participants had experienced variable familial attitudes towards physical participation in sport/PA, with several feeling positive attitudes were a necessary precursor for their use of sport/PA, believing they had only limited ability to initially create interest in sport/PA since parents and carers functioned as greater role models for their children. As Ava shared "**if** they're a sporty family it then becomes ok, how can I get my child involved". These were the "active families", also encountered by Nigel, Amelia, Ella, Sophie and Sarah, who had "normalised" sport/PA, although Sarah was cautious about immediately judging familial attitudes to sport/PA because "it's massive and it's also surprising". Emma further underlined clinicians need to appreciate the timing of any sport/PA message, highlighting that the period after devastating news or during acute illness was not an appropriate moment. Participants also shared hugely different narratives of familial abilities to engage with physiotherapy services and challenging socio-economic circumstances, e.g., access to transport, all of these familial contexts negatively impacted their ability to use sport/PA within physiotherapy interventions.

> some of our children aren't necessarily privileged to come from the families that will support them with their aspirations [Kelly].

Familial ignorance about available opportunities sometimes created barriers for participants use of PLP, although this was solvable through the provision of information. A greater challenge, however, were deep-seated cultural and gender attitudes to sport/PA experienced by Nigel and Jessica, working in ethnically diverse areas, who responded with a mixture of resignation, challenge and innovation.

> There was a very different response to the boys, to the girls in certain cultures because that's just culturally how it was, when you were trying to introduce physical activities [Nigel].

Jessica laboured under the particular restraints of her working context in a deprived and ethnically diverse area with many first-generation immigrant families, where a combination of associated practical and cultural factors problematised participation in sport/PA, e.g., poverty, long working hours and large families, alongside cultural and religious beliefs. Jessica experienced family as the essential context of children's lives in a distinctive way, where negative cultural values concerning sport/PA and about disability as a stigmatising phenomenon did not cohere with her professional values; even though she understood them, due to her own ethnicity. In this dissonant environment, Jessica felt thwarted, with her capacity to influence diminished; her account and word choices ("stumped") also showed an awareness of her limited locus of control, as well as a feeling of being somewhat isolated in her experiences from other paediatric physiotherapists, who practiced in a different cultural milieu.

> we have these extra factors that maybe other physios in other areas of England…don't have to deal with, but we do. So, it's like how do we take away the stigmas, how do we take away the availabilities, how do we take away a lot of the things they just can't afford.
>
> They're kind of first generation into the country, so they're still kind of just only getting to grips of how to sort of integrate into society…a lot of them don't actually believe in sports or extra-curricular activities and there's a difference in participation for girls and for boys […] there are some cultures that don't allow for exposure of skin, or exposure of hair.
>
> We want to promote sport, we want to promote physical activity […], but then we kind of get stumped because we get answers [paraphrasing parents] 'no she's not allowed to do this or no it doesn't fit in with her timetable, or no we don't have the money for it, no we don't have the car to go there. We just get stumped with the roadblocks that come in the way [Jessica].

Another 'roadblock' experienced by Jessica were parents' primary foci on education and seeing their children advance to careers and university, these were exclusively pursued so that sport was viewed as a 'threat'; a cultural prioritisation which her own ethnicity gave insight into.

> I think I understand this a little bit more than another physio of mine, as again, because of coming from a coloured background myself, for example, I know a lot of immigrant parents they emphasise getting better grades, so they can go and get a better education to get out of that cycle and sport hinders that. Sport

> will mean, ‘oh I’ve got to take my child out,’ so that means they don’t have two hours of revising [Jessica].

Both Kelly and Harry also experienced the influence of family, recognising that physical engagement with sport/PA was initiated more by parents than children, therefore the physiotherapist could only exploit existing interests and Harry recognised his limited locus of control.

> Most of it has probably been built upon stuff that’s already there, I don’t think I have necessarily created the engagement from the outset, I‘ve always mentioned it and suggested it, but I wouldn’t be able to quantify necessarily more than…I dunno…half a dozen examples where they’ve gone, oh that’s a good idea…let’s go and try it…climbing would be one [Harry].

Harry’s deep understandings of the family’s primordial power to influence PA behaviours arose from his own profound, familial cultural experiences within athletics. A shared running interest is how he met his spouse and his children were introduced to athletics early and had continued with it…”both of my kids have been taken down the track since they were diddy, you know literally nine days old was my boy, cross country the lot”.

Parents’ participation in creating a supportive culture within Ivy’s cycling project meant she saw them as “key advocates” who not only functioned as part of the enabling environment but personally “drove” her to keep going. In turn, she perceived what was “driving invested” parents was the almost unbelievable “wonder” of seeing their children be physically active for the first time despite their severe impairments. Ivy recognised the profoundly emotional effect this had on parents and the way it deeply reinforced behaviours and in turn it also powered her beliefs and behaviours about the cycling project, creating a kind of symbiotic energisation.

> we’ve got families who are so invested in the bikes, you know, for the first time they’re seeing their children, you know these are children who, there’s the acceptance that they will never, you know, walk or be mobile independently and I’ve had parents when they’ve watched their children cycling, say, like, are they doing that themselves? [Ivy].

4.1.7 Social context

The contexts reflecting inclusive societal discourses concerning disability and disability sport were of prime interest in my study, as they impacted how sport/PA was enacted within physiotherapy interventions for YPwD. Several participants shared how the paradigm shift of disability sport from niche to mainstream media, and experiences within mainstream sports settings as well as adapted and inclusive sports settings had acted to create their inner world of reference.

As a para-athlete, Ava possessed existing 'insider' awareness of disability sport discourses and experienced how increased mainstream media profiles were altering the mindsets of 'her' parents. This relocation was normalising PA for YPwD and created an 'accessible' space for Ava to engage them in new possibilities.

> They see other people like their child achieving and having great success and say, ok, what's to stop my child and then it becomes ok, how can I get my child involved, we see what's possible, now it's why not, instead of are you sure? [Ava].

Thus, media exposure was contributing towards and creating a new 'normal' in both disability and mainstream clubs and prompting mainstream coaches to work with those who have disabilities. However, Harry perceived that positive disability sports legacies sometimes remained unexploited by physiotherapists and Jessica reminded how media influences were still contingent upon supportive familial cultures of sport/PA.

> culturally a lot of these families, they wouldn't spend their time watching the Paralympics, it's not something that's on the top of their list…it's genuinely not on the top of their heads […] some families of some backgrounds, they just don't. They don't have the time; they don't have the interest [Jessica].

Jack shared greater detail on how inclusive disability and disability sports discourses were changing the perceptions of 'her' children with milder impairments (GMFCS Level I and II). These YPwD had been reluctant to attend disability sports sessions to avoid the stigma surrounding activities for 'severely disabled'; however, Jack felt the inclusive alternative discourse of being differently-abled had enabled…"kids to see disability comes in all forms, and to be more accepting of the fact that it doesn't have to be the defining feature of them". When Jack mentioned the visibility of "all forms" she seemed to be conceptualising ability as a spectrum which challenges binary

notions of ‘being disabled’ or ‘not disabled;’ and this was directly facilitating greater engagement of YPwD within her adapted cycling sessions.

The idea of inclusion in sport/PA for YPwD as a moral stance or quest appeared alongside ideas about normalisation of PA for YPwD, and seemed to be driving Ella’s, Ivy’s and Jessica’s commitment. Ivy self-identified as an “advocate” for the right and choice to exercise for the “forgotten population” with severe disabilities, who have limited options to be physically active. Her advocacy was bi-dimensional comprising practical support alongside social justice to ensure YPwD’s rights were upheld in both social and healthcare contexts.

> I feel like what we’d like to do is become real advocates for this population of children. We’re promoting it [exercise] for every other person on the planet…you know, don’t sit too long at your desk; our children have got no choice, yet we’re not looking how can we get you moving. It’s all passive […] and this feels like a real opportunity to come in and raise that profile [Ivy].

Ella similarly identified moral and social dimensions within her practice; when she experienced YPwD freely participating in sport/PA, it represented equality of opportunity and access, not only to PA but to social connectedness, a basic psychological need. The contrast she sometimes saw between the situations of peers with typical development, where these possessed rights are taken for granted, and YPwD was creating moral indignation for her, but she felt alone in her views.

> I think it’s also about, well to me, it’s about equal opportunities and access. You know, kids that haven’t got a disability, the parents would not even be thinking twice…well some would…about well, let’s go and try swimming, let’s go and try this, let’s go and try that […] let’s have a go as a means of getting their kids involved in social activities, fitness and all the rest of it. So, why shouldn’t kids with physical disabilities have those same opportunities? [Ella].

Jessica had experienced similar emotions when accessing a community gym facility with teenagers who had mild impairments and her words demonstrated her deep sense of rejection and injustice. Her choice of verbs and personal pronouns ‘they are scared’ identified an adversarial establishment blocking her collective ‘we are trying hard’.

> We were turned away…so it feels like we are trying hard to involve ourselves with the community, but I think they maybe then get scared the children then have a [*hand gesture of inverted commas*] condition. If the children met the minimum age requirement of sixteen, which they did, it shouldn’t make any difference. Why is it that our kids needed an extra risk assessment*?* [Jessica].

In common with those expressing a response, both Jessica and Sarah envisaged a place for both adapted and inclusive sports settings with feelings arising from internalised pragmatism and practicality. Sarah appreciated that the divergence created by the physical maturation of those with TD and most obvious during competitive sport meant YPwD needed to be part of something with 'people like them'. Pragmatically, she also understood why some of her children attended multiple settings, to access meaningful competition in one place and social connectedness in the other.

4.2 "It's all about the kids".

This theme explored participants' meaning making that privileged YPwD and their needs above focus on sport/PA. This aligned with child-centred approaches that are universally promoted within paediatric care which recognise children are not just small adults. Moreover, this theme explored participants' relational focus on YPwD alongside their engagement. Participants often referred to them colloquially as 'our kids' or 'our children' and use of this possessive pronoun demonstrated the depth and type of therapeutic relationship experienced.

4.2.1 Our kids with disabilities and their engagement

An essential concept underpinning participants' accounts of their interventions recognised the importance of play as both the occupation of youngsters and a loved, fun activity. Therefore, it made perfect sense to Ava to harness that 'love' by integrating sport and play, using 'phrasing' to effectively transform her positionality as well as the intervention. Her choice of 'battle' acknowledged that practice sometimes felt adversarial and she needed to be on the winning side.

> children love play and if you phrase that as sport or recreational activity, children love that, children's main occupation is to play and you know that's the same for teenagers, as much as they like to be grumpy and sit on their phones…a lot of them love having fun and if you can make an activity into something enjoyable, you've won more than half the battle [Ava].

Participants recognised 'play' as the preferred activity for infants and younger children with a gradual evolution into more formal sports for older children.

When considering ‘our kids’ specific identities and needs, Amelia reprised Ava’s comments about fun being a non-negotiable need during physiotherapy sessions and added, almost apologetically, that her patients are ‘kids’ not patients. Both Amelia and Jessica instinctively felt that an alternative identity replacing ‘patient’ mattered for YPwD and was an important part of a normalising approach. Although it felt personally ‘odd’ to depart from clinical terminologies and of course altered their own clinical identity; the resulting benefits were valued over any dissonance created.

> I know it sounds really strange, but I don’t see my patients as patients anyway, I know that sounds really odd. I look at all my patients and just think, you’re just a kid, you should be having fun and I do really try to make the physiotherapy fun [Amelia].

Where participants focussed on their ‘kids’ as situated persons encountering issues linked to their conditions, transitional stage or age, it clarified sense making when using sport/PA. Kelly experienced the particular challenges for those with life-changing conditions and an altered body image arising from acquired disability. She felt a specific need to understand the child’s ‘normal’ relationship with sport before disease or trauma, and how this influenced their subsequent feelings. Her word choices simultaneously acknowledge the previous depth of relatedness to sport, yet its vulnerability following acquired disability…”They don’t want to be involved in sport if they can’t be involved in the sport they loved, in the way that they loved it”. However, Kelly experienced others rationalising their situation, their love of sport remained undiminished and had transcended the need to practice it as before; therefore, they were receptive to alternatives, which provided traction when weaving sport into her rehabilitation offer.

Ivy was deeply focussed on ‘her’ children whose severe impairments (GMFCS Level IV and V) rendered them invisible to those setting PA guidelines who thought them incapable of exercise. It felt right to style herself as an ‘advocate’ for her group and her intervention as an ‘investment’. The word choices implied a profound giving to the group and the cycling project, within a social justice framework. Ivy also clearly appreciated the evolving clinical and ethical landscapes associated with recent medical advances for ‘her’ children and used them to locate herself and her interventions in a place that lies beyond “survival.”

> I've thought a lot about… ethically where we are […] there's always the discussions around how our children are surviving, medical advancements mean we're saving our children, so we're seeing children with the kinds of disabilities that we just wouldn't have seen fifteen, twenty years ago and I feel like that's great […] obviously our children are surviving, but it's beyond the survival isn't it? [Ivy]

Ivy recognised cycling as a meaningful activity which contributed to a quality of life beyond survival and this is observed in the chronology of embodied narratives describing the inclusive participation of 'her' children in the virtual Land's End to John O'Groats cycle ride. She experienced the enabling use of assistive bikes as "ground-breaking, surprising and great," which had created a new 'normality' for individuals and for the wider community, that felt like a new epoch.

> before the bikes, you know, it would have been the staff or more able-bodied children, but each child was able to participate and you know we'd got the PowerPoint of how far we'd got and we did it in one day…I can't remember how many hundreds of miles it is. […] You know those kinds of things for our children are just not normally in reach, so it's just great. […] I can't speak highly enough of what it's done for our children and the community [Ivy].

Harry's insight into the angst experienced at educational transition by increasingly self-aware YPwD of their physical differences was a starting point for using sport/PA.

> all of a sudden, they're very, very self-conscious and aware that they've got a slight difference They've gone through a phase, where they've grown up with kids […] in a primary school setting that have got used to them walking slightly differently to their mates and being towards the back third of the group, but then to get mixed in with sort of another three times as many kids that haven't [Harry]

Harry identified the challenges for "mild CP children" transitioning to mainstream secondary school as both physical and psychological and felt he should and could utilise these challenges to justify using sport/PA as a therapeutic intervention, using the differences now being revealed during sport, to act as a motivation to engage.

> effectively their disability is hidden and the one thing I do try to do in that is use sport as that leveller to say look you know there is a difference, you do have a bit of an issue in these areas, so therefore the playing field is not level […]. You might not necessarily see it at school, but can we then optimise, can we then maximise that [Harry].

Similarly, although Jack accepted that peer pressure was frequently perceived as a negative, she experienced it in a positive way, where pressure to conform to physical 'norms' functioned as an intrinsic motivator for YPwD to engage with her

interventions…"I think peer pressure is always seen as such a negative but there's a natural peer pressure in wanting to keep up with your friends that really supports participation and really supports my programmes".

Grace appreciated the particular situation of teenagers who had undergone long-term physiotherapy treatment and consequently were now negatively experiencing interventions. Grace's use of 'scream' and 'physio'ed to death' eloquently capture her insight into the frustration, possible anger and the depth of negative emotion directed towards physiotherapy as both a 'brand', an activity, and towards physiotherapists. She described how by teenage years, "they just get fed up with us" [Grace, female, 55] and really felt the need to find an alternative approach.

> I've always found sports really helpful because children don't feel like they're then doing physio because I think my experience has been, by twelve, thirteen, some of my clients have been physio'ed to death […]. They get to the stage if they have to do another physio exercise or see another physio, they're just going to scream [Grace].

Grace consequently experienced the use of sport and personal trainers (PTs) as a valuable and necessary alternative strategy and along with Jessica acknowledged it might speak to the peer pressures and identity challenges which teenagers faced.

> Handing onto personal trainers because maybe they're more acceptable than taking a 50-year-old woman [smiles] to the gym with you…they want someone who's cool, that fits with their priorities in life [Grace].

Other participants were aware that children and teenagers negatively experienced physiotherapy interventions. Harry used the word 'grind' which eloquently captured his perceptions concerning the tedium of daily, lifelong physiotherapy exercises; set against this unsustainability, sport/PA felt a more palatable solution to create motivation and fun was, of course, non-negotiable.

> It's about optimising the sport against their motivation and them having fun, which takes away some of the grind that we're trying to avoid because for kids, grind doesn't work, we've got to make it fun [Harry].

Similarly, Amelia and Paul experienced how the nature and presentation of formal physiotherapy interventions was simply not aligning with children's need for fun and excitement. The 'push back' described by Paul underlined his frustration that instead of interventions advancing children, they were unsustainable and counterproductive.

> these are really boring exercises and let's face it they are, if you've got to do these same exercises day in day out for fifty years, you can make it as exciting as you like, but it's not exciting by any means…unless you're doing it alongside peers in a kind of fun situation [Amelia]
>
> Facing the fact that I might have physiotherapy for the rest of my life and there can be a big push back against that [Paul, male, 33].

Overall, participants shared feelings that the 'brand' of physiotherapy can be problematic for children; and in the case of teenagers, clinicians being another representation of 'uncool' adult authoritarian figures directing them and conflicting with their perceived need to appear 'cool' to peers.

Participants' experiences of 'kids' responses when sport/PA was included within the physiotherapy offer were closely associated with the existential problem of how to ensure the longevity which would yield therapeutic benefits and desired outcomes. Sophie felt that 'kids' had been motivated to engage and move when sport/PA disguised the physiotherapy interventions, which she described as "hiding the vegetables in the pasta." As a result, children felt they weren't doing physiotherapy at all and would say…"This isn't like physio, this is fun; they're more engaging with it because it's not physiotherapy". In this circumstance, Sophie was highly aware that 'kids' were responding differently to the way physiotherapy was presented and was concurrently aware that physiotherapy was not associated with fun. That sport/PA was legitimately creating an alternative 'wrapper' was an important feature of her account, although she did also acknowledge that not all children are interested in sport.

Nigel, Harry and Paul located their sense making about sport/PA in the perceived needs of children and families and the need to identify meaningful goals, a process described by Paul as 'theming activities'. They also experienced how play and having fun functioned as an intrinsic motivator in this process and sport/PA could sometimes act in this way. However, as many participants were keenly aware, children have diverse goals and preferences, leading Sarah to hope they loved sport or at least tolerated it. Ruby experienced how some YPwD used sport/PA to identify their own physical goals which allowed her to create meaningful programmes; it felt like a liberating step-change from usual therapist-led goal setting because it opened up new possibilities. Ruby's narrative captured the elation she felt when sport/PA

facilitated this and thus created the desired active participation and intrinsic motivation. I interpreted this as a feeling of release into a place without limits where Ruby's own creativity could flourish.

> when a child comes up and says something like I want to skip or I want to play cricket better. I just find that so exciting because there's so much you can do with that…what are those components that we can then break down and develop the goals around that [Ruby].

The natural sequel to self-initiated goal setting was for children to increasingly self-manage their conditions and some participants, like Amelia, experienced sport supporting this process. Amelia clearly believed that individualised self-management using sport was an imperative for children with long-term conditions. This avoided her interventions creating unnecessary medicalisation in the lives of children and families, alternatively normalised exercise for YPwD and enhanced experiences of childhood normalcy.

> We have [emphasised] to work towards self-management…we can't just keep going doing everything for families, but obviously different families get there at different times and need different amounts of support, but I do find that the ones who seem to engage in sports and clubs do seem to get there sooner because they get that idea in their head…we're exercising our body […], it's not stopping the child from exercising like any other child. They may be exercising in a different way, you know, it might not look the same […] I think once families see that, the childhood is more like what they expected their child's childhood to look like and actually I find everyone relaxes more as well…it's just getting them into it in the first place [Amelia].

Amelia considered self-management as natural evolutionary response when a family is coming to terms with their child's enduring health condition, she experienced it as a significant 'staging point' that demonstrated a desired maturity in the therapeutic relationship between her and the child and family. At this point dependency on her as a clinician and focus on 'therapy' reduced with the child and family equipped to progress more independently and everyday exercise normalised.

> They realise there are ways to exercise outside of therapy and it changes that whole mindset with thought processes that when you've got a disabled child and everything's about therapy initially, to then realise, they can just exercise, they can just enjoy themselves, it doesn't have to be under the scope of a physiotherapist and that's a real achievement when families get to that point, for me [Amelia].

Ava concurred with ideas of how sport/PA performed this normalising function for YPwD and families, her schema explained how perceiving sport/PA as 'normal' activity allowed her to normalise the physiotherapy encounter and increase self-management; the diverse tangible 'rewards' then experienced by YPwD and families reinforced sport/PA behaviours.

> seeing your child get involved, make new friends, learn a new skill…see them flourish, must be hugely rewarding as well, particularly for parents of children with disabilities who had worries about all of these things […]. For parents seeing their child achieving in a sporting activity brought the realisation "they'll be fine" [Ava].

Certain sport-related rites of passage for children with TD were recognised by participants as physical activities that also held particular significance for YPwD and families, e.g., bike riding, running and swimming and fortuitously for all of these, YPwD could be appropriately supported to participate and so could be utilised within their physiotherapy interventions. Ella experienced the impact of setting up a community club using supportive running frames (Figure 7a) which created 'emotional, hot cognition', powering her sense-making as previous physical limitations were removed and new possibilities revealed. This suggests perceptions of running frames as technologies that extend the capability of the 'unfixable' body to participate in sport and therefore effectively expanded what constituted the body for my participants.

> They'd showcased it with a fantastic video of a young man […]. So, I was absolutely blown away with the frame running and what it could do for kids on our caseload [Ella, female, 53].

Ella also experienced how frame running accommodated direct sibling involvement and its profound dual emotional impact on parents of seeing their child able to run and run with their sibling. Ella recognised the deeply significant effect this had on her and on re-setting parental expectations; whilst Ruby echoed similar profound emotional recollections about shared PA in her frame running activity. Such 'passionate' feelings acted to reinforce PA behaviours in everyone involved.

> oh, it's fantastic…You've parents standing there, saying they've never done anything together before because one of them has been in chair, activity-wise, so it's really great [Ella].
>
> it was tear moment for some of the families [smiles at recollection of the event] because they could see their little child with CP in a running frame next

> to their sibling who doesn't have any motor impairment and just that sense of, yeah, doing things together, doing life together. Regardless of what difficulties they have, there's a shared passion for movement, for exploring [Ruby].

Positive meanings experienced by YPwD through physical participation are echoed in Amy's account of someone with severe disabilities (electric wheelchair user and unable to turn herself in bed at night) who accessed swimming independently. For Amy, this reinforced her essential values about swimming enabling physical participation, without an aid.

> she says she just feels so wonderful to be without anything in the water…I think it did a lot for her mental wellbeing…something that she could do without having an aid […]. This is the only environment we can do a sport or physical activity without aids and that was very important [Amy, female, 73].

The narrative made Amy reflect on what swimming meant to her, which lay beyond the physical to embrace what it meant psychologically to those with the most severe difficulties. Amy's use of the word "soul" speaks to her belief that swimming animated the whole person through wide ranging benefits that embraced spiritual, emotional, moral and intellectual domains; however, sometimes swimming's immediacy meant it was overlooked as an accessible PA for people with disabilities.

> Swimming for disabled people it's more, it's a sort of a human attitude…something that's good for the body and good for the soul and it's good for inclusion…I think it, it's a winner […]. Swimming has always been there… [Amy].

Kelly experienced additional feelings about patients' positive responses to sport/PA by sharing narratives where sport/PA had provided a platform to demonstrate skills mastery and show restitution against a backdrop of life altering and life limiting conditions "sport providing opportunity to show new skills, e.g., shooting hoops where the patient is more skilled than parents, sibling or peers, or physio!"

All these diverse patient narratives and the emotions they evoked were clearly recalled by the participants which is manifested in the authentic language used…'blown away,' 'fantastic' and 'tear moment' and these acted powerfully to reinforce their future practice. However, it is important to note that an opposite view was shared by Emma, working in a specialist inpatient setting, who strongly felt that integrating sport/PA into physiotherapy would repel children, as they would associate

it with a clinical intervention and no longer be fun. Emma was here describing the opposing phenomenon of medicalising sport/PA.

> We need to be working on de-medicalising exercise and physical activity a little bit and getting children to do it because they want to do it and because it's fun…rather than it being you need to do this for a set period for a set reason [Emma].

4.2.2 Kids who compete in sport.

Participants working with YPwD competing in disability sport experienced specific negative and positive phenomena associated with a competitive lifestyle and mindset, including conflicting priorities, intensity, internal pressure to win, frustration or loss of identity when injured, increased self-esteem, skills mastery and social connectedness (Grace).

Emma experienced a situation where self-identity was so synonymous with life as a competitive swimmer that a teenager's inability to swim caused him grave mental health difficulties. Emma addressed this through a brief visit to the hydrotherapy pool, which felt hard to physiologically justify within her professional scope but was an impressive psychological success, immediately restoring his swimmer identity and emergence from a depressive cycle. Powerful experiential learning of this kind could not be unlearnt and had been incorporated into Emma's practice epistemology with further instances since in similar circumstances.

> honestly, I have never seen such a change in somebody in a week, like he came to hydro twice that week and his mum came the week after and she was like, you've changed, you've changed his life.

Ava and Jack encountered challenges associated with overtraining which perpetuated injuries and exemplified how competitive requirements sometimes conflicted with physiotherapy goals for YPwD. Similarly, Grace working with boccia competitors and Sarah, with promising or established wheelchair athletes, experienced difficult 'conversations' about conflicting priorities between restrictive competitive positions in wheelchairs and their therapeutic goals, e.g., greater joint range.

> when it's come to physio-wise, it again has restricted her to 'you must use this chair and you must sit like this because that might make you throw better […]

> and from my point of view I want her to be able to do a range of different ways of moving and not just moving this way. [Grace]
>
> You can't do a patellar pull down on a child that needs to be folded up in a wheelchair, it doesn't work [Sarah]

Sarah resolved her conflict by retreating to her fundamental primary goals and internally confirming values about "what is best for this child, how are they going to achieve most, what is going to make them happy in the long-term and what is going to influence their quality-of-life moving forwards." Kelly experienced similar tensions when polarising messages from the 'two worlds' of competitive sport and physiotherapy were pulling YPwD in differing directions. Although Kelly experienced sport as an overwhelming good, the narrowed perspective of a 'win at all costs' mentality led her to visualise an unexpected 'dark element.' Although mostly covert, sometimes this 'dark side' manifested when YPwD were unduly influenced by coaches at the expense of the physiotherapist, or in relational conflicts with coaches, which is covered in the relational identity section below.

4.3 Conceiving and experiencing the relationship of PT and sport/PA.

This theme explored how participants made sense of the relationship of physiotherapy and sport/PA and the diverse ways it appeared in their everyday practice.

4.3.1 Signposting

Jessica's service was currently constrained by referrals and available staffing and therefore signposting to suitable sport/PA felt like the only realistic option but, like Ella and Ruby, she still felt it was a justifiable and valuable service. At the time of interview, Jessica's physiotherapy student was researching and preparing an information leaflet about the suitable local sport/PA for YPwD, which Jessica rationalised as a valuable service legacy.

> so, after every appointment […] where they say…'oh I don't know where to go,' we can say actually here's a leaflet and everything's there for you [Jessica].

Ruby had also felt positive about signposting to online yoga, dance and local Pilates classes, because these non-clinical activities addressed associated clinical areas of core strength and body awareness.

In Emma's specialist tertiary service, signposting was also used, normalised and justified, alongside annual multi-sport taster days to pique children's interest; even though patients came from afar and she had limited knowledge of their local sports opportunities. However, Emma also strongly felt that signposting was not a function unique to physiotherapists and any health professional can give this message.

> we do signpost and we do quite a successful day that [children's hospital] have taken on and [other children's hospital] and they now do similar days and some of the other teams within our hospital have done those as well […] we have children coming from fifty, seventy, eighty miles away […] I don't know what happens in their locality that they could access and therefore it is kind of signposting […] I don't think it's not our role but I think it could be a lot of other people's role as well [Emma].

Emma's awareness and operation of her individual scope of practice was highly influenced by the other personnel available within her workplace with a funded EPAT and health professionals, hospital teachers, play therapists and arts staff all contributing to a conducive and unique PA environment, which she repeatedly said she was 'lucky' to be working within. For her, this realised, ideal 'whole system' approach to signposting had been further underpinned by wider involvement in the Moving Medicine project and reading of related research underlining her beliefs, "you know […] it's not just how physios get people more active; I think" [Emma].

4.3.2 Alongside - Physiotherapy is physical literacy.

Several participants experienced physiotherapy and sport/PA simultaneously running along two separate but complimentary tracks. They indicated that clinical activities and sport/PA were two different phenomena, even though closely associated.

> To me, sport is absolutely, a really crucial way, of alongside what we're doing as physiotherapists to try and get children into something long-term [Ella].

Grace, Paul and Sophie developed this idea of complimentary but separate phenomena by sharing how they conceived physiotherapy as a form of physical literacy that provided the specific motor foundation for performance in PA, sport or competitive disability sport. Thus, physiotherapy goals, such as muscle

strengthening, range of movement, balance and co-ordination were the essential staging points towards improved activity and therefore improved PLP in a 'non-clinical place.' The simple logic of this made sense to Paul and he knew it helped him explain it easily to 'kids'. Unsurprisingly, Paul chose an obvious sporting metaphor when likening physiotherapy to running drills practiced in training to promote good form, which allow runners to subsequently perform better in competition. The end product in the non-clinical space was what mattered most when form became applied, unconscious and meaningful.

> In the same way we can think of the physiotherapy session as the learning of the skill and the technique to enable the meaningful change in someone's life that takes place away from the physiotherapy session, e.g., when someone is then participating in sport or physical activity or playing (if a young child/infant) [Paul].

In addition to improved physical skills, Sophie experienced children's improved confidence in physical literacy groups she ran, for those currently struggling with foundational movement skills or who had not previously established them in earlier physical development.

4.3.3 Active integration of sport/PA within the physiotherapy offer.

An important feature here were participants' choice of words when describing how they experienced the relationship of sport/PA and physiotherapy as 'embedded', 'interchangeable', 'seamless', 'holistic' and 'integrated'. Yet despite experiencing integration, there was a simultaneous fluidity identified by Ruby when components didn't always 'marry up' or when Sophie temporised that only certain 'elements' were integrated and achieved mutually beneficial outcomes.

> I think elements of it, between physiotherapy and sports is integrated. I think […] the more exercise you do, you've got the physiological adaptations that occur with physical activity that can improve muscular strength, muscular endurance, cardiovascular fitness and all that is related into physiotherapy [Sophie].

Practice experiences had often led participants to feel and know that physiotherapy made no sense when it was compartmentalised and practiced in isolation from everyday life. For Harry, this arose from the obvious practicality that YPwD lacked the time to undertake additional physiotherapy activities and so, like Nigel, he aimed

to embed them into existing PE and loved-sports activities. Similarly, Ivy, whose classroom-based cycling activities more effectively integrated physiotherapy into the school day. Thus, the everyday frequency required for physiotherapy to be effective rationalised and framed participants' integration of sport/PA and physiotherapy. Sarah's experiences of integration aligned with ideas about normalising physiotherapy by promoting PA participation that was non-clinical and recognising physiotherapy's value lay within wider perspectives of physical participation in all life situations.

> with the best will in the world, we're not going to get anywhere doing ten leg raises in isolation in a little room or cubby hole whatever…in a school or hospital area where we can have space. The thing that's going to make a difference to that child's life, to their actual function, to their long-term mobility is that engagement and that participation [Sarah].

Paul's patient narrative demonstrated the integrative phenomenon well, where a child seen weekly by him for strengthening and maintenance alongside a home physiotherapy programme had recently got involved in frame football and "absolutely loves it." Paul's positive experiences of the child's greater participation and engagement with physiotherapy exercises in comparison to previous self-reported frequencies were 'game changing' and arose because physiotherapy activities were now viewed as 'football training'. Participation was further reinforced by the frame football coach noticing ankle issues compromising the child's ability to kick the football, which prompted the child to ask Paul for ankle exercises.

> I thought that was absolutely fantastic, because, whereas before it might have been me suggesting, well, let's work on this… that's him engaging through his motivation to engage in his external physical activity better. It's meaningful for him and hopefully will have a better outcome in the future in terms of his engagement and his participation in the exercises I want him to be doing [Paul].

Amelia valued an integrative approach because she understood necessary daily physiotherapy which is physiotherapist-led is unachievable, but sport/PA is not. Furthermore, both Ivy and Amelia strongly felt that ongoing weekly physiotherapist-led physiotherapy for routine maintenance was inherently inappropriate for any young person. It is clear they envisaged possible psychological harms, where

lifelong weekly input from a health professional might reinforce the child's sense of difference and impede their societal participation.

> you've got to see a physio and you've gotta be in a room in some kind of weird relationship with an adult for your whole life, when it's no… you should be out doing stuff with children and you should be outside [Ivy].

> I do think we have to be really careful that we don't paint a picture for families that ongoing weekly therapy is ever good for any young person, not that some people don't need weekly therapy for periods of time, they absolutely do…but no case for a nought to nineteen weekly therapy [Amelia].

Emma diverged from Amelia and Sarah by warning about integrating physiotherapy and sport/PA, since she experienced it as a medicalisation of PA and felt it could ultimately 'put children off' She cautioned clinicians to be mindful about using the phrase "physical activity as a therapy." At that point in the interview, it is likely she was thinking of her workplace and 'her kids' who needed PA as a fun distraction, rather than associate it with clinical intervention and therefore be 'spoiled.' It also hinted at her underlying beliefs about the nature of PA, that it was fun and voluntary; and about physiotherapy, that it was not fun and prescriptive, which she strongly linked to intrinsic motivation and long-term behaviour change. For these same reasons, Emma also felt ambivalent about social prescribing.

> Actually, we need to be working to de-medicalise exercise and physical activity a little bit and getting children to do it because they want to do it and because it's fun and then they'll carry that through for, for the rest of their lives hopefully, rather than it being 'you need to do this for a set period for a set reason' [Emma].

It is relevant to highlight that Emma's setting supported her position, as she could refer patients to an EPAT, unlike most of the other participants.

4.3.4 Rebadging physiotherapy as sport/PA

This theme concerned how the labels attached to activity by participants affected experiences of it, e.g., Amelia felt the need to frame her interventions as inclusive 'football and gym stretches' done by everyone. Whilst Sarah appropriated the disciplined commitment of sports people and directly transferred it to her patients undergoing intensive extended post-surgical physiotherapy programmes. This

underlined her felt need to present and sustain a big rehabilitative commitment that accommodated progressive clinical goals but remained personalised.

> we talk of our rehab as a training programme, same as in a sports discipline and our approach very much works on that sort of progression for strengthening in particular, but also flexibility when we're talking about rehabilitation. So, for me the two things go together just really well. We talk about it just the same, as if you were training for the Olympics or whatever big sporting event, whatever is most appropriate to the child. Whatever works for them in their headspace [Sarah]

Sarah also relabelled her approach when required, to include non-clinical activity such as dance or walking the dog, as did Ruby who described dance as *a* "nice sideways step." Whilst Ava styled it as "dressing it up" to create excitement or meaningful function.

Where participants' physiotherapeutic interventions felt unpalatable, sport/PA could be a legitimate re-packaging or a disguise that generated internal motivations and meaningful goals, e.g., Ella, Kelly, Nigel, Paul and Sophie felt there was better learning, development and engagement from children when activities 'did not feel like a chore', were enjoyed and not presented as work or as physiotherapy at all.

> using a sport or balls to get the therapy out of them, they don't realise they're doing the therapy at the same time [Nigel].
>
> children have been more likely to engage when they don't realise it's what they are doing. It's like hiding the vegetables in the pasta [Sophie].

Sophie's therapeutic activities, e.g., obstacle courses, games and mainstream PE apparatus (balance block) meant she felt this was harnessing children's natural play instincts, curiosity and desire to participate; the alignment with natural phenomena made her actions feel permissible and legitimate -"It's sort of disguising it in a way, through engagement, fun and participation". In contrast, Grace showed distinct unhappiness about using sport/PA as a 'disguise,' instead she strongly styled her experience as sport participation transparently creating inspiration and interest that then supported YPwD's personal motivations to engage in activity that she still recognised as physiotherapy.

> It's absolutely not a disguise, no, absolutely, it's a reason to work… we absolutely are doing physio, but with this very strong purpose, yeah, that meets your interest not mine, it's going where you want it to go and not necessarily where I think it should go. [Grace].

4.4 Sport/PA - one tool in the toolbox

This theme focussed on participants experiences of sport/PA as a rehabilitative tool, one among many. This meant, like Sarah, they necessarily styled themselves as tool users and included associated identities as bricoleurs, creative innovators and eclectic problem-solvers.

> I have always tended to be eclectic in my approach to physiotherapy as a whole and not too tied to one particular thing and my underlying principle for that is that we are all different and one size rarely fits all [Sarah].

4.4.1 Utility

Harry, Nigel and Ruby specifically drew upon their previous positive experiences of using sport/PA as rehabilitative tool to provide a framework for practice knowledge and behaviour.

> Sport is ‘a rehab tool’ [Nigel].
>
> it [sport] is a tool to get the best out of children, at the end of the day, very few children would just stand and do ten repetitions of an exercise, if it had no meaning to them, no element of fun [Ruby].
>
> Yeah…, it’s another tool in the bag isn’t it, it’s another modality [Harry].

Having a toolbox assumed other equally useful tools existed for those not motivated by sport/PA and Kelly used an ‘arts stream’, whilst others mentioned yoga and dance as alternatives to formal sport.

Kelly felt sport/PA showed utility as a non-negotiable diagnostic tool for initial assessment “that’s part and parcel of their therapy programme that we use to assess their abilities and their potential and their function”. Whilst other participants also identified its later utility for specific goalsetting across diverse caseloads from post-orthopaedic surgical in-patients to ongoing community outpatients. Ella, Nigel, Paul and Ruby also experienced the ability of sport/PA to circumvent the ‘clinical’ and address cognitive difficulties by using sport’s common ‘language’, e.g., Ella obtaining stretch ‘naturally’ through frame running. In addition, their comments indicated how they believed using sport/PA had made physiotherapy goals meaningful and enable self-quantification by YPwD.

> You can simplify sport rules to help with this, things like cause and effect or effort and reward are part of sport and they give the feedback and positive encouragement. Using points and scoring systems help kids gauge their progress or otherwise. This provides feedback to let them compare what a good execution felt like versus a poorer one [Ruby].

Finally, sport/PA possessed further potent utility because it did improve symptoms participants were trying to address, e.g., Jessica observed alleviation of pain through swimming; or Harry and Sarah noting that strength and flexibility arose from sport/PA.

4.4.2 A tool to create engagement?

Participants did not mention adherence or compliance, instead they focussed on experiences of sport/PA facilitating children's long-term engagement with physiotherapy. Ruby and Nigel observed this as intrinsic motivations created in YPwD when sport/PA directly linked formal physiotherapy goals with their own, e.g., standing balance for young boys aiming to play football or when the identification of component skills required for cricket (arm function, catch/throw skills, trunk rotation for batting) shaped targets for physiotherapy. Thus, when participants made sport/PA the focus, rather than the physiotherapy, it created both understanding and motivation in YPwD.

> it's that level of motivation that they just suddenly have which they didn't have before. Traditional physio can sometimes be quite boring for young people…they either don't have the understanding of why they need to do it, or they don't have the motivation…to do five rotations to the left and five rotations to the right [Ruby].

Similar experiences were shared within Paul's themed football activities, Sophie's PA group and Harry's use of riding to address ankle range and bench programme to achieve core stability, as alternatives to formal physiotherapy.

> if they drive those heels into the stirrups, that's the stretch as much as they need to do […] so that's my job done [Harry].

> it's trying to take away […] the, 'this is physio, this is your exercises, go and do it' […] half the reason we think it works, it's an activity the kids buy into because it's something they can do, it's fun and if we can make things fun, then that's half the battle…the whole battle, that bit of fun buys into the keeping it going [Harry].

Harry's use of the word 'battle' implied an adversarial element within the formal therapeutic encounter, alongside Amelia and Ava identifying conventional physiotherapy approaches as 'dry' boring interactions. These underlying accounts relating the negative experiences and disengagement of YPwD were a common thread in several participant narratives and contrasted with positive experiences and outcomes obtained through sport/PA.

> sport and physical activity in that sense has always made it easy to get that engagement, rather than the dry kind of […] 'let's do three sets of x, y or z.' [Ava].

> If they can incorporate an activity that they're already doing…football club, hockey club, and it not look like they're doing this separate, specialist boring exercise, I've found they're far more engaged, they're more willing to do it, they then actually do it, follow through on it and reap the benefits for it, so, yeah…I guess it's re-working it in a way that gets the engagement [Ava].

> you kind of realise that actually if it's not happening at home, then joining clubs, joining sports is really the only way to get them to exercise [Amelia].

Of course, participants acknowledged the potential of sport/PA to engage was contingent on finding the right activity and upon YPwD's individual preferences, as noted by Sarah and discussed earlier in theme 4.2.

Ava expanded the idea of engagement to include additional concepts such as patient ownership, control and empowerment in relation to sport/PA within her practice. I interpreted these foundational concepts co-existing with engagement and an interest in sport/PA to mean sport/PA functioned as Ava's 'place and space' to realise these phenomena for YPwD and their families. Thus, Ava was covertly reflecting on power imbalances within healthcare between clinician and patient/families; her self-awareness prompted a desire to address such imbalances, with sport/PA perceived as an obvious conduit. Such self-awareness of power imbalances was a critical starting point for authors such as Nicholls and Cheek (2006) when exploring how clinicians' power was a defining feature within the origins of physiotherapy.

> making sure that the power doesn't lie with me, but that I'm empowering them. […] we're not going to make the progress and you're going to be completely reliant on me to fix when actually I need you to have the power, to have the understanding, to be able to take ownership, because if they take ownership, then they're going to want to be invested, then they're going to want to carry on, they're going to want to engage [Ava].

4.4.3 Effect on service delivery and care pathways

One ongoing issue for participants, especially within NHS services, was managing patient demand, both from individual and team perspectives and how sport/PA affected this.

Amelia, Jack, Jessica and Sarah experienced how for some YPwD, under favourable conditions, active sport/PA participation had influenced both the amount and nature of physiotherapy intervention required. It was clear they believed that targeted physiotherapy programmes with fewer goals were more feasible for busy families to consistently undertake and, along with sport/PA participation, more effectively created the conditions for self-management.

> In my head, as a physio, the ideal situation would be that they've got their relatively small, concise physiotherapy programme and then they've got their sports and activities and those hopefully would kind of build a whole picture […] and whittle down the physio programme [Amelia].

In addition, Jack felt concise programmes released time for social inclusion and simultaneously reduced stigmatisation – "a smaller programme gets the buy in because you're not asking them to do a mountain of stuff that their friends don't have to do".

Sophie noted positive impacts on service re-referrals, whilst Ava added that sport/PA participation could be part of meaningful discharge strategy for specific subsets mature enough to self-quantify their motor skills, using their chosen sport/PA. However, Ella highlighted how contemporary discharge strategies for YPwD must now accommodate prescriptive legal requirements for physiotherapy provision outlined within 'EHCP's.'

> once you know a patient is engaged with the input and are running with it, then, yeah, it just helps you scale that frequency right back […] definitely if they're flying with it [sport/PA] …[for discharge pathways] particularly the older teens if they're in competitive sport, they've got some understanding of progress and how they progress from one skill to another [Ava].

> if we can try and get these children active, engaged in physical activity, I think that reduces the chances of them keep bouncing back [Sophie].

Ivy, Jack and Amelia noted the benefits, for those YPwD actively engaged in sport/PA, of having open access and just engaging with physiotherapy services at

‘pressure points’, e.g., post-surgery, ‘post-Botox’ or the annual CPIP (‘Cerebral Palsy Integrated Pathway’) check and self-managing the rest of the time. Speaking from an informed position as an NHS manager, Ivy was animated about why the desirable interface of NHS services with YPwD and families should be self-management with periodic contact, rather than continuous treatment and it is clear she forcefully rejected negative comparisons with private healthcare and media analyses that present episodic interventions as a response to limited NHS capacity. It is reasonable to interpret Ivy was offering an alternative narrative where episodic care normalised the experiences of children with long-term health conditions and their families, reducing time spent in clinical environments and unnecessary medicalisation; even though episodic care fuels what can be a common source of friction between physiotherapy services and families.

> this where we get again into this thing about the NHS being a poor relation because the assumption is always…you’ve only got six sessions because there’s not the resources [,,,] It’s like, no, we wouldn’t work that way anyway because why would you want to come here in this environment forever, when that environment’s out there, when you could go with another group of children, where you make friends. Because you’ve got the media narrative, that all the services are struggling and the reason that we’re doing it is because we need to discharge the children and it’s like…no! [Ivy].

Concerns about YPwD’s transition into adulthood and adult physiotherapy services were shared because even though paediatric physiotherapists constituted the purposive sample, they considered how their current PA interventions might prepare YPwD for transition to the lesser levels of input within adult physiotherapy services. The long-term perspectives of Amelia and Grace framed the crucial expectation and need to establish self-management and resilience now. This was operationalised as healthy lifestyles and life-long PA, alongside sustained adherence to necessary physiotherapeutic elements, within the context of an enduring health condition.

> I want them to grow up into adults that want to do that…so it’s a real long game in my head and that’s why it’s so important to find what the young people actually want to do […] Self-management for long-term conditions really is…has to be the goal, because whether we like it or not, the adult service does not and is not going to be handholding from twenty to ninety to one hundred [Amelia]

> they’re in this game for the long haul, it’s got to be something that’s continued [Grace].

4.4.4 Psychological perspectives

Physiotherapists increasingly recognise that psychological perspectives influence patients' emotion, cognition and behaviour, e.g., Kelly who dealt daily with 'normal' psychological responses to life-altering events felt…"as clinicians we all come with a sprinkling of that psychological support." Latterly, pre-registration physiotherapy courses promote psychologically informed practice and biopsychosocial models underpinning rehabilitation, but long-qualified staff, like Emma, have needed to research a change of thinking whilst in practice, to establish their knowledge about PA and behaviour change.

> not when I trained anyway [laughs] you know, we were taught about just being physically active […] we do think […] a lot more from a psychological point of view than we have before […] I've started thinking more along the kind of psychological behaviour model theories.

Emma's navigation of the psychological and the physiological within her use of sport/PA was reflected in a patient narrative where she had provided water-based activity in a hydrotherapy pool for a patient who had not clinically required hydrotherapy but was struggling psychologically. Her actions allowed the patient to reconnect with his former self as a county level swimmer and successfully emerge from depression. Although Emma found this experience had reinforced the psychological benefits of participation in sport, she had felt conflicted about whether it had been a legitimate use of her time as highly specialist physiotherapist.

> I mean he didn't particularly need to see a physio [conspiratorial smile] but we were like, well we've got a hydro pool up the road, you know, let's just get him in it […] and honestly, I have never seen such a change in somebody in a week [Emma].

Emma's internal dilemma was related to her professional scope and identity as a physiotherapist with a focus on physical health; so, was it within her legitimate scope to address psychological issues? Reconciling those competing ideas was then externally played out when justifying her activities to managers, which prompted further sense-making on her use of sport/PA as a physiotherapist and what it really means to be a rehabilitator. Her narrative also demonstrated the hierarchical nature of the NHS and assumptions about the physiotherapists scope of practice.

> it's really hard isn't it because you always have to justify this to management and middle management of why I'm taking an hour out of my time to take one person in a hydro pool, with an assistant […] with the hydro pool time, from a

> mental health point of view, not a physical point of view, when I'm a physiotherapist. It's quite hard to justify through my management team [laughs]…but we have done it quite a few times actually. [Emma].

Emma presented other examples where patients had psychologically benefitted from her sport/PA interventions and ultimately, she reconciled her conflict by accepting her experiences had demonstrated that physiotherapy is about her clinical decision-making in the best interests of the patient, which inevitably creates choices and sometimes blurs job roles. Her words reveal an interesting juxtaposition, the psychological is still 'softer stuff' but powerful enough to produce lifelong changes.

> it's about all the softer stuff as well, that will lead to more lifelong changes and if we've prevented a kid from ending up on anti-depressants, that's amazing [Emma].

Kelly deeply felt sport/PA could sometimes be a part of managing patients' psychological responses to an acquired disability and additionally found wider benefits which addressed families frustrated expectations. I interpreted this as Kelly experiencing psychological benefits balancing the psychological losses and the "avenue of life" provided by sport/PA could alternatively be seen as an avenue back to life. Quality of life mediated by sport/PA was also a powerful motif for Ivy with psychological gains observed in the facial gestures of non-verbal YPwD - "absolutely beaming when they're moving themselves." Similarly, Amy's use of the word "soul" demonstrated beliefs about the wide-ranging benefits of swimming within spiritual, emotional, moral and intellectual domains and should also be noted (discussed in detail in theme 4.2.1).

Ella, Ruby and Ava recalled similar positive experiences during voluntary activities at frame running clubs and at multi-sport weekends, through observing the tangible psychological benefits of sport/PA participation for both YPwD and families. Prime among these was the social connectedness experienced by isolated wheelchair users and their parents, through being with others like them and for Sarah, this sense of belonging was actually more powerful in sustaining participation than any skills mastery. Positive sporting experiences were observed to facilitate children seeing beyond their disability and as opportunities to achieve success and build self-confidence. Interestingly, Sarah reported that the psychological gain of increased confidence preceded the physiological gain of improved balance in a previous dance

project. Similarly, Sophie repeatedly observed YPwD's improved confidence in their own skills creating the encouragement to socially mix within sport/PA sessions and not fear PA. Thus, skills mastery within an adapted sport activity was seen to create self-esteem, counteracting unfavourable comparisons and previous failure to achieve in PA alongside peers with TD. Sophie also realised that just being in the presence of other YPwD reduced the sense of difference usually perceived in mainstream settings. Likewise, as Ava noted, parents also valued the opportunity to meet others facing the same challenges and share experiences and information, which created a kind of 'kinship'.

> I think sport has such power to connect and to support within the family of sport and having the parents around that you perhaps would never have met, unless it was for that particular sport but now you've got parents that are going through similar things with their children and you can share those experiences and share the highs and lows together while watching your child flourish into a young adult person, that may have amazing sporting skills, may not, but they're having fun, they're enjoying and they're developing into an adult with confidence, that is enjoying being active [Ava].

Ruby experienced sport providing an alternative self-identity for teenagers moving into adulthood with an increasing realisation of their disability and shared narratives about her advice to two teenage males in a wheelchair basketball club. Within a context of the reduced adult physiotherapy services available, Ruby felt their best option was to find identity in a loved PA, regularly attend and this would then become their 'physio' to maintain optimal physical function, strength and movement control.

The universally positive first-hand experiences shared concerning the potency of sport/PA to provide a place and space for YPwD of any ability to participate in PA, created a powerful practice epistemology for participants, which they drew upon to both inform and reinforce their use of 'sport as a therapy choice'. However, alternative perspectives should be noted, e.g., although Grace recognised that sport/PA engagement yielded associated psychological benefits which she could effectively harness, she was wary and generally experienced them as positive by-products, rather than as her primary aim or that of her service – "I think I'm always aware of it but I don't think I would purposely engage somebody into something that they're not looking for".

4.5 Locating identity

This theme explored participants rehabilitative identity when using sport/PA within their interventions including professional identity and scope of practice. It also included perspectives on physiotherapy professional knowledge and what philosophies underpinned that knowledge and therefore legitimised it.

4.5.1 Dual identity

Ruby, Ella and Harry had dual roles as physiotherapists and qualified sports coaches or sport organisers and talked about different 'hats' and 'heads' depending on their immediate setting.

> wear a couple of hats at times, depending on who and where I am and what I'm doing [Ruby].
>
> I very much have my physio head on when I'm there [frame running club], although I'm not their club physio [Ella].

I interpreted that the metaphorical hat or head seemed to help them better know who they were at any given time and managed role and/or knowledge interchanges. Possessing multiple knowledges could be advantageous and insightful at times, e.g., when clinically evaluating quality of movement and hypertonia alongside functional abilities during frame running for Ella and Ruby. However, some complex situations necessarily meant separating roles and their associated knowledges carefully to avoid a conflict of interest and confusion for children and families. Nevertheless, blurred demarcation lines between bodies of professional knowledge could reside in one person, even when the correct hat was being worn, which Harry illustrated well.

> It depends on the settings…in the clinic and home visits, I have my physio hat on and I would suggest they go to the sports coaches. At the track it's more of an amalgam...there's a lot more observational stuff going on […] and then I've got to be slightly careful as to whether I say something or don't say something […] It will be just a suggestion, such as you really need to go and see a GP or a sports physiotherapist, I can't be treating you in that role…I can just make a couple of suggestions and that's made clear to them from the outset [Harry].

Sophie's duality was somewhat different, since she had two discrete roles within one physiotherapy service - undertaking formal physiotherapy assistant activities and leading a PA group. In this circumstance she experienced them as two

complimentary skill sets and knowledges that combined harmoniously to benefit the YPwD and positioned her in an optimal place to continuously learn and upskill.

4.5.2 Secure identity

Several participants, like Kelly, experienced a secure physiotherapeutic identity when using sport/PA, with Grace and Paul, attributing their clarity about this to experience over time which enabled better identification, categorisation and positionality of scope of practice within the role. This would indicate professional physiotherapy knowledge, clinical expertise, reasoning and clinical goals were privileged before participants considered whether sport/PA could be used clinically and any subsequent 'marrying up' occurred.

> when I first started working in schools, there definitely was a conflict […] during the first couple of years [pause] Just getting used to the way things worked in education […] I did start to feel not necessarily de-skilled but like what am I doing? Am I delivering PE? As I've got older, been doing it for longer […] compartmentalising the physio bit slightly. I found that has helped, just retaining, just being very clear in my mind what my physio goals are and then if I can clinically reason it through…'ok, I'm working for this [Paul].

Grace, Ivy, Jack and Sarah also associated secure identity (when using sport/PA) with clarity of role by contrasting their unique knowledge of the child, professional skills and professional knowledge with that of sports professionals. Although acknowledging coaches' complimentary skill sets, they differed from physiotherapists because they focus on specific sports expertise… "Yeah, I'm secure in what I can do…what we don't always value as physios, and some of that I think is about security, is that when you're talking to coaches, they are experts in what they do and their expertise [Sarah]. Amelia explored this further by evaluating three distinct but related roles and associated professional knowledges – physiotherapist, sports coach and PT. I interpreted Amelia's use of the word 'lines' as illustrative of professional practice boundaries which created unease when you stepped over them; her delineation was made theoretically challenging because of technical knowledges she possessed as a previous competitive swimmer and judging whether it was legitimate to share those when operating in a different role. However, identifying her specific professional knowledge and unique focus on the impairments of each YPwD ultimately created clarity and enabled contrast with the roles of others.

> Where I draw the line is tricky, but there does come a point when I have to sometimes say to families, that's a sports technique that you're asking me about there and I don't play every sport […], so, yes, I might look at their body's structure and function a little bit more and make sure there's nothing there that's holding them back from doing the sports that they want do, e.g. if I can see from their CPIP that their hip flexors are really tight that might impact on their swimming and a really good swimming coach might also be able to see their hip flexors were really tight, but it's for me to sort out the tight hip flexors, so that the coach can then instruct them in the technique without the limitation and the two will feed into each other because perhaps the swimming will help with the flexor tightness because of the way they're kicking in the water [Amelia].

Jack and Ava still identified as physiotherapists whose role was to identify and address impairments and adopting coach-like characteristics did not challenge that; even though it 'softened' forensic quantification of deviance and changed the register to something more supportive and appropriate for YPwD.

> you're the clinician, you're the intimidating, scrutinising, as opposed to being a coach, who I think socially is interpreted as being more facilitative, more supportive [Jack].

> I feel like I'm a physio […] I've approached from a physio angle, rather than more of a coach or sport's therapist angle…so in my practice I still feel very much physio, rather than coach, but from my experience, perhaps bring in some of those, kind of coach elements [Ava].

Overall, Sarah summed up how secure identity as a physiotherapist was not challenged when using sport/PA within interventions. Her rehabilitative identity stemmed from certain knowledges and axiology concerning the bigger questions of what physiotherapy is for and how it should operate within a wider perspective.

> Yeah, I'm happy that it's part of what we should be doing because it's part of life and what we should be doing as physios is looking at life in its broadest sense and thinking about how people function throughout that and so sport has to be a part of that; not for everybody maybe, but for a lot of people. I don't have any qualms […] I don't feel threatened by that as part of what we do.

4.5.3 Relational identity

This theme concerned participants' experiences of relational identities when using sport/PA in the community and flowed from earlier sections exploring identity (Harry, Ella and Ruby) but developed further. Participants experienced relationships with

paid/unpaid staff in community clubs, e.g., Jack and Grace described close, joint working where each professional complimented the work of the other and favours were exchanged, but only within a symbiotic relationship with certain caveats in situ.

> we've worked hard to develop those; it's been a unique advantage of where we live. We personally know the guys in there, so we can twist their arms and they can twist ours, so that's been great [Jack].
>
> I'm really hesitant about handing over to the coaches and saying you take it from here. It's […] always been physiotherapy, coaching hand in hand [Grace].

The longevity of PA required to effect meaningful change meant community clubs were conceived as the appropriate place to provide on-going sport/PA and enable long-term motor skills acquisition, which Ivy contrasted with episodic interventions often offered by physiotherapy services – "it's the repetition of skills over time, you don't just pick things up from coming to physio over six weeks, do you?".

Positive relationships were typically underpinned by the accurate operation of coach's and participants' roles. However, whilst Harry identified that coaches could be useful conduits, close professional relationships held potential for misunderstandings and protectionism; in such circumstances, he ascribed a collective characteristic to all physiotherapists of seeking common ground within any dialogue.

> I think for us…we see the relationship with the coaches as a way in. I think the grey area and the danger is the coach's acceptance of we're not trying to encroach on their ability to coach. We're trying to support that whole process […] and it depends on the perception of the coach, some coaches are very protective and want to do this, this and this…and again are they understanding their role? […] and can we meet somewhere in the middle […], so it's opening those dialogues […] I suppose in a way that's physio through and through [Harry].

It is possible to interpret this defensiveness previously described as dissonant interactions with sports coaches, where a 'win at all costs' mentality conflicted with physiotherapy treatment and advice. Kelly experienced this as a possible impediment to using sport/PA because "kids stop listening to the hospital" in this more complex relational triad of coach, physiotherapist and YPwD. Kelly highlighted polarised viewpoints, contrasting her holistic input privileging the child's entire world and long-term physical status against that of the coach who was prioritising

immediate performance and winning. The comparison was based upon a “really difficult conversation” with a youngster (now a Paralympian) who was challenging her advice to stand and maintain range of movement as part of rehabilitation for future optimal health. The youngster referenced David Weir (Paralympic wheelchair racer) who is “living a life and doesn’t care about contracted legs, why should I?” Kelly’s reference to this “dark element” when ‘sportsperson’ is your sole identity, speaks to a hidden aspect that is maybe unexpected amongst the obvious positivity generally surrounding sport, but she wanted other physiotherapists to be aware of.

> So, sport is overwhelmingly good, but this is a dark element that physiotherapists need to be mindful of and keep an eye on and it can happen when sport is your only world [Kelly]

Sarah had experienced similar conflicts concerning patellar pull-downs on children who needed to “be folded up” to optimally compete as wheelchair athletes and Grace had felt the need to ‘rein in’ trampolining coaches who perceived children only participated to achieve badges when actually it was about being physically active and “the joy of being on a trampoline and being free and being able to do.” Notwithstanding this, the positive input of some coaches had enabled several participants to reduce the frequency of their interventions and optimal symbiotic relationships between sports coaches and physiotherapists were seen as preferable, since both required each other to function effectively.

Participants shared experiences of their relationships with PE (physical education) teachers in special and mainstream schools that generally demonstrated two different dynamics. Participants based in special schools and sports colleges, such as Paul and Sarah (earlier in her practice) experienced the benefits of close working relationships which facilitated the tangible gain of integrating PE and physiotherapy; both felt this “good place” was holistic and promoted deeper mutual understandings, which in turn generated better engagement.

> a good position’ because of longevity over the whole school career and through whole school day […] I get to understand them and what makes them tick, what will engage them, what won’t….and work things into the day that aren’t just physiotherapy [Paul].

Conversely, experiences with PE teachers in mainstream schools were exemplified by Ruby’s accounts which she laughingly described as ‘very mixed’ ranging from

‘absolutely fantastic’ to frustrating due to poor or absent communication, including when offers to help with differentiating PE activities for YPwD were not taken up. Ruby shared one narrative where a YPwD was not participating in PE and instead doing physiotherapy exercises with their teaching support assistant. Ruby’s use of the word ‘apparently’ indicated her suspicions that participation in PE was unsupported; and it felt wrong that although this created time for physiotherapy, the child was isolated from peers and not participating in an ordinary part of the school day.

> sometimes that’s been the child’s choice, apparently, you don’t always know, sometimes it’s been for ease of timetabling or they don’t have enough support [Ruby].

4.5.4 Epistemological identity

There is consensus across both physiotherapy’s regulator (HCPC, 2023) and professional body (CSP, 2018e) that it is an evidence-based profession which draws upon three knowledge sources - the best available research, clinical expertise and patient preferences. As such, a wide range of epistemological sources were possible but participants did not openly self-identify preferences during interviews. Only subsequent analysis of how they shared, through numerous patient narratives and their own clinical expertise and experience, revealed their valued knowledges. The majority of participants made no overt reference to research knowledge concerning sport/PA, although Nigel briefly identified researchers as a kind of collective ‘other’ - “they say” and Sarah made singular comment on how research informed her knowledge concerning the wider benefits of sport participation, which then provided a rationale.

> there’s loads of research about, you know, the benefits of participation for children, young people and adults with disability because isolation is such a sort of widely experienced difficulty for that group, that it’s really important that we have a way of addressing that and I think sport’s brilliant for that [Sarah].

In contrast, Emma repeatedly referred to research literature as a valued knowledge source in relation to sport/PA. It was clear that cognisance of contemporary research in her clinical area underpinned foundational knowledge regarding the benefits and applications of PA for her specific subset of patients. Knowledge concerning outcomes, recurrence and intervention efficacy linked to PA were key areas of

interest and evidenced acknowledgement of the scientific method and positivistic approaches associated with biomedical and biomechanical traditions. Similarly, theoretical knowledge of several models (Capability, opportunity, motivation behaviour (Com-B) and Behaviour Change Technique Taxonomy (BCTT), ICF and F-Words) felt a secure source; however, elsewhere in the interview she drew upon an alternative epistemological constructivist stance built upon patient narratives to inform her practice epistemology.

Ivy's extensive account of her adapted cycling research was shared in the style of a scientific research report with a study background, rationale for intervention, detailed protocol, results and quantitative data analysis.

> you know we've got now like reams of data to say, like six or seven years of data […] we brought oxygen and saturation monitors, monitors for heart rate. So, every time we cycled...'beginning of a session, middle and an end and we would take heart rate and oxygen saturations. That's another heap of data that I've got that actually I can go out there and I can say this is safe for our children [Ivy].

Her reference to 'reams of data' and need to evidence intervention efficacy located her in the positivist tradition with a focus on measurable empirical, objective quantification. It felt logical to initially collect the oxygen saturation levels of an under-researched patient group participating in novel PA to demonstrate safety alongside proof of concept. Furthermore, using positivist quantitative epistemologies enabled successful dialogue with an uncertain medical profession and so this type of research knowledge legitimised her activity and provided necessary re-assurance.

> at the beginning when we looked, we went very, very slowly. I did an action research set with [a London University] just case studied eight children […] because I wasn't obviously at that time confident that this was a thing I should be advocating or promoting and our paediatricians wouldn't, I went to them first to say will you sign our children off as medically fit because I felt like this is a bit of an unknown as to how our children might cope with exercise, because there's no literature out there when you look and our children are always seen as quite fragile I suppose, medically unstable [Ivy].

Elsewhere Ivy utilised alternative epistemological perspectives, drawing upon clinical expertise and constructivist traditions to accommodate the specific complexities of her group with 'unfixable,' severe disabilities. Here, I interpreted Ivy's profound understanding of her children meant she knew she could not be linear nor 'scientific' about inputs or outcomes due to the many alternative confounding influences

creating cyclical and non-progressive multiple realities. This particularly helped her explain to commissioners why clinicians were 'going round in circles' without achieving rehabilitation goals. Ultimately, Ivy showed it was both necessary and possible to draw upon multiple epistemologies to accommodate multiple realities and appreciate the wider determinants of health.

> I was trying to say for me there's three types of outcomes. There's a linear outcome which is point A and point B rehab type outcomes which work in an MSK clinic or they work when a problem can be fixed and a child's here and you put some intervention in and they get there [pointing]. That's not the case for our children for a lot of the time, so I've sort of put in a model of cyclical outcomes because what commissioners want to see…you've set something, you've done something, something's changed and I've tried to say but I could be working on ten different things for these children, I could fix something in terms of, I don't know, comfort…they're sitting comfortably, two weeks later they're not comfortable because something else has happened, it's just this cyclical, ongoing process and then I said there's also holistic outcomes which aren't driven by you, which you get drawn into because it might be around housing or safeguarding and that might be your focus for that half a term because actually if you don't fix that bit, you might as well put everything else to the side because it's pointless [Ivy].

4.6. Embodiment of models

This theme explored participants' use of theoretical models, primarily ICF and 'F-Words' used by both clinicians and researchers within paediatric physiotherapy.

Kelly and Harry felt that ICF principles were already unconsciously embodied within their interventions, making knowledge of the theoretical model superfluous, e.g., Kelly recalled when ICF's participation domain was highlighted by a rehabilitation manager to her team "we were just like…well, obviously, that's what we do, why do we need a model to tell us that". So, the team's intuitive alignment with principles obviated the need for theoretical awareness of the model or the research that led to its creation. Harry shared similar ideas about privileging his own practice epistemology, and embodying ICF principles over conscious reference to the theoretical model.

> Err…I'm not good at that side of things, there's probably a lot of stuff I would link into the ICF and that, but I would have to have the ICF framework to then say, oh yeah, this bit fits [pointing gesture] the framework and rather work

> from the model, it's probably the other way round, sorry I don't tend to practice that way […] feedback from my colleagues would say I deliver a more holistic programme than just the physio side of it [Harry].

Similarly, Amelia talked about experienced colleagues who had been employing the principles of the model without knowing the theory…

> One said the other day, patient X is now doing frame football and I was like that's the ICF [hands held up in cheering action], she was like oh, ok…That's the whole point of it, we've been working on this, he can now do that and now he's participating in this, so, they were all using it, they just didn't necessarily know they were using it [Amelia].

When analysing why participants successfully operated without conscious awareness of ICF and 'F-Words' models and yet intuitively demonstrate the principles and values associated with them, it could be suggested that by drawing upon knowledge from other sources, such as their own practice epistemologies and patient narratives/preferences, they were simply openly privileging those two elements of evidence-based practice, and perhaps any research knowledge had become tacit and internalised.

In contrast, Amelia, possessed a developed, conscious sense of ICF underpinning her interventions; in this sense she embodied ICF differently to Kelly and Harry as practice made sense when mental assent evolved to create both an informed and intuitive practice. Although Amelia's account indicated a 'forced' introduction to ICF, she later deeply assimilated the model, so it both validated and shaped her values and now felt like a comfortable habitation. To "build everything" reflects ICF as the essential cornerstone that supported her practice.

> If I'm being really honest, I build everything around the ICF. It was rammed down my throat when I did all my initial paediatric interviews and was getting into the paediatric world and that was the ethos I started out with and so I've entered paediatrics just believing that and it makes sense to me, it's got like face validity…it just sits with my beliefs [Amelia].

4.6.1 Philosophy, epistemology and legitimacy

This theme focussed on three value questions - do you value models? how do you value them and why? Participants' experiences inevitably flowed from consideration of a model's utility to provide professional knowledge and support everyday practice,

e.g., within physiotherapy treatment planning, outcomes and specifically in relation to ‘sport as therapy choice’.

Several participants valued the ICF because it felt a more holistic representation of how paediatric rehabilitation should be conducted, in contrast to its predecessor medical model ICIDH (International Classification of Impairments, Disabilities, and Handicaps). ICIDH’s underpinning biomedical philosophy privileged a positivistic epistemology and used medical terminology focussed on impairment, with patients the passive recipients of care, which Ava rejected.

> treating them as a patient would be I think quite a negative effect on them. The kids that come in with that kind of patient hat on, you’ve got to do a little bit more work to remove them from that medical model and bring them into more of a self-empowerment, engagement. [Ava].

Nigel, Ella and Amelia deeply valued ICF’s holism because it facilitated meaningful aims, subsequent joint identification and achievement of appropriate goals within sport/PA participation and widened a family’s focus to include activity and participation domains. Amelia found this particularly useful in complex situations where there had been conflicts over levels of therapy input…

> sometimes I’m seeing a really unhappy child in the middle of all of this. Often, it’s because only one section of the ICF is being addressed as opposed to all sections. So, for example if the family are really, really focussed on one particular part of the child’s body […] if I put it [ICF] to families, they seem to understand it and whenever I see what I think is a good outcome, I can normally relate it back to the ICF and see that all sections of the ICF have been fulfilled [Amelia].

Jack also valued ICF’s holism, as for her, it had also accommodated an ‘easy’ theoretical integration of ‘Cognitive Behavioural Therapy’ to ‘slot in nicely’ with ICF in an effective combination that ‘teased out’ the desires of service users. Emma’s use of several other models Com-B, BCTT and COPM (Canadian Occupational Performance Measure) had been prompted by her initial need to understand how to influence patient PA behaviours, which had necessitated researching psychological theories and behaviour change models. This demonstrated how and why Emma valued the models since they expanded her knowledge base and supported exploration of new areas such as locus of control and motivational theory, which underpinned meaningful goal setting and interventions.

Regarding models as sources of knowledge, Amelia acknowledged an internal conflict because although the F-Words model felt intuitively right and worked in practice for her, there was limited quantitative research examining its efficacy and so provide evidential 'proof'. This suggested an uncertainty about how much weight and legitimacy should derive from the three elements that constitute evidence-based practice.

> I must admit I don't know huge amounts about the sort of like research around it, so like I've read the F-words paper and stuff, but that's very descriptive and you know I haven't personally read any papers that are really like hard numbers that say like if you follow this model, you'll get this outcome and if you don't follow this model, you'll won't get this outcome, you know, it's, it's still kind of like a theoretical model, but it's one that makes sense [Amelia].

Finally, it is important to note that Ivy and Sarah noted limitations with models in use; this was experienced as unmet needs when utilising the theoretical knowledge models provided, in comparison to the more immediate experiential knowledge deployed in everyday practice, e.g., Sarah felt ICF was a good starting point, but lacked sufficient detail about how to actually achieve physical participation, she therefore preferred to rely on her own clinical expertise to "get a feeling for what works for a particular child with a particular approach". Similarly, Ivy felt models inadequately captured the complexity of her patient subset.

> So, yeah, we use models, existing models that are there, but it's finding one, you know, that makes sense for the more complex children and young people [Ivy].

Several participants experienced models specifically legitimising their physiotherapy interventions beyond body structure and function and the participation domain, prompting reflections on the purpose of physiotherapy. Ella believed the essential significance of physiotherapy lay in the PLP experiences which an improved body structure and function enabled, rather than the improvements themselves and hinted at social justice when highlighting equal PA inclusion for YPwD.

> what the kids are involved with physiotherapy for? It's not about so they can get stronger quadriceps, it's so they can participate and do the things that they want to do [pause] like everybody else [Ella].

ICF's focus on participation was also really important for Paul, Amelia and Ava because it explicitly realised YPwD's particular need to move away from the negative problem-based 'medicalisation' of their impairment to something more participatory and functional within PLP.

> what are your participation goals? and what do you want to be doing functionally? […] having focus on activity and assisting back to full function, rather than this is the problem that needs to be treated. [Ava].

Paul valued how the ICF domains helped him accommodate individual needs, with sensitivity to the situated contexts of YPwD and crystalised in his need to 'juggle' their quality of movement versus functional PA participation. Paul's dilemma about quality and function mapped to specific domains within the models, as he continually evaluated for each YPwD, is it more important they can mobilise from 'A' to 'B' (a functional approach privileging participation over quality) or is the quality of that mobility more important? (an impairment-based approach privileging body structure and quality movement over participation). Ruby highlighted the ongoing quality vs function debate within paediatric physiotherapy, referencing "purist movements" to describe the exclusive pursuit of quality but envisaged it as a spectrum rather than a binary.

> A lot of physios probably struggle with that concept and some would be more one way and purist movements and some would be more on the participation side…think I'm in the middle somewhere [smiles] [Ruby].

It can be interpreted that Ruby realised the futility of exclusivist positions and recognised her constantly shifting 'location', e.g., beyond clinical environments during frame running sessions, where "purist movements" were replaced by alternative manifestation of purity, namely "pure enjoyment." Ultimately, she accepted displacing her clinical, performance-based self was necessary to enter a function-based 'participatory world'.

> so, you slightly have to put your physio hat aside, but you're encouraging them in movement and participation and they're getting that pure enjoyment and love of the sport [Ruby].

Participation and function domains were also key to promoting self-management and ultimately reducing medicalisation and dependency on therapist, which Ava framed as disinvesting herself of the power she possessed as a clinician. In this way, Ava

completely understood that self-management could only be fully realised when it was accompanied by control and power for children and families, “they [*children and families*] have the power and we can give them the tools”.

Participants’ experiences largely reflected the utility of models like ICF and ‘F-Words’ that allowed them to legitimately construct multiple realities based on the circumstances of each individual child and young person.

4.6.2 Relational aspects

Ava felt that ICF supported relational factors through the inclusion of personal and environmental domains, which facilitated insight into the minds and motivations of children and families without classifying them. Amelia and Emma experienced similar insights because models provided ‘space’ and permission to explore psychological aspects of care.’ “I work a lot off the ICF, and I try and share that with parents and try and get their understanding of what we are looking at” [Amelia]. Emma identified ‘psychologically informed physiotherapy’ as a relatively recent phenomenon, but crucial if clinicians are to obtain the successful engagement of patients and highlighted her insights into motivational states and their determinants through using the COPM (used with occupational therapists) and Com-B model, conjointly with ICF.

> We do think a lot more from a psychological point of view than we have before. I think we’re moving towards how do we put those motivators in, is the intrinsic motivation there? Is it extrinsic motivation that we need? Is it about the environment? Is it about the systems that are in place…can we do anything about it anyway? [Emma].

Growing interest in psychological aspects of care and perceptions of needing to ‘move on’ beyond narrow clinical approaches had led Jack’s service to additionally use Cognitive Behavioural Therapy (CBT) and Motivational Interviewing (Nigel’s also) within their services, which Jack felt had “pushed us to new perspectives about being purposeful, meaningful and enjoyable in comparison to how they were previously, where physiotherapy can be so prescriptive”. Jack’s use of “so prescriptive” captured feelings of negative legalistic restriction concerning past

physiotherapy practice which contrasted with a new freedom, where a combined approach had operationalised psychological perspectives and practices to better connect with children and families. Ivy developed this by sharing how the 'F-Words' proforma facilitated the establishment of therapeutic relationships with families through the frank conversations it supported about children's situations and futures and the realistic impact of physiotherapy input. The early use of this proforma created a dialogue with parents, so they could articulate what mattered to them and helped mitigate relational problems.

> some of our parents are still not in a place where they have accepted the gravity and the nature of the disability and that's mostly where our relationship problems come from because we're thinking one thing and the family's thinking another and to try and bring ourselves together […] we've got like a proforma now [Ivy].

Although participants shared numerous patient narratives that directly demonstrated mostly positive experiences of ICF (activity and participation) and 'F-Words' domains (fun, friendship, fitness and family), contrary perspectives were expressed by Sarah who felt her intuitive experience was more important than ICF in promoting relational features of the therapeutic alliance. Her use of the word 'magic' implied participation was associated with a kind of mythical power and possibly elusive.

> it's a useful starting point […] doesn't necessarily deal with enough of the detail of the sort of the how's and why's of how you make this happen, this magic thing called participation […] you get a feeling for what works for a particular child with a particular approach [Sarah].

Similarly, Grace felt ICF worked best later on in the patient journey, when writing her GAS (Goal attainment score) goals and thinking about how best to embed them, but not at the initial stages when identifying her client's motivations.

4.7 Summary of findings

The findings chapter examined participants varying experiences and explored how they made sense of 'sport as a therapy choice' "in the way they occurred and in their own terms" (Smith et al., 2022, p. 8), going "back to the things themselves" (Smith et al., 2022, p. 8, citing Husserl). Interpreting the experiences of paediatric physiotherapists revealed how they used, valued and applied different types of

knowledge, both theoretical and experiential. Perspectives were necessarily informed by diverse contexts including past experiences of sport/PA, workplace cultures and differing values around optimal practice epistemology. Multiple perspectives co-existed within individuals and were used eclectically, based on the needs of YPwD, as perceived by participants. There was consensus concerning secure physiotherapy identity as rehabilitators using sport/PA but a range of experiences and ideas existed about what 'sport as a therapy choice' looked like in practice, for participants and their services, how it affected engagement and what the relationship between physio and sport/PA should be.

Collectively idiographic analysis and creation of PETs contributed to create six GETs (Tables 2b, 2c and 3).

'Shaped by context' demonstrated how diverse past and present lifeworlds played an influential role in creating participants' current personal spaces and contextualising their sense making when sport/PA were used. Contexts were often consciously perceived by participants which created better understandings about why sport/PA was an integral part of their physiotherapy offer, why it might benefit YPwD and what hindered and facilitated implementation in everyday practice.

'It's all about the kids' demonstrated participants' primary focus on 'kids' – their needs, situations, ages, conditions, transitional stage and their engagements with physiotherapy, with sport/PA and with sport/PA within the physiotherapy offer. 'Kids' provided specificity for meaning making about 'sport as a therapy choice' and sport mattered because it mattered to 'kids.' Particular importance was attached to children's uncontested need for play and fun and sport/PA made sense in practice because it could possibly meet this need.

'Relationship of PT and sport/PA' and a 'tool in the toolbox' represented diverse idiographic and service level perspectives and participants did not confine themselves to singular approaches when using sport/PA in practice. Sense-making was informed by participants' values and practice epistemologies regarding the purpose, nature and value of physiotherapy and of sport/PA; and could they, should they be integrated and in what way? The conversation was framed by the pressing

need to improve long-term engagement of YPwD with physiotherapy and participants wielded their sport/PA tool in ways that made sense to them.

'Locating identity' explored how participants viewed their professional identity as rehabilitators when using sport/PA within their physiotherapy practice. Participants experienced secure identity and did not feel conflicted when utilising sport/PA and equated this with their effectiveness as experienced physiotherapists. Participants' secure professional identity was also discussed within the framework of their everyday interactions with other sport/PA professionals; such interactions were associated with professional knowledge and scopes of practice.

'Embodiment of models' explored how commonly used holistic models of intervention linked with participants practice and use of sport/PA. Participants used, valued and applied theoretical knowledge in diverse ways. Some participants were conscious of their embodiment of models, whilst others felt they intuitively demonstrated their principles in their everyday practice; but in both cases their holistic, inclusive approach made them feel they were being more effective in their practice.

In the following chapter, the six GETs are discussed in relation to the extant research literature in order to locate them within a wider context.

CHAPTER 5 - DISCUSSION

Introduction

This chapter discusses findings, theme by theme, in relation to extant literature and highlighted where my analysis illuminated or problematised; and involved further selective literature searching (Smith et al., 2022). It is important to note that as paediatric physiotherapists' sense-making concerning 'sport as a therapy choice' is previously unexplored, dialogue has necessarily included research literature where this was not the research objective or only briefly referred to. My study presented the initial findings in this area which demonstrates its originality. Finally, the chapter addresses the strengths and limitations of my study.

5.1 Group Experiential Theme one: Shaped by contexts.

Contemporary healthcare is both complex and evolving, requiring healthcare professionals to manage everyday uncertainties (Beenen, 2018). Paediatric physiotherapists working with YPwD practice within a constantly changing NHS characterised by clinical advances in childhood disability and the increasing expectations of service users and their families (Beresford et al., 2018). Simultaneously, diverse personal, social and institutional contexts shaped participants' sense-making when experiencing 'sport as a therapy choice.' Although context was not identified within my original research objectives, it became increasingly clear that it influenced participants' values and practice epistemologies.

It would be a gross oversimplification to argue that physiotherapy typically attracts those who positively value sport/PA and closely associate it with physiotherapy; although Fuente-Vidal et al., (2021) found the perceived relationship between physiotherapy and sport was a determinant factor in pursuing physiotherapy for 79% of students sampled; similarly Spittle et al. (2021) noted sports association and love of sport to be significant attractors for those studying exercise and sports science with future career intentions in physiotherapy. Seven of my participants had a sports background which was consciously and unconsciously underpinning their ontological values, as Shannon et al. (2021) found; however, others lacked this personal context and still experienced the value of sport/PA within their practice which coheres with

Wallis et al. (2022) who found altruism to be the key factor for UK students choosing to be physiotherapists. This indicated constructing positive meanings about sport/PA was not contingent upon previous positive personal experiences of it. In this way, participants had created an inner world of reference based upon positive assumptions about sport/PA which influenced their practice, consciously and unconsciously; albeit caveated by their acknowledgement that sport/PA was YPwD's individual choice. Notwithstanding this, I recognised how seven participants had some degree of positive bias through their previous personal positive experiences of sport/PA, and/or positive beliefs about the value of and role played by sport/PA within their practice with YPwD. Such sample characteristics were highly likely, given the voluntary nature of research participation, since those lacking positive beliefs about sport/PA would be unlikely to participate and cannot be coerced to do so.

Healthcare practitioners are influenced by institutional contexts, as Shannon et al. (2021) found lack of formal organisational support prevented effective fulfilment of PA promotion and this was not confined to paediatric practice (Williams et al., 2018). My participants were similarly impacted at the level of their immediate team, employing organisation and healthcare system (NHS or non-NHS). Practitioner's institutional contexts are analogous to organisational culture which Simpson et al. (2019) noted represented the collective values and beliefs of all those in the organisation. When applied in healthcare, history, clinical governance, management aims and objectives all influence an organisation (Rytterström et al., 2013). Legacy and culture also exert power within an individual organisation to displace national contexts and UK-wide perspectives and Kelly exemplified this as she experienced how her organisational culture completely embedded sport/PA into her interventions. The profound historical sports legacy permeated professional practice amongst the healthcare professionals in Kelly's setting, creating its own local and accepted organisational culture that was not only permissive of sport/PA, but actively promoted it - "sport is so plugged in; I almost don't need to think about it" [Kelly].

Organisational culture is operationalised through established and accepted working practices and communicated to employees through local policy and/or national healthcare strategies, e.g., NHS Long Term plan (2019) for NHS staff. Such phenomena function as epistemological 'gatekeepers' to govern what knowledge

and activities are legitimised and resourced; and served to influence participants' practice of 'sport as a therapy choice.' Furthermore, combined high demand and reduced resourcing of physiotherapy services for YPwD (NIHR study of Beresford et al., 2018) meant physiotherapy service delivery was in a state of flux and highly individualised, creating uncertainties about legitimate scope of practice, with permissible activities set by local commissioners and senior managers. Such phenomena were observable in Ivy's narrative where adapted cycles supporting PA for a highly sedentary group, were regarded as a 'luxury' by NHS funding bodies and yet expensive postural management equipment supporting a passive intervention was routinely funded, leaving sport/PA outside clinical scope, which Shannon et al. (2021, p. 74) described as "decreased organizational capacity" in certain practice settings.

National health policies may be underpinned by assumed or unseen paradigms, e.g., at first glance, the NHS Long term plan (2019) with its focus on patient self-management synchronises with the goal envisaged by several of my participants when using sport/PA. My participants recognised the desirability of YPwD living more independent lives, managing their health condition through sport/PA accessed in community settings and linking to the concept of social prescribing (CSP, 2019c; Public Health England, 2019). However, alternative perspectives exist, primarily exemplified by Nicholls (2012, 2018, 2021), which posit self-management and patient empowerment not as evidence-based practice but associated with neoliberalism and these were unrecognised by my participants. Neoliberalism is driven by a desire to reduce healthcare costs by reducing the scope of state-provided healthcare, encouraging privatisation and making individuals more responsible for their own care. In the UK, the Wanless report (2002) set this future trajectory for healthcare policy, when highlighting the financial benefits of self-management in an era of increasing healthcare costs due to an ageing population and advances in clinical care. The demands created by increasing complexity, chronicity and multi-morbidities of patients mean the concept of responsibilisation and the need for people to be pro-active in their care continues to be highlighted (Ham et al., 2018; Ham, 2023).

The judgemental language of neoliberalism is clear when it mentions the healthcare 'burden', assumes it is every citizen's social and moral obligation to self-manage but fails to recognise that some people with disabilities may not have capacity to self-manage. Although neoliberalism was not mentioned by any of my participants, several did recognise, through interactions with each YPwD and family, that some lacked the agency or stable resources to self-manage using sport/PA. Neoliberal foci on healthcare as a business also stigmatises those with disabilities as 'costly bodies' Sakellariou & Rotarou, (2017, p. 3). who disproportionately burden society financially. My participants never mentioned this financial perspective but Ivy reported that some families could be 'cynical' about self-management in connection with the use of sport/PA and might perceive it as a way of rationing scarce resources, especially when episodic care was also being widely utilised. Ivy justified episodic care as promoting an alternative ideology of de-medicalisation and participation in ordinary activities, rather than as a neoliberal agenda; however, Beresford et al. (2018) had identified it as deliberate managerial response to reduced resources.

The YPwD population has changed in the last twenty years as advancing medical technologies have increased the incidence of complex impairments, with Gibson et al. (2009) noting how this is altering the trajectory of childhood disability and the need for enhanced models of care (Royal College of Paediatrics and Child Health - RCPCH, 2021). Advancements in neonatal care were experienced downstream as rehabilitative and moral dilemmas by Ivy in… "the kinds of disabilities that we just wouldn't have seen fifteen, twenty years ago […] it's great that children are surviving, but it's beyond survival, isn't it?" The RCPCH (2021) noted that the changing healthcare context means paediatricians must now re-focus equally on improving quality of life as well as quality of care for those who have survived but with lifelong impairments. Similarly, physiotherapists' mission to support quality of life for YPwD is a constant but requires ongoing review, especially for those with the most severe impairments. Notwithstanding that quality of life is a difficult construct to measure, Ivy extended her rehabilitative identity through advocating (Ullenhag et al. 2024) for access to PA in the style of the social justice "manifesto" noted within Lumsdaine and Lord's (2023) collaborative autoethnography. Pickering's (2021) findings had

similarly strengthened the importance of advocacy roles for health professionals in enabling participation in recreational activities by young people with Cerebral Palsy but noted it to be unclear in practice. However, for Ivy, the overriding need to promote quality of life for her group led her to locate some answers in adapted cycling. Additionally, along with Grace and Amelia, she felt although paediatric physiotherapists aimed to support YPwD to live well and participate in sport/PA now, sport/PA participation acquired additional significance as preparation for a meaningful life as adults. In these circumstances where typical adult social and work roles may not be possible, Gibson et al. (2009, p. 1449) similarly noted,

> for many persons with severe impairments, non-work activities are the norm and thus leisure takes on a greater significance as a vehicle to enhance well-being.

Geographical, environmental, familial and social contexts are discussed together because these cohered as influencing factors within research that discussed barriers and facilitators surrounding sport/PA for YPwD. Sophie and Ruby recognised that long rural journeys and sparse populations of YPwD, reduced access to suitable facilities or clubs, which negatively impacted their ability to use ‘sport as a therapy choice’ in practice and this is confirmed within the research where rurality augmented the existing barriers to participation (temporal, financial and sparse populations) which all YPwD face (Adams et al., 2018; Jaarsma et al., 2015; Ullenhag et al., 2024; Wakely et al., 2018).

In addition to practical barriers, twelve of my participants experienced familial cultures and attitudes which they felt enabled or hindered their use of sport/PA; this cohered with research examining barriers and facilitators of PLP for YPwD which identified time, access to transport, socio-economic status, family type, awareness about opportunities, parental physical and mental health and self-efficacy (Adams et al., 2018; Arakelyan et al., 2019; Jaarsma et al., 2015; Pickering, 2021; Schleien et al., 2014; Shields & Synnot, 2016; Shimmell et al., 2013; Steinhardt et al., 2021; Verschuren et al., 2012; Wright et al., 2019).). Rosenbaum and Gorter (2012) particularly highlighted family as the essential environment and central contextual factor in the lives of children with disabilities and twelve participants particularly focussed on familial valuing and role modelling to create and maintain interest in

sport/PA. Arakelyan et al.'s (2019) systematic review outlining the diverse familial factors associated with leisure participation identified both non-modifiable status factors (ethnicity, parental education and socio-economic status) and modifiable process factors including attitudes towards PA. They therefore encouraged rehabilitation professionals to focus on modifiable factors for best effect; however, Jessica's and Nigel's particular locations in areas of ethnic diversity problematised this reductionist approach, as they experienced modifiable process factors such as attitudes towards PA, family preferences and activity orientation being directed by the non-modifiable status of ethnicity. Furthermore, by privileging education over PA, Jessica's families were actually modifying the so-called non-modifiable factor of socioeconomic status.

The question of whether families model sport/PA is deeply influential for paediatric physiotherapists, as it affects their ability to introduce and maintain sport/PA within interventions, e.g., Jessica and Nigel experienced cultural attitudes towards sport/PA at odds with their accepted professional knowledge of its benefits for YPwD. Although both were experiencing cultural relativism, they did not use that term or theory and it is an under researched area within physiotherapy, although more developed within nursing and medical literature. Jelsma (2004) summarised the theory as…

> there are no absolute, morally acceptable or unacceptable actions but that all actions can only be judged from the social context within which they take place […]. The locus of deciding whether an action is morally desirable resides within a certain cultural context and a specific period of history (Jelsma, 2004, p. 4).

Although Jelsma's (2004) commentary was set in post-apartheid South Africa, her exploration of the ethical dilemmas arising in multi-cultural settings may resonate for paediatric physiotherapists in today's increasingly diverse UK society. As a theory, cultural relativism theory has its apologists and its critics. Critics highlight how the rejection of absolute moral standards can lead us to untenable positions, justify clearly immoral behaviours and undermine individual agency in terms of each person's moral obligations. However, apologists counter this by saying moral value systems do exist but draw a distinction between the absolutes of right action which hold sway within a given society, and the universals of right action, which are

external to any particular society and that these “absolutes derive from universals” (Jelsma, 2004, p. 5). Certainly, Jessica and Nigel were intuitively aware of ‘absolutes’ when evaluating the situation and navigating a delicate path to reconcile the differing values placed on sport/PA by families. However, it could be argued that specific awareness of such theoretical paradigms would assist in sensitively managing cross-cultural issues to avoid undermining therapeutic relationships between physiotherapist and YPwD and their family. Jessica and Nigel did not directly confront the attitudes encountered, but with sensitivity Jessica sought to educate and problem-solve practical and cultural issues around sport participation, e.g., promoting female-only activities, encouraging awareness of cultural issues in sports providers and modest clothing for female participants.

My participants’ social contexts including accounts of providers’ negative attitudes towards YPwD in community sports settings were also highlighted by Brittain et al. (2020) and Lumsdaine and Lord (2023, pp. 1239-1240) and is suggestive in those same contexts of restrictive metanarratives of ableism and/or able-bodied hegemony of Western societies which then creates specific practical and attitudinal barriers to YPwD’s sport/PA participation (Schleien et al., 2014) and blocks positive post-humanist narrative resources that could re-construct a healthy sense of self. These narratives persist despite increased mainstream media profiles surrounding Paralympic sport, as Jessica found.

> Our experiences for the most part have not been positive […] We were turned down for group swim lessons. We’ve been turned down for tennis lessons. And all because of their diagnosis (Schleien et al., 2014, p. 66).

Jessica experienced similar negative emotions and the distressing verbal rejection of being ‘turned away’ whilst trying to access a community gym facility with ambulant teenagers who had mild impairments. This matters because community PA participation outside health settings is crucial for ongoing PA participation (Clutterbuck, et al., 2022; Nyquist et al., 2020). Although access was problematised for Jessica by some providers, equal access to facilities and inclusion in PA for YPwD is a fundamental legal right which added a social justice dimension to Jessica’s challenge of outdated and discriminatory practices. Nevertheless, several participants continued to encounter and contend with negative attitudes and sub-optimal social contexts when they were attempting to integrate sport/PA into ‘real

world' settings away from clinical environments. Amelia understood this well through the negative experiences of YPwD and their families whilst accessing mainstream sports clubs and thus appreciated "the importance of finding the right sport and the right club and making sure mainstream clubs are potentially a bit more inclusive," to create new, positive PA narratives for YPwD.

In conclusion, making sense of sport as therapy choice was intrinsically context-dependent with no absolute truths, and each participant constructed their own realities based on personal, social and institutional contexts. Extant research also demonstrated the influence of context upon professional practice and values and in my study was irrespective of participants awareness of it as discourse, e.g. neoliberalism. Although these local and specific contexts were shaping my participants' lived experiences, the potential for theoretical transferability, rather than empirical generalisability, exists towards other paediatric physiotherapists working with YPwD in similar contexts.

5.2 Group Experiential Theme two: It's all about the kids.

Paediatric physiotherapists practice with children and young people aged up to nineteen and understand that they are not just small adults and will have typically received training and education around important aspects of global child and motor development. The population of YPwD is contextualised by their increasing complexity which reflects advancing medical technologies that have enabled greater neonatal survival (RCPCH, 2021). In this theme, YPwD and their perceived needs were the starting point for the way sport/PA was used and presented by participants. Understandings of what YPwD and their families want was refined through practice and experience, as well as being informed by theories associated with typical and atypical child development.

All my participants fully recognised the fundamental importance of play within paediatric physiotherapy and privileged the need for 'fun' interchangeably alongside it in the way they presented sport/PA. Children have a fundamental, legal right to play which is formally enshrined in Article 31 of the United Nations Convention on the Rights of Children (United Nations Children's Fund, 2022) and research has

addressed the continued importance of play for children in health settings (Koukourikos et al., 2015) to help reassure and maintain some feelings of normalcy, since play is their occupation. Importantly, play serves multiple functions as the medium for learning, sensory and physical development (McCoy et al., 2019), as well as being loved by children and young people. Several participants advanced the idea of goal-orientated play with disguised skills development to make activities more appealing by using aspects of play within sport/PA to develop motor skills. This description of goal-orientated play is closely associated with the concept of 'play as an occupation', as conceived within occupational therapy by O'Connor et al. (2021); with play defined through its three core characteristics of freedom, choice and control and it's two different purposes of process-orientated play associated with fun (play as an occupation or play for play's sake) and goal-orientated play as a medium for fine or gross motor skill development (play as an activity). Occupational therapists often work closely with paediatric physiotherapists in the field of childhood disability and O'Connor et al.'s (2021, p. 697) description of how motor skill development was 'disguised' as goal orientated play to make it more appealing and parents' need to integrate object play into therapy to provide a stimulus for physiotherapy, mirrored sense-making shared by my participants when they used play within sport/PA to develop motor skills. Notwithstanding all my participants still retained the fun element of process-orientated play and importantly O'Connor et al. (2021) did find the two purposes of play were not mutually exclusive,

> Contrary to the belief that play cannot be truly experienced when activities focus on therapy, education or skill-development (citing Goodley and Runswick-Cole, 2010), the findings of this study suggest that play may be both process-orientated and/or goal orientated depending on the player (O'Connor et al., 2021, p. 699).

The allied concept of 'fun' was a key element within all my participants' use of sport/PA and is an equally important feature of the F-Words' model, described by Rosenbaum and Gorter (2012, p. 457) as constituting a set of ideas about childhood neurodisability, child development and the socio-ecological forces which impact children. The 'F-Words' model also echoes the same essential truth that the occupation of children with disabilities is play and having fun, which the authors called "doin stuff." Self-evidently and implicitly, all my participants recognised that

children play sport but they don't play physiotherapy. Play, fun and participation were frequently emphasised by my participants within their 'sport/PA offer' alongside helping YPwD understand that physical skills mastery was possible, albeit in a different way from peers with TD. In fact, qualitative research has found that participation contributes more to YPwD's life satisfaction than skills mastery and physical functioning (Rosenbaum et al., 2007b) especially in adapted PA settings (Nyquist et al., 2020).

The importance of everyday participation in rites of childhood passage like bike riding and running were highlighted within the frame running experiences of Ella and Ruby and valued by YPwD and their families as manifestations of normalcy; these were another manifestation of their primary focus on YPwD and their families when making sense of their use of sport/PA in practice. The recognised familial desire for normalcy (Ullenhag et al., 2024) remains unchanged from its expression two decades ago within the National Service Framework (Department of Health and Department of Education and Skills, 2004) as the wish to 'live ordinary lives'. For my participants creating such normalcy for YPwD and their families was intuitively linked to the associated concepts of family-centred care and the paediatric therapeutic alliance but without reference to any underpinning theory. This reflects the relatively limited research on the therapeutic alliance in physiotherapy (Babatunde et al., 2017; Hall et al., 2010) and to a greater extent the paediatric therapeutic alliance, which is possibly attributed to its origins within psychotherapy and later application to physiotherapy. Babatunde et al. (2017) further identified shortcomings in the research that problematises defining the therapeutic alliance as a concept and locating suitable outcome measures which capture its effects.

Ava conceived of sport/PA empowering YPwD and their families and revealed co-existing awareness of power imbalances between practitioner and patient within clinical encounters, which Crom et al (2020) described as a positional inequality within the paediatric therapeutic alliance. Jack was similarly aware of such imbalances through the impact of clinical settings on children, alongside simultaneous harms occurring through scrutinisation of their motor skills and function; these same fears and lack of control in the clinical encounter were also highlighted in a qualitative study by Lundberg et al (2022). Such power perspectives

link to the philosophical roots of the physiotherapy profession and have latterly been explored within theoretical research exploring discourses operating more widely within allied healthcare professionalism (Nancarrow & Borthwick, 2021). The power imbalances recognised by Ava and Jack speak directly to the micro-powers enacted in the “mundane, day-to-day practices of professionals” conceptualised by Foucault (Cheng-Hao Huang et al., 2021; Nancarrow & Borthwick, 2021, p. 15) as disciplinary power. Nancarrow and Borthwick (2021) conceived such power as a generative force, since power created knowledge to inform a diagnosis or treatment plan via surveillance and monitoring; however, several participants diverged from this analysis, recognising only negative, coercive forces; and sought instead to empower YPwD and families through sport/PA.

Within Jack’s description of the formal physiotherapy encounter, with its scrutiny, intimidation and even fear, it is possible to envisage an alignment with Foucauldian analyses of the disciplinary ‘gaze’ and the body as the object of study. However, such areas remain surprisingly undertheorized in physiotherapy according to Nicholls and Gibson (2010) and it is only relatively recently that traditional views of the body, normalisation and physiotherapists’ role in identifying deviance from normal have been challenged by authors (Nicholls, 2016; 2018; 2020) within new models of care. These emerging ideas about the body as an object of study for physiotherapists challenge former biomedical and social models of health and the metanarratives of biomedicine. Furthermore, Nicholls’ theoretical work (2012, 2016, 2018) noted how this expands our concept of “what our bodies can do, where bodies begin and end and how we might relate to other people, objects, technologies […] in the future” (Nicholls, 2016, p. 160). It is therefore particularly apposite to consider Ella, Ruby and Ivy’s use of assistive sporting devices (adaptive cycles and running frames) to make PA possible. Sporting technologies extended the YPwD’s bodies, so participants’ interventions are now focussed on a new conception of the body, endowed with greater functionality (Van der Linden et al., 2022); and this reconceptualisation simultaneously created new positive narratives of sport/PA for YPwD themselves.

For several of my participants, sport/PA served the function of a comfortable place, a neutral vehicle or ‘normal’ activity, which facilitated a relational connection with ‘kids’

by distracting from the clinical environment or even completely disguising it. The phrase ‘paediatric therapeutic alliance,’ has sometimes been used to describe this kind of relational and collaborative engagement, where therapeutic change is contingent upon empathy, congruence and unconditional positive regard of practitioners (Crom et al., 2020). It is also recognised that the therapeutic alliance requires specific interpersonal skills, capability to address psychosocial issues and confidence not to feel threatened by power shifts (Crom et al., 2020) and it is possible to see all of these phenomena particularly operating in Kelly’s experience of ‘being out’ using sport/PA to create place and space in a non-clinical setting to create connection with a disengaged teenager.

> It was about being out and being moving and being…doing something non-hospital [beyond] kind of convention of hospital exercises [Kelly].

Although Kelly did not use the phrase ‘paediatric therapeutic alliance,’ her narrative demonstrated her awareness of its key components and the importance of relational trust, as well as her technical, clinical skills. Interestingly, this contrasted with Crom et al.’s (2020) sample of physiotherapists who felt being a good professional was related to good technical skills rather than relational trust. The need to create and maintain relational aspects of the paediatric therapeutic alliance is crucial to successful physiotherapy practice (Crom et al., 2020; Phoenix et al., 2020) and interpersonal skills are therefore highlighted in pre-qualifying physiotherapy education and within professional standards (CSP, 2019a; HCPC 2023), holding equal esteem alongside ‘hard skills.’ More than a decade earlier, Redmond and Parrish (2008) found that the engagement between YPwD and their physiotherapists was the essential variable influencing adherence to physiotherapy. Positive relationships were built upon trust, respect and empathy as shown in these extracts from service users…

> think it’s about having a really good relationship and a good rapport with the physiotherapists because if you get on well with them and you know you feel comfortable with them and relaxed. I think that makes a big difference.
>
> Most important thing for me really is not so much on a physiotherapy level this time, it’s to have a good relationship with your physiotherapist so they understand what you need and to have a bit of fun with it as well (Redmond and Parrish, 2008, p. 1505).

Another aspect of relational trust and normalcy is related to identity and exemplified by the terminologies used by physiotherapists to describe YPwD. The significance of naming extends beyond descriptive labelling, to the fundamental internalised role being played, so, when Amelia felt really ‘odd’ about seeing her patients as ‘kids’ rather than patients, she was privileging their identity as a young person over their patient identity, of course this then also created an unspoken dissonance within her own identity as a healthcare professional which may have been arising from feelings of abandoning physiotherapy’s affinity for the metanarratives of biomedicine (Nicholls & Cheek, 2006). This reflects the related dilemma about roles highlighted by Crom et al. (2020) who noted aspects of professional role and relationship must be balanced when working with children and families because they are…

> in a dependent relationship with the physical therapist, therapists are encouraged to find the right balance between their professional position and contribution to the relationship on the one hand, and the emotional needs of children and their parents on the other hand (Crom et al., 2020, p. 12).

A further feature of physiotherapeutic encounters with YPwD and their families is the impact of ‘non-fixable’ conditions. The drudgery and tedium of repetitive, long-term physiotherapy exercises is recognised by YPwD and meant long-term engagement with physiotherapy was very challenging. This was acknowledged by fourteen of my participants, although Jack and Kelly qualified this by saying engagement could vary depending on the individual and Sophie stated it had not been a problem in her PA group; however most agreed with Amelia’s sentiments - “these are really boring exercises, you know, and let’s face it they are, if you’ve got to do these same exercises day in day out for fifty years”. Similar issues were noted within other studies (Basaran et al., 2014; Beresford et al., 2018; Chappell & Williams, 2002) and it especially arose for teenagers undergoing long-term physiotherapy. Grace’s use of ‘scream’ and physio’ed to death eloquently captured the frustration, possible anger and the depth of negative emotion directed towards physiotherapy as a ‘brand’ and an activity and also towards physiotherapists and acknowledged other contributing peer pressures. The negative emotions of teenagers were also highlighted by Redmond and Parrish (2008) who described critical and unconstructive experiences of physiotherapy arising from the repetitious nature of physiotherapy intervention throughout childhood and into adulthood.

> the majority of the time it's a set exercise program which I find is a bit boring to me. You do the same exercises over and over (Redmond and Parrish, 2008, p. 1506).

Grace acknowledged that fitness professionals had a part to play, with PTs a valuable long-term strategy and latterly the CSP (2023, 2024) is promoting the value of collaborative working with fitness professionals in the 'exercise space'. My participants' responses concerning long-term engagement with physiotherapy when sense making about sport as therapy choice for YPwD recognised the essential nature of paediatrics, also outlined within research, which places the young person and their family at the centre of any approach (family-centred care) and so therefore prioritised their interests, needs, goals and capabilities in relation to sport/PA (Ullenhag et al., 2024). The paediatric therapeutic alliance, although not named, represented an optimal type of therapeutic alliance for participants; but at the same time, they acknowledged the 'brand' of physiotherapy was being negatively experienced by YPwD, alongside a finite capacity to engage with that brand in the long-term.

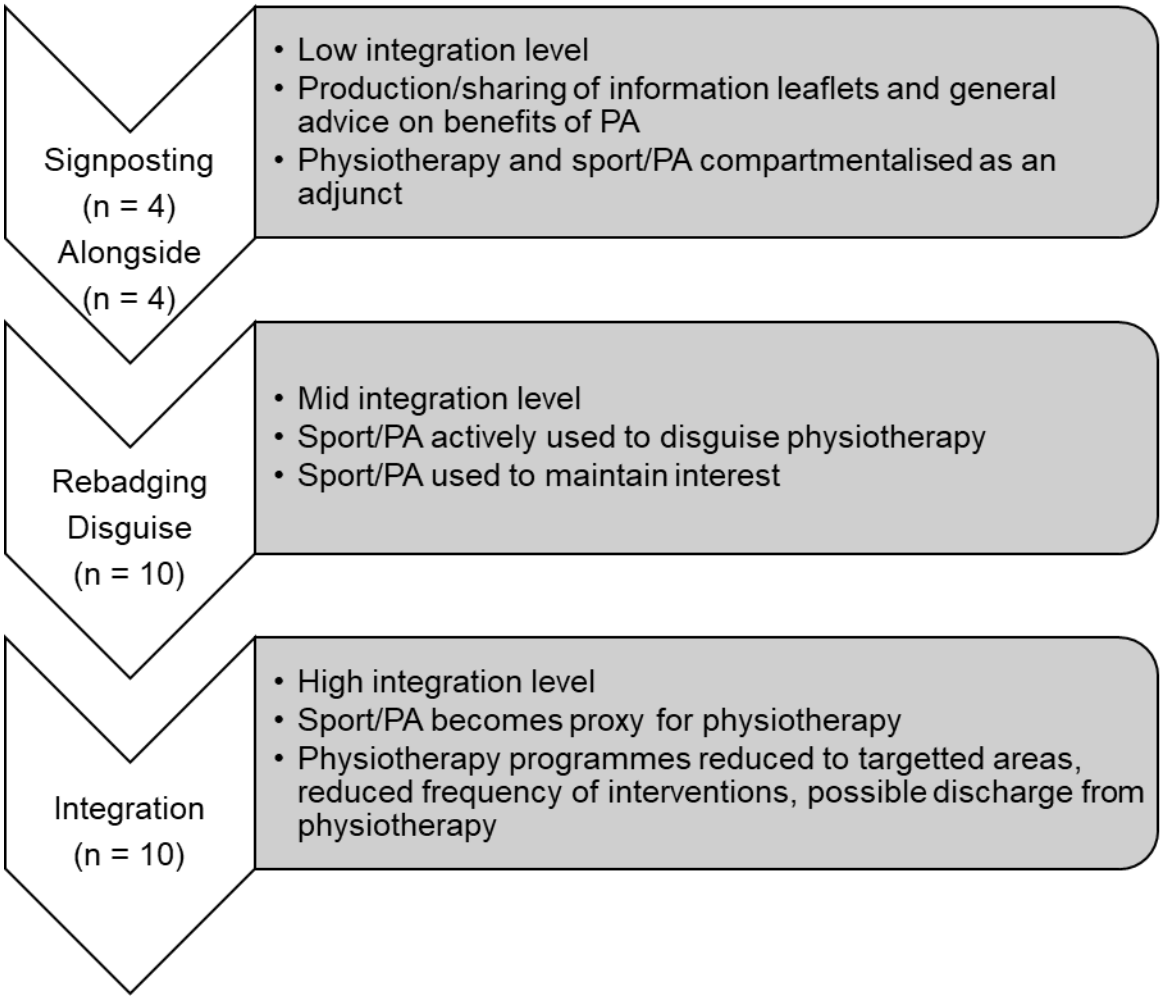
5.3 Group Experiential Theme three: Relationship of PT to sport/PA

My participants practiced within differing healthcare systems/settings with varying caseload pressures and had individualised sport/PA experiences. Consequently, interpretations concerning the appropriate relationship between physiotherapy and sport/PA also varied across participants and within participants and were mediated by individual's contexts. A loose integration spectrum was observed (Figure 11) within participants' sense-making concerning 'sport as a therapy choice', with foundational activities of promotion and signposting to suitable sport/PA, as these activities were perceived as less time-consuming.

A midway point existed where participants felt sport/PA was being specifically used to disguise physiotherapy activities as a kind of re-badging exercise. As sport/PA became more integrated into the physiotherapy 'offer' and less compartmentalised, temporal considerations evaporated even though ironically the time being devoted to sport/PA was becoming greater, this is possibly because sport/PA was successfully playing a targeted role in achieving more physiotherapy goals. There is limited

Figure 11

Relationship of PT and sport/PA diagram with typical activities



research that has directly explored the direct relationship between paediatric physiotherapy interventions and sport/PA and physiotherapists' sense-making about the idea of exploiting this connection and its possible impact on engagement with the physiotherapy programmes used with YPwD. Research with adult samples and/or those focussed on short-term health conditions is not considered since findings would not be transferable to paediatric physiotherapists and YPwD. This literature gap represented the originality of my study.

Promotion and signposting

Emma, Ella, Jessica and Ruby realised they were uniquely positioned to deliver a general message about PA's benefits to YPwD as envisaged by Hartley (2018); Sharp et al. (2012). They also understood this was a legitimate role for them as trusted healthcare professionals whose core professional identifier was the restoration and maintenance of optimal physical health through physical means. These understandings are supported by the majority of extant literature, e.g., West et al. (2021, p. 2) identified how physiotherapists' specialist professional knowledge and skills ideally positioned them to undertake this role in the healthcare space, "Physiotherapists are a group of health professionals who could be central to the implementation of PA promotion in the healthcare setting". Although in practice, Shannon et al.'s (2021) mixed method study found lack of clarity concerning physiotherapy's role in PA promotion to YPwD, no specific detail on how to promote and sometimes lack of organisational support (which several of my participants had experienced). Contrary findings were limited to Noyes et al. (2017) who stated PA was out of scope for paediatric physiotherapists working with YPwD.

Lowe et al.'s study (2017, 2018) also found that UK physiotherapists working across diverse settings saw PA promotion as an element of their practice. Several of my participants agreed and understood the rationale, including Emma in her acute specialist setting; however, like Shannon et al. (2021) and CSP (2024), she challenged the perception that this was the exclusive task of physiotherapists. Emma's experience of changing narratives concerning 'ownership' of PA promotion arose through her contributions to the 'Moving Medicine' (n.d.) website during information gathering processes with nurses "they 100% will all say its physio's [laughs] and it's like you know it isn't, though…I didn't get trained to talk about this at university…it's as much everybody else's role as it is mine". The Moving Medicine initiative exemplified how a campaign can influence the discourse surrounding accepted scopes of practice in a healthcare profession by challenging the existing perception that only physiotherapists can and should talk to patients about PA. This is significant when identifying the distinctive scopes of practice of the physiotherapy profession and of individual physiotherapists, alongside how scope evolves in response to the changing healthcare environment. It also emphasised the practical

issue that Emma was not always present on wards to have those conversations with patients.

Participants rationale for promoting PA for YPwD was supported by research showing sedentary behaviours and reduced PA compared to peers with TD (Ganz et al., 2020; Carlin et al., 2024), with deconditioning worsening post-Covid-19 due to closure of community facilities and clubs (West et al., 2021) which remained closed after restrictions eased. The WHO (2020) recognised physical inactivity is a global, critical public health issue and updated its guidelines on sedentary behaviour and PA with a recommendation for those aged seven to seventeen to undertake an average of sixty minutes per day of moderate to vigorous PA and children with disabilities to perform the same amounts if possible. Several of my participants realised the importance of YPwD hearing this message now, whilst influenceable, to avoid future morbidities as adults and appreciated that good PA 'habits' had to be established as children, to remain embedded within adulthood. Such foresight was also mirrored by Gibson et al. (2009, p. 1449) who noted the impact of "early formation of life dispositions and orientations", when discussing emerging new rehabilitation populations and changing trajectories of childhood disability arising from advancing medical technologies; these had also been highlighted by Ivy.

Within time-pressured physiotherapy services, signposting was a preferred option of four participants who wanted to use sport/PA in some way when other options were restricted by temporal considerations and caseload pressures. Therefore, where suitable ongoing clubs existed, signposting felt an accessible, time-efficient option and something physiotherapy students could assist with, since it simultaneously preserved staff time and left meaningful legacy of students' placements. Signposting was advanced by Iverson et al. (2021); Pickering (2021); Sharp et al. (2012); Sivaratnam et al. (2020); Wright et al. (2019). However, Shannon et al. (2021) noted that signposting did place responsibility back upon families, some of whom were not inclined nor equipped with necessary levels of capacity to act and self-manage, which my participants also acknowledged. Signposting could be part of general PA promotion and necessarily included evaluating suitable ongoing community activities, so framed by theme two and participants privileging of YPwD and their families. Research literature on PA for YPwD reported how poor knowledge of suitable

sport/PA functions as a barrier to participation (Carlin et al., 2024; Jaarsma et al., 2015: Shields and Synnott, 2016; Verschuren et al., 2012) but Ella's team had also found signposting problematic due to the existence and longevity of clubs.

> we were really fed up with struggling to find anything to signpost our kids with physical disabilities to in the area for sport… At that time there was very little in our area, it was a real struggle to find something that kids could try out that was then an ongoing club, because there's no point them doing something and then there's nothing for them to continue with [Ella].

Paul's theoretical rationale for making easy sense of the complimentary relationship between physiotherapy and sport/PA conceived physiotherapy as physical literacy that enabled a motor output in sport/PA. Physiotherapy exercises were analogous to the technical running drills which promote good form and then allow runners to perform in competition, with foundational motor skills unconsciously applied. Theorising physical literacy outcomes, Paul regarded motor skills accomplished through physiotherapy as enablers of meaningful change for YPwD that happen beyond the physiotherapy session during sport/PA participation or play (for young children and infants). Previous research largely addressed physical literacy as a fixed, prescriptive process where the outcome is development of foundational gross motor and movement skills in children with TD, together with foci on locating and testing measurement tools across varying PA domains. At first glance these ideas generally align with Paul's thinking, however, originality is demonstrated in his more holistic application of physical literacy to YPwD in relation to their physiotherapy activities and conceived in a way he felt would effectively promote lasting changes in their exercise behaviour, alongside identification of his role in the process. In this respect, Paul aligned more closely with contemporary research which identified the vital role of physiotherapists in physical literacy for YPwD (Hebinck et al., 2023) and the potential of physical literacy as a conduit concept between rehabilitation and community PA for children and adolescents with Cerebral Palsy (Clutterbuck et al., 2022; De Sousa Junior et al., 2023; Shannon et al.,2021). Similarly Cornish et al.'s rapid scoping review, (2020) which stated physical literacy's multi-dimensional, holistic concept better incorporated PA promotion across healthcare when it linked clinical and community settings and accommodated psychosocial factors alongside individual motivations, abilities and knowledge, in preference to previous prescriptive

approaches which ignored these areas. The multi-dimensional concept and linked settings identified by Cornish et al., (2020); Clutterbuck et al. (2022); and Hebinck et al. (2023) comprising physical, social, cognitive and psychological elements correspond with the environmental and personal domains outlined within biopsychosocial models such ICF and 'F-Words' used by several of my participants in theme six and widely observed within themes one and two. Such correspondence is further observed within Cairney et al.'s (2019) evidence-informed conceptual model derived partly from childhood motor co-ordination disorders, which conceived physical literacy's broader impact beyond physical education to position it as a determinant in health and health behaviour.

Rebadging and disguise

The middle ground of sport/PA within practice was represented by ten participants utilising it to disguise or re-badge physiotherapy activity. Where physiotherapy was unpalatable, sport/PA provided a legitimate disguise, e.g., Sophie experiencing children learning, developing and engaging better when activities did not feel like a chore, were enjoyed and not seen as work or physiotherapy, was noted by Shimmell et al. (2017). Sophie described this as "hiding the vegetables in the pasta" and Moore et al. (2019) identified the same mechanism when physiotherapy stretching and strengthening exercises were contextualised within football team training, which they theorised as new internal motivations displacing non-compliance. The morality of disguise felt permissible to Sophie because it involved children and this spoke to the paternalistic nature of paediatric work, where practitioners justifiably acted in the best interests of children who may lack or have only partial capacity. Such practices led to 'a greater good' where the ends justified the means. Similarly, Sarah, deploying intensive treatment regimes with YPwD, used an alternative 'wrapper' to create resilient engagement with physiotherapy. This highlighted the psychological significance of labels for YPwD and how they may affect intrinsic motivations and alter self-identity of YPwD, hence a 'training programme' rather than a 'physiotherapy programme' and an athlete in training rather than a patient rehabilitating. Sarah's use of labels to influence YPwD and counter negative attitudes towards physiotherapy was similar to ideas explored by Dasoju and

Hazzard (2019) about the psychological significance of negative labels within qualitative research undertaken for the CSP ‘Love activity, hate exercise?’ campaign.

> A view which appeared consistently was that the word ‘exercise’ was often perceived negatively and as a barrier, whereas taking part in an activity which individuals enjoyed was perceived more positively (Dasoju & Hazzard, 2019, e100).

Integration

Ten participants were starting to explore and implement active integration of sport/PA into their interventions, several, like Amelia, envisaged integration enabling reduced, targeted physiotherapy programmes, less frequent physiotherapy interventions and even possible discharge from physiotherapy. Amelia described it as “the perfect situation […] where there’s a little bit of physio and a little bit of clubs and sports and activities going on.” Similarly, Clutterbuck et al., (2022) had proposed that sports participation represented an avenue towards improved health and sustaining the effects of physiotherapeutic interventions for more able children with Cerebral Palsy. This could be viewed as cohering with ‘across the lifespan’ delivery approaches for both physiotherapy and occupational therapy services (Gibson et al., 2009; Law & Darrah, 2014), where intervention is characterised by ongoing, flexible episodic input focussed on ‘pressure points’ like surgery, transition or growth spurts, to meet changing needs, followed by periods of low or no service input. Therapeutic use of sport/PA is now gaining more traction with a range of allied health professions (APCP; CSP and the Royal College of Occupational Therapists), with principles similar to the American-based idea of therapeutic recreation. The production of evidence-based inclusive sport guides outlining their therapeutic value, as well as the use of boccia as an assessment and intervention tool (Sport for Confidence 2021, 2022) speaks to an increasing acceptance that functional outcomes accomplished through everyday activities do integrate PT and sport/PA for YPwD, where physiotherapists and occupational therapists work very closely together. However, it should be noted these guidelines do not constitute primary research.

Notwithstanding, several of my participants had difficulty precisely articulating the relationship between physiotherapy and sport/PA and it was expressed ambivalently; this underlined how they experienced the relationship as complex, fluid and context

dependent with multiple realities. This demonstrated their epistemic sophistication in meeting the challenges of increasingly complex, everyday practice and reflected how it was easier to feel and see the relationship than it was to articulate.

> The relationship between them is [pause]…I wanna say physiotherapy's not a sport. They're interchangeable, they're one and the same thing that enables that child to get to that point [Ivy].

The sophisticated interchange had also been visualised as a fluid and responsive symbiotic relationship, with physiotherapy and sport/PA seamlessly feeding each other's agendas by Wiart et al. (2010).

> Therapy activities were viewed as a potential strategy for enhancing physical fitness, and sometimes recreational activities were viewed as having therapeutic benefits (Wiart, et al., 2010, p. 252).

Support for integrative approaches is partly provided by Neurobehaviourial Theory (NBT - Coetzer & Ramos, 2022) which utilises psychological aspects (cognitive, affective and behavioural) of neurological conditions to prompt practitioners to focus on situated functional outcomes rather than improving specific areas of neurological impairment. Similarly, the transactional framework of King et al., (2018) identifies the importance of recognising YPwD as situated persons ensuring long-term rehabilitative interventions are focussed on everyday real-world experiences. Sport/PA as vehicles for activity and participation fall into this category and ten participants recognised it is what YPwD do anyway and facilitates their socialisation with peers. Thus, it made sense to envisage sport/PA within non-clinical community settings as immersive activity and participation 'starting points', rather than as outcomes; even if this does require paediatric physiotherapists abandon conventional biomedical approaches and become "top down rather than bottom up" (King et al., 2018, p. 1838; Rosenbaum and Gorter, 2012; and Rosenbaum, 2022).

The greater integration of sport/PA into physiotherapy programmes by ten of my participants is reflected within contemporary research where holistic practice is encouraged alongside adaptive PA participation (Gorter et al., 2016; Nyquist et al., 2020; Rowland et al., 2015; Shikako-Thomas et al.,2014; Verschuren et al., 2012) and promoted as a legitimate treatment goal. Sharp et al. (2012) and Bult et al.

(2011) had similarly urged whole rehabilitation teams to aim for improved participation in leisure activities that simultaneously addressed all ICF domains.

> treatment gains will probably only be reached through interventions aimed concurrently at the level of health condition, body functions, personal factors, and environmental factors (Bult et al., 2011, p. 1528).

Integrative practice within ICF advances two important concepts, namely that all domains are equally important and that domains are not mutually exclusive. Sophie, Ella, Ruby and Harry shared similar experiences when sense-making concerning sport/PA in practice, as they experienced the satisfaction of seeing YPwD changing their attitudes to exercise, in addition to progressing gross motor skills. Participants referenced this via everyday practice narratives, with and without references to ICF, which created integrative practice epistemologies that represented their sense-making around why and how they used sport/PA in their practice, why and how it worked and consequently why they valued it. Such epistemologies were valued because they created and maintained their knowledge base of effective practice and in turn reinforced their ongoing behaviours.

In contrast, participants made minimal references to published literature on the integration of sport/PA within paediatric physiotherapy, which reflected the limited but growing literature available, but may also reflect how as longstanding practitioners they valued and utilised their experiential learning more and found it more accessible. This concept is described within Kolb's (2014, p. 37) experiential learning cycle where learning is stated to be "the process, whereby knowledge is created through the transformation of experience", including the initial stage where feelings are evoked. Patient stories exemplified situated learning that held meaning for all my participants because it had been applied and reflected upon. It also held a power over the formal learning derived from reading research literature because it evoked emotional feelings, which in turn created or reinforced 'hot' cognitions (Smith et al, 2022) and were subsequently observed in actions and behaviours. Emma exemplified experiential knowledge concerning the integration of physiotherapy with sport/PA within her narrative of the competitive swimmer with rapidly deteriorating mental health. Although not a priority for clinical physiotherapy intervention, Emma experienced how her input rapidly made a 'massive' psychological difference, helping him emerge from depression and realise swimming was still possible.

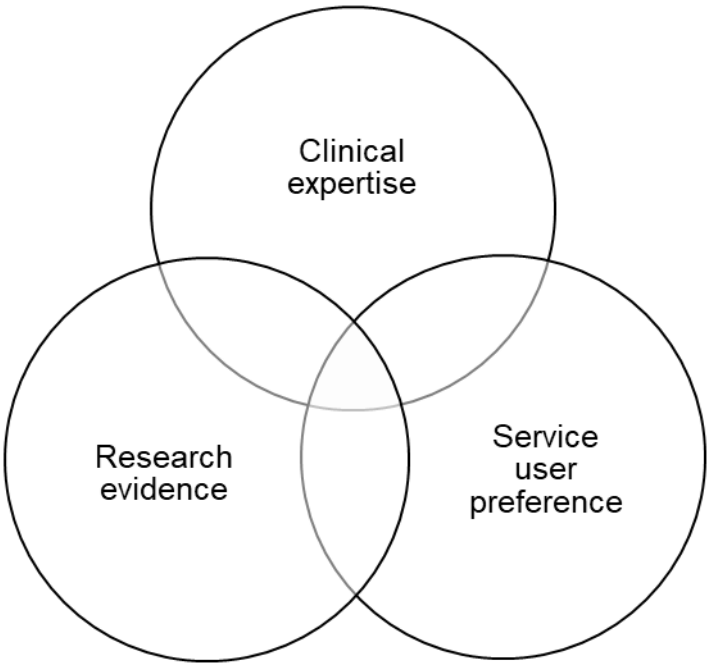
Similarly, Paul's narrative of the child seen regularly for exercises and strengthening who had got involved in frame football and "absolutely loves it." Paul observed greater adherence to physiotherapy exercises in comparison to previous self-reported frequency because the child viewed physiotherapy activities as football training and this had progressed to self-management with a spontaneous request for more ankle work to help with football skills. These were both examples of patient narratives reinforcing practice epistemology concerning the integration of sport/PA within physiotherapy.

Only Ivy and Emma spoke about combining formal research knowledge with practice epistemologies when sharing experiences of integrating sport/PA and physiotherapy, e.g., Ivy combined experiential knowledge from her virtual cycling narrative with initial quantitative research from the cycle action research project. This demonstrated Ivy's possession and use of formal knowledge to build the evidence base for her activity and therefore legitimise the project. Scientific method and principles underpinned her integrative intervention in terms of monitoring its impact and dependent variables and they also re-assured from a safety perspective. Similarly, Emma repeatedly deferred to research literature concerning the benefits of PA for her patient group and it was clear that she privileged research as both the evidence base for her integrative practice and her interest in PA. The concept of proof was highly important, so the limited evidence was concerning to her… "I would say [a] growing body of evidence, it's not brilliant, but it's growing." The different types of knowledge used by Paul, Emma and Ivy illustrate the concept of evidence-based practice (EBP) which derives from evidence-based medicine and promoted by the CSP (2018e, 2019a) alongside regulatory HCPC standards for physiotherapists (2023, 2024) to ensure the safety, quality and effectiveness of services (Sedgley, 2013). Furthermore, it is important to distinguish between being evidence-based, associated with the empirical positivist paradigm of science represented by predominantly experimental research methodologies, and EBP which integrates the best available research with individual clinical expertise and patient preference (Greenhalgh, 2019). EBP is sometimes conceived as a three-legged stool which emphasises all elements within a framework underpinned and operationalised by critical thinking and clinical reasoning (Fig 12). However, most of my participants

only referred to experiential knowledge and patient preferences; this may be due to unspoken embodiment of research knowledge or to the limited literature on the integration of sport/PA and physiotherapy. This is unfortunate since contemporary research, discussed here, supported several ideas associating sport/PA and physiotherapy practice, such as PA promotion and signposting, paediatric physiotherapists' accepted role in physical literacy and integrative practice focussed on situational functional outcomes.

Figure 12

Evidence based practice.



CRITICAL THINKING & CLINICAL REASONING

Note. Evidence-based practice. Adapted from *What is evidence-based practice?* by Chartered Society of Physiotherapy. 2018e. (https://www.csp.org.uk/professional-clinical/clinical-evidence/evidence-based-practice/what-it). Copyright 2025 by CSP.

5.4 Group Experiential Theme four: Sport/PA - one tool in the toolbox

Paediatric physiotherapists respond in diverse and innovative ways when practicing and problem-solving within complex and changing environments, traits recognised by Nicholls (2018) as characteristic of their reputation. One response shared by all participants was to rely on different types and sources of practice knowledge, differing ontological beliefs and evolving theoretical approaches (Law & Darrah, 2014). Sarah exemplified this eclectic approach to practice, which was partly driven by her patients' eclecticism and partly response to influential changing social, cultural and environmental contexts.

> not too tied to one particular thing and my underlying principle for that is that we are all different and one size very rarely fits all [Sarah].

The idea that 'one size does not fit all' was echoed within Shaw and De Forge's theoretical paper (2012, p. 421) which recognised practice epistemologies are situated within social, historical, cultural and professional contexts and highlighted "that in a field as (ontologically) complex as physiotherapy, a single, consensus-based practice epistemology is insufficient". Shaw and DeForge (2012) conceived this pluralistic epistemology as 'bricolage', asserting it was both theoretically rigorous and empirically grounded fit for "conceptualizing the knowledge that composes, enacts, and arises from expert physiotherapy practice".

In order to accommodate patients' eclecticism, it felt intuitively right for several of my participants to embrace emerging interpretive and critical epistemologies within their narrative clinical reasoning, as YPwD and their families were differentially interpreting their experiences of disability and sport/PA. Edwards and Richardson's theoretical framework (2008) similarly used case studies to highlight how such epistemic sophistication enabled practitioners to avoid associating severe impairment with poorer experiences of disability, as exemplified by Ivy when using PA to improve quality of life. Although Edwards and Richardson (2008) focussed on knowledge and understanding arising from inductive and deductive clinical reasoning processes within adult conditions, some transferable principles applied due to the chronic nature of the healthcare condition involved.

Harry, Ruby and Nigel advanced a specific, eclectic perspective when naming sport/PA as “another tool in the bag […] another modality” [Harry]. This ‘toolbox’ became enlarged through experiential learning, critical reflection and shared clinical decision-making, so that over time, their expert practice was associated with multiple ways of knowing (Shaw and DeForge, 2012). Accessing other equally valued tools was necessary because participants knew not all YPwD had interest in sport/PA, possibly through previous negative experiences. ‘Other tools’ sometimes simply meant utilising other forms of PA such as dance, as opposed to formal sport, but also wider understandings of what PA might mean to a YPwD, within the context of a physiotherapy intervention. The ‘toolbox’ therefore contained a repertoire of approaches which could be called upon in an agile fashion to achieve the desired outcome of engagement with physiotherapy intervention and treatment goals. The eclectic deployment of tools accommodated YPwD’s unique individual interests and choices around activity and settings. As Kanagasabai et al. (2018) noted, choice must be respected and facilitated, if leisure experiences are to create positive reinforcement and motivation to continue. All participants also showed awareness of YPwD’s need for autonomy and agency within sport/PA experiences (without using these terms), which are recognised psychological components of health behaviours within SDT (Evans & Hickey, 2017; Ryan and Deci, 2000). However, the limitations of exploring motivation solely using SDT has been critiqued by Standage and Ryan (2020) as it assumes basic psychological needs are universal; furthermore, the autonomy and agency of YPwD would be selectively mediated through interactions with their parents and care givers.

Multiple tools and multiple ways of knowing are a rejection of narrow interpretations and metanarratives concerning the nature of physiotherapy practice, e.g., those which exclusively privilege biomechanical and biomedical views of the body as machine, theorised by Nicholls and Gibson (2010). The need to integrate biomechanical approaches with other interpretations of what constitutes physiotherapy is particularly apposite for my participants who were implicitly aware of their inability to ‘fix’ YPwD with the tools available. YPwD reveal the inadequacies of exclusively biomedical approaches to physiotherapy and require practitioners to move beyond what Edwards and Richardson (2008, pp. 185-186) termed

epistemologies based solely upon the scientific, experimental, positivist' paradigm associated with hypothetico-deductive clinical reasoning, focussed on objective and predictable types of knowledge in practice.

Several participants, exemplified by Jack, viewed the motor tasks of sport/PA within naturalistic settings as accessible functional contexts that were goal-directed and purposeful, thus providing the 'reason to move'. The idea of sport/PA as an everyday function consequently contextualised the motor skill beyond its proficiency, to include its meaning in a specific environment, creating a more authentic motor performance by YPwD and a more authentic in-context assessment for participants. The blending of such ecological perspectives and ideas of sport/PA as tool can be seen in emerging new knowledges underpinning motor development theory, relevant to YPwD since it recognises that motor development is multifactorial and not solely dependent on nervous system maturation. Neuro-maturational theory, NBT and the Transactional theories of Neuronal Group Selection and Dynamic Systems have created more comprehensive understandings of motor development by demonstrating it is a function of multiple interacting systems, including task and available environmental influences or opportunities. Law and Darrah (2014) recognised how these transactional perspectives on motor development align with contemporary definitions of disability; likewise, Bonney and Smits-Engelsman (2019) directly linked Dynamic Systems task performance with ICF's activity, participation and environmental domains by suggesting how particular environmental contexts influence efficient solutions to motor tasks. Bonney and Smits-Engelsman (2019), Law and Darrah (2014) and Ullenhag et al. (2024) further emphasised 'ecological' perspectives by highlighting the importance of functional 'in-context' movement experiences, rather than isolated motor components practiced in non-functional contexts; and furthermore, the increasing acceptance by practitioners of functional movement solutions not based on 'normal movement patterns'.

Sport/PA for YPwD is undoubtedly a complex construct whose significance is not limited to physiological, rehabilitative or inclusion perspectives and Carroll et al.'s qualitative study with YPwD (2021, p. 2) conceived meaningful physical participation as an "assemblage" associated with preferences, desires and pleasure and shaped by social, affective and material forces, rather than simply a vehicle to rehabilitate

and normalise bodies. However, at times, several participants solely focussed on the effectiveness of sport/PA as a potential “rehab tool in the toolbox” [Nigel] and as “a tool to get the best out of children [Ruby]. These experiences were reflected within research that recognised sport/PA functioning as an extrinsic motivator. Extrinsic motivation was particularly observed in team sports where social connectedness reinforced ‘belonging’ and was more valued than physiological gains, as Sarah noted “it has been about belonging and that has been what’s kept them probably more than anything else”; this was also reported by De Sousa et al (2023); Kilgour et al. (2023); Lumsdaine and Lord (2023); Nyquist et al. (2020); Shapiro and Martin (2010); and Ullenhag et al. (2024). Sport/PA was also valued by several participants for its utility as a tool to positively affect other psychological states, such as autonomy, self-efficacy and confidence, which cohered with existing literature (Andersen & Winther, 2023; Clutterbuck et al., 2022; Lauruschkus et al., 2015; Martin et al., 2020; Nyquist et al., 2020; Roth et al., 2022; Ullenhag et al., 2024). Here, values were again reinforced by practice narratives and the preferences of YPwD and their families, through participants’ inductive and deductive clinical reasoning. Sophie’s PA group additionally highlighted its potential to prepare YPwD for community sport/PA and the desirability of this strategy was also noted within recommendations by Shannon et al. (2021). No extant research considered sport/PA as a tool to promote engagement with physiotherapy or affect service delivery and care pathways.

The idea of sport/PA creating alternative self-identities was only lightly touched upon by Ruby and Sarah who described her programmes as training for athletes. However, research is suggestive of sport/PA’s potential to enable shifts towards an alternative athletic self-identity (Hammer et al., 2019; Groff et al., 2009; Lumsdaine & Lord, 2023, p. 1242; Shapiro & Martin, 2010; Scarpa, 2011), thus “providing an alternative way of being disabled through [competitive] sports participation for those with congenital disabilities”. Research suggests this could be a promising avenue to selectively exploit for better engagement but had not been considered by participants.

5.5 Group Experiential Theme five: Locating identity.

In recent decades, physiotherapists have shown increasing interest in defining their professional identity and research is “revealing a complex, multi-faceted picture” (Nicholls & Gibson, 2010, p. 497). Professional identity may be defined through philosophical, historical and educational lenses and according to Wackerhausen (2009) operates at both macro (profession level, e.g., CSP) and micro level (individual clinician). One of my research objectives was to explore the professional identity of paediatric physiotherapists as rehabilitators in relation to ‘sport as a therapy choice’ and hence my primary focus was micro level, whilst appreciating that macro level professional identities had the potential to influence individual physiotherapists. My exploration of participants’ professional identities as rehabilitators also necessarily involved locating values and assumptions and then interpreting their significance though my selected lenses of contexts, professional scopes and knowledge and intervention approaches. This research objective had been included to explore the possibility that participants might feel conflicted or even demonstrate role confusion when using sport/PA in their interventions.

Paul had experienced less secure professional identity earlier in his career when using sport/PA, whilst initially working as a clinician in a special school (a de facto non-clinical setting). He had felt not necessarily de-skilled but questioning “what am I doing? am I delivering PE or physiotherapy”; his experiences were context dependent, as they related to professional level and workplace setting. However, all my participants now felt very secure in their professional identity as a physiotherapist, when using sport within interventions, exemplified by Sarah - “I don’t feel threatened by that as part of what we do. No conflicts, none at all”. Such evolution cohered with Hammond’s (2013, 2016) idea that professional identity is a kind of living organism, more complex than traditionally thought, evolving over time and place, with its meaning and values being co-constructed within differing communities of practice that were both intra-professional and inter-professional.

> physiotherapists make sense and (re)interpret their professional self-concept based on evolving attributes, beliefs, values, and motives. Patients informed this, and it was mediated by workplace and institutional discourses, boundaries and hierarchies, through an unfolding career and the contingencies of a life story (Hammond et al., 2016, p. 71).

The influence of patients, discourses, boundaries, hierarchies and organisational cultures (Simpson et al., 2019) upon professional identity when sport/PA was used were observed within my study. The use of sport/PA within physiotherapy might be an accepted almost unconscious part of rehabilitative identity or it challenged existing ideas about what constituted physiotherapy and therefore what professional identity looked like. Some participants operated within institutional discourses that completely reinforced sport/PA within their rehabilitative identity, e.g., Kelly experiencing a "strong emotional and professional pull towards that, given that's our heritage and that's where we've come from; sport is embedded in our culture and our ethos." However, it was different for others, like Jessica, labouring to justify its use in settings, where other clinical priorities held sway.

All my participants were surrounded by influences that deeply impacted how they made sense of their professional identity and professional self and as they interpreted and subsequently re-interpreted, they arrived at a kind of resolution. Participants generally referred to this process as clinical reasoning based upon experience, which enabled a clear understanding of their rehabilitative identity when using sport/PA. For Paul, his experience, clinical reasoning and compartmentalising located his professional self and confirmed that goals could be achieved in diverse ways, including through sport/PA.

> we can sometimes get in our physiotherapy box in a bad way, but its ok to think there can be multiple ways to achieve our physiotherapy goals. We are secure because we know what we want to achieve as physiotherapists. I have no conflict at all because I compartmentalise it [Paul].

Across my sample, the differing discourses experienced were constructing professional identities which cohered with Hammond's findings (2013, p. i, 2016) that physiotherapy was an occupation socially constructed on an ongoing basis to accommodate society's expectations of healthcare, neo-liberal agendas and post modernism. Thus, physiotherapists must inevitably embrace the idea of continually updating their role, 'location' and identity versus the traditional notion of professional identity as a fixed asset acquired by novices on qualification. This conflicted with participant experiences of professional role and identity grounded within scopes of practice conceived as fixed territories, with talk of "lines" which located them and prevented accidental crossings. This is challenging because in actuality professional

knowledges may be unstable and professional identity alongside scopes of practice, constantly evolve in response to the evidence base, changing healthcare environment and needs/expectations of YPwD and their families. Amelia's difficulties arose because of previous personal sports participation and knowledge of sports technique which meant "where I draw the line is tricky," this was unavoidable since practice epistemology and professional identity is inevitably shaped by past personal experiences outside of physiotherapy. Hammond (2015; 2016) identified similar findings where "stories revealed that some participants had more than one job or had had more than one career and brought these identities to their physiotherapy professional identity" (Hammond et al., 2016, p. 75).

Boundaries marked professional territory and knowing your own individual scope of physiotherapy practice enabled secure rehabilitative identity for several of my participants. Personal 'knowing' was also necessarily informed by knowing the scopes of other fitness professionals (sports coaches, PTs, PE teachers) they interacted with. Although PA can be 'contested ground,' (CSP, 2024) and observed within Noyes et al., (2017) which assumed the exclusion of physiotherapists from the area of exercise, my participants did not regard exercise as an area beyond scope and were using sport/PA in diverse ways within their interventions. In fact, many felt a unique suitability to promote PA based upon their knowledges and relational factors, as noted by Wright et al. (2019).

My participants' understanding of their professional knowledge base was the second key area they linked to their rehabilitative identity and this also included understanding the professional knowledge base of sport/PA professionals they interacted with. Perceptions that professional knowledges differed between PE teachers in special and mainstream schools, were based on their appreciation of how to differentiate the PE curriculum for children with disabilities and recognition of how physiotherapy could support this. The existence of a profession-specific knowledge base is one characteristic supporting the trait theory of professions (Thistlethwaite & McKimm, 2016). MacDonald (1995, p. 1) described such professional knowledge as "advanced or complex or esoteric or arcane" which captures its specialist nature and accessibility only to the initiated; and it is through evidencing traits such as professional knowledge that professions such as

physiotherapy are able to justify their exercise of power in society (Sedgley, 2013, p. 4). It is important to note that trait theory is just one way in which professions are defined and other more contemporary theoretical frameworks exist which consider professions' function in society, their origins, the power they exercise or in terms of gender discourses they may reinforce (Nancarrow & Borthwick, 2021).

My participants experienced secure rehabilitative identity through their professional knowledge base and selectively referred to knowledges of body structure and function informing their rehabilitative identity when using sport/PA. This epistemology indicated a retreat from ICF domains of activity and participation, since privileging body structure and function coheres with the philosophical roots of physiotherapy in Cartesian mind-body dualism and the idea of 'body-as-machine' described by Nicholls (2018) and Nicholls and Gibson (2010). Nicholls and Gibson (2010) had argued that the physiotherapy profession needs to move beyond solely biomechanical views of the body to accommodate a holistic view which embraces diverse phenomenological perspectives of health and illness. Therefore, they presented a case for the adoption of a three-dimensional, embodied view of health and illness which still retains the objective reality of the health condition but also includes an appreciation of how people experience it and how surrounding social structures mediate their experiences of that health condition. It could be argued that these three dimensions directly correspond to ICF's domains (health condition, body structure and function, personal and environmental factors) and therefore a holistic model was already shaping the rehabilitative identity of several participants who privileged it. However, in 2010, Nicholls and Gibson had critiqued ICF as an under-theorised and 'thin'.

Elsewhere several participants shared additional knowledges which drew upon holistic and evolving approaches that contributed to their secure rehabilitative identity when using sport/PA. For physiotherapists working with YPwD, this crystallises in principles underpinning 'F-Words' model and movement (Rosenbaum & Gorter, 2012; CanChild, 2022), where practitioners are encouraged to think beyond 'fixing' impairment and embrace a wider conception of what health and wellbeing looks like for YPwD and how sport/PA slotted into this. Similarly, Gibson et al., (2009) had earlier re-imagined paediatric rehabilitation of chronic and complex conditions as

multi-faceted comprising approaches additional to the traditional treatment ideas of repair and remediate (fix) and whose essential significance lay more in its ability to enable occupation, enhance quality of life and decrease activity limitations. Gibson et al. (2009) recognised that such rehabilitation approaches assumed corresponding values and assumptions within the rehabilitator identity, either implicitly or explicitly. Embracing this wider conceptual identity necessarily involved several participants, like Ivy and Ella, to ponder the bigger question of what physiotherapy is for anyway? and reframe goals towards achieving autonomous physical participation for YPwD rather than "stronger quadriceps." Similarly, Sarah felt her rehabilitative identity meant viewing life in its "broadest sense" and how sport/PA was part of that for some YPwD. Nicholls and Gibson's (2010) alternative embodied view of chronic illness and endorsement of physiotherapists' unique position meant it ought to be easier to justify these 'wider conceptions' for physiotherapists working with YPwD, as it emphasises the value of all movement irrespective of quality and prompts them as specialists in movement, to remove all constraints not just those associated with body structure and function, but this was not always the case for several participants.

> Physiotherapists should be the principal advocates for an embodied science of movement that draws on a diverse set of theoretical approaches, and we are perfectly placed to take advantage of people's growing need for more person and community-centred approaches to rehabilitation. (Nicholls & Gibson, 2010, p. 504).

Participants who had additional roles as sport coaches and officials drew upon wider theoretical approaches and professional knowledges when using sport/PA within their practice and talked of 'wearing a physio hat' or 'putting their physio head on' in different settings and this represented a dual identity. The metaphorical changing of headgear seemed to symbolise a complete exchange of professional knowledges but in reality, some participants accepted this was impossible…their resolution was to wear two hats or a dual hat or alternatively keep their 'physio head' on, even in non-clinical settings ("I'm just not officially being a physio" - Ella). Although Hammond (2015; 2016) had found his participants brought identities from previous jobs and careers to create their current physiotherapy professional identity, the implications of previous knowledges were not explored. In my study it was sometimes problematic to understand how different professional knowledges could co-exist in one person and be selectively applied accordingly in time and place; it

may be because my participants were experienced physiotherapists and their accounts evidenced sophisticated resolutions to such epistemic challenges. The dilemma of my participants' co-existing, conflicting professional knowledges was particularly exemplified in how the quality versus function conundrum sometimes challenged them when using sport/PA. This issue of 'fix versus function' is perpetually debated, often as a binary (Gibson et al., 2009; Rosenbaum & Gorter, 2012), e.g., is it more important that YPwD can participate in sport/PA (a top-down, functional approach privileging participation) or is the quality of motor skills shown during sport/PA participation more important? (a bottom-up impairment-based approach privileging body structure and 'quality' function - Law and Darrah, 2014). However, Ruby recognised the difficulty and futility of adopting exclusivist positions in complex practice and how her flexibility was context dependent, e.g., in clinic or during frame running sessions beyond clinic.

However, participants were unambivalent about how their exclusive and in-depth knowledge of the YPwD and family situation contributed to their rehabilitative identity. The unique, clinical, professional knowledge of each child's body structure and function was their vital contribution when liaising with fitness professionals who had the expertise around sport-specific techniques and is widely evidenced in research focussed on PA participation by YPwD (Bjorbækmo et al., 2017; Wright et al., 2019). Harry and Amelia had experienced it as symbiotic knowledge sharing as "the two will feed into each other because perhaps the swimming will help with the flexor tightness because of the way they're kicking in the water" and was simultaneously aware of not straying into the coach's knowledge base, to ensure it remained a complimentary process. Such teaching partnerships were both observed and expected in Norway by Ullenhag et al. (2024) where fitness professionals were described as sports pedagogues.

In conclusion, rehabilitative identity for paediatric physiotherapists working with YPwD was a multi-factorial phenomenon; and when deploying sport/PA, wider rehabilitative identities beyond that of 'fixer' came into clearer focus, that were focussed more on enabling functions associated with occupation, quality of life and activity; these are supported in both theoretical and primary research.

5.6 Group Experiential Theme six: Embodiment of models

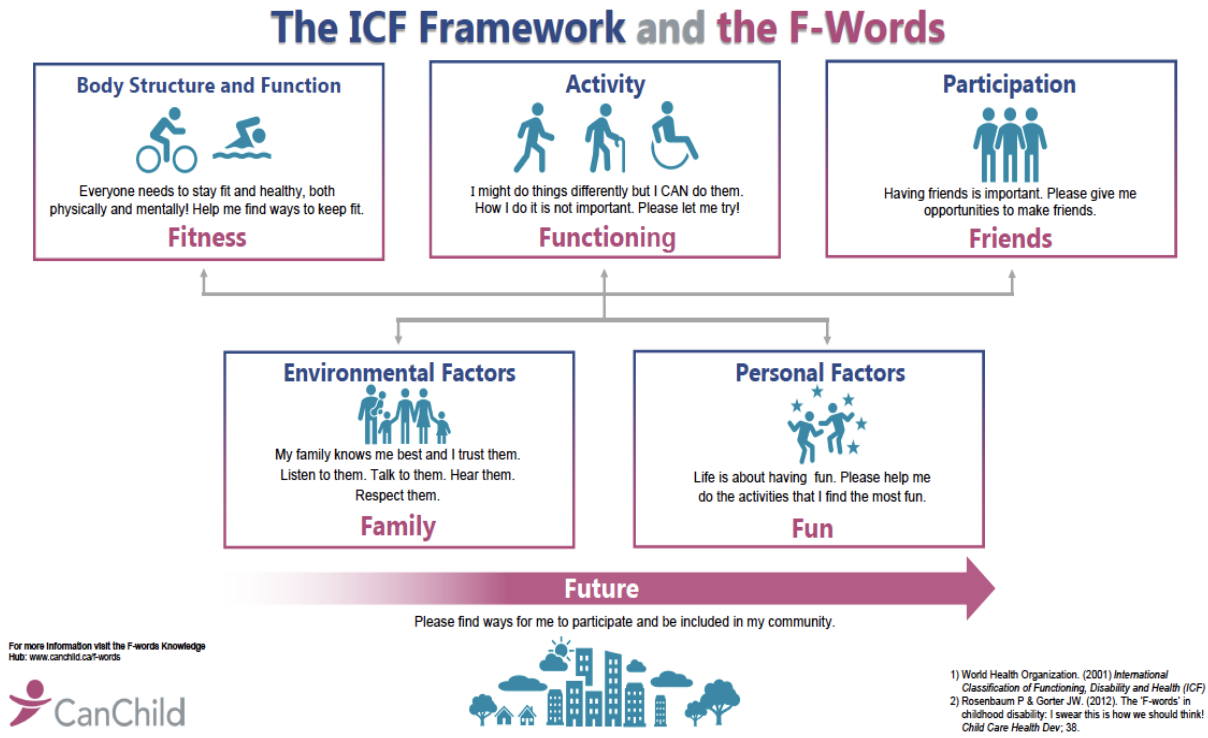
Embodiment is defined as giving tangible form to a non-physical idea (Oxford Dictionaries, n.d); in my study I explored how paediatric physiotherapist's unconscious and conscious embodiment of ICF and 'F-Words' were shaping the way they made sense of 'sport as a therapy choice'. These models hold high significance for paediatric physiotherapists working with YPwD, because they value physical, social, environmental and personal factors equally and explicate how they interact to globally represent each individual's disability.

Six of my participants, including Amelia, privileged the 'person-environment' approaches to function contained within these models when combining YPwD as 'person' with participatory sport/PA as an 'environment'. Thus, through using ICF to understand the complex ways each YPwD experienced sport/PA, ICF made sense and demonstrated face validity. Carlin et al. (2024, p. 2) similarly recognised how ICF supported granular understanding of individuals through "recognition of the complexity and heterogeneity of the disability experience in its relationship with community sport" This is also reflected within Bickenbach (2008) who regarded ICF as an embodied conceptual model of human functioning and disability, where disability was not the static bodily state but experienced as the outcome of highly complex, changing interrelations between an individual's health condition, personal and environmental factors…"this interactive, person-environment approach to functioning and disability avoids the misrepresentations of disability found in both the biomedical approach and the social model of disability" (Bickenbach, 2008, p. 108). 'F-Words' (Cross et al., 2022; Soper et al., 2020) similarly espouses biopsychosocial principles and interconnectedness of concepts (Figure 13) but re-mapped in age-appropriate language to address what matters to children and their capability as children with a disability, hence, a strengths-based approach. Embodiment of models varied from the unconscious (Kelly and Harry) to the highly conscious, exemplified by Amelia, who felt ICF contained all the 'things' that were really important to her and played a foundational role in her practice. Amelia's journey with the model and her current use of the terms "beliefs" and "ethos" indicated her epistemological relationship had evolved from an initial encounter with the theoretical model and forced mental assent into a conscious but also intuitive practice knowledge. This is

akin to the journey of the ‘F-Words’ model into practice, a process of knowledge translation (Soper et al., 2021) that could take in excess of a decade.

Figure 13

The ‘ICF’ framework and F-Words



Note. Combined ICF and F-Words. From “Knowledge translation strategies to support service providers’ implementation of the F-words in Childhood Disability” by A.K. Soper, A. Cross, & J.W Gorter. 2021. *Disability and Rehabilitation, 43*(22), p. 3169 (https://doi.org/10.1080/09638288.2020.1729873). Copyright 2021 by Taylor and Francis.

Although, it was clear to see how my participants’ sense-making about sport/PA had theoretically aligned with all the ‘F-Words’ principles and values (Rosenbaum & Gorter, 2012), body structure and function and fitness domains were privileged, with fun recognised as an obvious, obligatory component within paediatrics. Additionally, specific alignments were observable within other domains. Activity was represented by those who valued and promoted sport/PA as movement, even when that movement looked different. Participation was represented by those striving to locate sport/PA within local non-clinical settings. The future was represented by those who

sought to embed PA behaviours within childhood, in order to assist the creation of healthy lives as adults. Family was represented by those who found the model helped build relationships with families when explaining sport/PA's utility to address physiotherapy goals in more inclusive ways as 'activity' and 'participation.' Finally, Paul's understanding of physiotherapy as physical literacy to enable function and participation in meaningful sport/PA outside of therapy, aligned with the idea that 'F-Words' categories are interrelated. Thus, Paul experienced a logical flow from fitness to function and friends, but interestingly Rosenbaum and Gorter (2012) actually envisaged F-Words 'flipping' biomedical thinking by promoting a 'backwards' flow where self-identified meaningful participation positively impacted on scope and intensity of activity, which in turn could potentially lead to some changes in body structure and function.

The implications for practice for those participants who consciously embodied models within their use of sport/PA, sat principally in two areas.

i) legitimising a global approach and justifying time spent using sport/PA to address activity and participation domains, as well as those of body structure, function and fitness.
ii) enhancing relationships with YPwD and families through being able to educate and explain about unrealistic expectations of physiotherapy and then jointly set realistic but meaningful rehabilitative goals using sport/PA.

These findings largely cohered with the qualitative content analysis of citations found by Soper et al. (2019, 2020) who identified the currency of 'F-Words' to act not only as a conceptual framework and practical rehabilitative guide but also in effecting attitudinal shifts towards childhood disability and legitimising holistic approaches. Of specific significance to my study was Soper et al.'s (2019) findings that 'F-Words' associates PA and rehabilitation within fitness that is functionally age-appropriate and supported shifting away from notions of 'fixing' and "normality". Similarly, for several of my participants, ICF and 'F-Words' legitimised new ways of thinking about YPwDs bodies when engaged in sport/PA, in preference to normalisation narratives and 'fixing the unfixable'; highlighted by Rosenbaum and Novak-Pavlik (2021) as a potential 'tyranny', created when professionals and parents promote 'normal function' for children with impairments.

> The idea of ‘normal’ is, in our opinion, at best naïve and at worst confining and frankly silly. ‘Normal’ is based on ‘typical’ patterns of child development — when (milestones) and how (the ‘usual’ ways) children develop. This idea builds on the notion of ‘average’ times when things happen (for example, milestones) but fails completely to recognize the wide variation around these averages and hence creates worries when things are ‘outside the norm’ (Rosenbaum & Novak-Pavlik, 2021, p. 214).

The ’pure enjoyment’ described by Ruby during frame running meant accepting motor movement that looked ‘different’ but this conflicts with physiotherapy’s historical philosophical underpinnings where patients’ bodies represent broken machines in need of fixing (Nicholls and Gibson, 2010; Nicholls, 2018) and physiotherapist’s role to continually identify and rectify deviance from “normal” structure and function when assessing, treating and managing patients. These understandings and assumptions underpin the biomedical model of care which privileges ‘normal’ quality of movement over movement as a functional act; and self-evidently, qualitative motor differences are most explicitly observed during any kind of sport or PA. The general limitations of the biomedical model when body status is the sole focus and consequential negative effects on both patients and physiotherapists’ practice has already been discussed (Nicholls & Gibson, 2010). Furthermore, the biomedical model sometimes acted problematically as a referent, as recalled by Amelia and Ivy in ‘difficult conversations’ with families of YPwD, who had unrealistic expectations of what physiotherapy can achieve physiologically, e.g., that ‘cure’ will come through increasing the intensity or frequency of physiotherapy input. Rosenbaum and Novak-Pavlic (2021) therefore prompted physiotherapists to relinquish familiar ideas based on deficit models, in favour of a positive focus on what YPwD can do.

> Can service providers become comfortable to move beyond our classical biomedical thinking toward a holistic, strength-based approach that might require letting go of older ideas in favour of new ones? (Rosenbaum and Novak-Pavlic, 2021, p. 217).

In this respect, some of my participants found themselves in a bind, balancing the idea of encouraging YPwD to participate in sport/PA to achieve physiological ‘fixes,’ whilst simultaneously resolving differential knowledges arising from progressive models alongside experiential practice epistemologies and patient preferences.

Perhaps Soper et al. (2019) indicates how ‘F-Words’ might balance these competing phenomena, as they re-stated the wishes of its creators (Rosenbaum and Gorter, 2012) that the model would be incorporated into clinicians’ work to support both a holistic approach to services (Soper et al., 2019) and impact interventions. Furthermore, Lauruschkus et al. (2015); Majnemer et al. (2008); Pickering et al. (2012, 2015); Shikako-Thomas (2013) identified that ‘F-Words’ is specifically associated with both PA and rehabilitation through its legitimisation of non-clinical concepts, such as fun, highlighted as a key strategy to promote engagement in rehabilitation, as it was by my participants. However, Pickering (2018) did note that aspects of ‘F-Words’ were underutilised by professionals when motivating and encouraging children to participate in PA.

A deeper exploration of the epistemologies in play for my participants when using models would appear to pivot upon their understandings of physiotherapy’s philosophical foundations as a profession and which underpin its evidence and knowledge base. However, talk concerning physiotherapy’s philosophical foundations was covert, as in Ivy’s ‘heaps of data’, and required interpretation to reveal. An obvious initial point of reference is physiotherapy’s professional body (CSP) since it acts as both guardian and gatekeeper in this respect and emphasises the profession’s key knowledge characteristics alongside consistent privileging of scientific evidence as the foundation of practice. The CSP (2010) necessarily and feasibly espouses an inclusive perspective combining a “science-based profession committed to extending, applying, evaluating and reviewing the evidence that underpins and informs its practice and delivery with clinical judgement and informed interpretation is at its core”, with ‘whole person’ approaches to health and wellbeing based on patients’ general lifestyles (CSP 2018d).

However, previous literature recognised physiotherapy’s greater emphasis on scientific knowledge and the positivist philosophical underpinnings in research based on systematic sensory observation and experiment (quantitative approaches) to create theory or universal laws to be applied deductively in practice (Wikström Grotell & Eriksson, 2012). These continue to be observed, as Nicholls et al. (2016, p. 166) noted “physiotherapy remains closely anchored to the powerful discourse of positivism that is the hallmark of biomedicine”. This is problematic for Nicholls (2018)

and Nicholls et al. (2016) who note that positivism may cause individual physiotherapists to accommodate 'certain dogmas' that conflict with their everyday clinical practice and interactions with patients. Two relevant examples have been discussed, namely the biomedical paradigm of the 'body-as-machine,' where bodies participating in sport/PA are considered in terms of structure and function, observed by Kelly as "[sport/PA is] part and parcel of how we suss our kids out"; and the associated normalisation agenda with its mission to define and 'fix' dysfunction in YPwD, captured in Jack's comment "we absolutely pull them to pieces"; these narratives therefore define the rehabilitative space for the paediatric physiotherapist to occupy. Most recently, positivist underpinnings have been increasingly questioned, with metanarratives displaced by multiple ways of knowing and being which align with postmodern perspectives. These are more suited to 21st century expectations of society (Nicholls, 2012; 2018) and challenge the idea of absolute truths and instead posit knowledge as "unstable, historically and socially contextual" (Nicholls, 2012, p. 3). Notwithstanding, within physiotherapy, Nicholls (2018) identified both lack of engagement with philosophies of practice in healthcare and lack of awareness of the cultural, economic, political and social discourses which impact practice and the changing contemporary healthcare economy. Certainly, my participants showed more awareness of the immediate impact of relevant discourses when using sport/PA, than the discourses themselves, e.g., individual responsibilisation for health was experienced as self-management and rationalisation of long-term rehabilitation to address the increasing chronicity and complexity of childhood disability was experienced as inadequately resourced services. In this way although Nicholl's gaze is directed towards the bigger question of physiotherapy's fundamental purpose, its future and explaining why it lacks a critical perspective upon itself, it still had relevance to my study.

Beenen et al. (2018); and Bientzle et al. (2014, p. 2) conceived of physiotherapy knowledge as a "continuum" ranging from the static, certain and objective (simple and naïve epistemic beliefs) to the variable, socially constructed and tentative (sophisticated epistemic beliefs). Interpretation revealed how the epistemic beliefs of several of my participants increased in sophistication with experience over time ('locating identity' theme) and were associated with an enhanced ability to deal with

the complexities of modern healthcare. Beenen et al. (2018); and Bientzle et al. (2014, 2018) also highlighted how epistemic sophistication supported evaluation, processing and integration of varying sources of knowledge arising from research, practice, the environmental context and patients' individual and increasingly complex characteristics. Such context-dependent epistemologies were particularly observed when analysing the 'shaped by context' theme of my study and within the context of paediatric physiotherapy for long term conditions, Bjorbækmo et al., (2017, p. 36, 2018) styled handling of these varying evidence sources as balancing clinical knowledge of the health condition with knowledge about living with the condition, which re-emphasised broader underlying ideas of children's optimal sport/PA participation being functional as well as remedial.

Although personal epistemologies were not openly specified within participants' transcripts, interpretative analysis of their accounts revealed several were employing multiple ways of knowing and being in how they operationalised sport/PA in their physiotherapy practice, as a way of dealing with the complexities of practice. Pluralism in practice was also reflected in participants patient narratives that demonstrated multiple realities in the way sport/PA was used within the frameworks of theoretical models such as ICF and F-Words, with no single objective 'truth' about how to deploy 'sport as a therapy choice.' This could be attributed to two reasons; firstly, the models themselves are subject to periodic re-interpretations which are related to paradigm shifts in thinking about paediatric rehabilitation and an "increasing explicit acknowledgement of the dominant culture of healthcare systems and providers" creating power differentials, as discussed by King et al., (2018, p. 1830). Secondly, pluralism in practice may be occurring because the meanings ascribed to sport/PA by YPwD and their families were individually constructed based on their specific contexts and evolve with time and place. This same pluralism in practice extended to whether models such as ICF and 'F-Words' were consciously or unconsciously embodied when used in relation to sport/PA. Whatever the reasons for pluralism in practice, the implications for practice were summed up by Nicholls (2018, p. 263) who conceived such pluralism as necessary and inevitable, eschewing single definitions and hoping for a thousand physiotherapies.

5.7 Strengths and limitations

Both the strengths and limitations of my study are related to the use of qualitative methodologies in general and IPA in particular.

Regarding data analysis, in line with IPA's principles, the researcher co-produces with participants and is the key data analysis instrument (Creswell, 2023). Although I made a conscious attempt to eliminate my fore-structured knowledge (Smith et al., 2022) concerning successful experiences of sport/PA in paediatric practice, it should therefore be acknowledged that researcher bias can never be fully excluded from qualitative research (Eatough and Smith, 2017). Consequently, findings should be regarded as a credible analysis not the only credible analysis.

Furthermore, capturing data through interviews without also including direct participant observation depends on reliable self-report devoid of recall bias. All analyses and conclusions are therefore cautious, tentative, indicative and caveated around the data collection instrument, sample characteristics and sample size. As IPA is designed to provide rich, idiographic accounts and necessarily uses small, purposive and homogenous samples, the most immediate relevance will be to that same demographic of paediatric physiotherapists working with YPwD. Furthermore, although my sample was towards the higher end of typical IPA sizes, it was not completely homogenous and not representative of all paediatric physiotherapists working with YPwD, since participants were recruited through the APCP membership. In addition, it is noted one participant was an experienced physiotherapy assistant with a gym instructor qualification, studying at degree level and working at a high level, albeit in a non-qualified role and represented a reliable informant only from that perspective. It is also acknowledged that participants were a self-selecting sample using sport/PA within their practice and highly invested in the approach, therefore they represented perspectives (on the topic area) rather than representing a population (Smith et al. 2022). The fundamental value of sport/PA both professionally, and sometimes personally, created unspoken assumptions; therefore, the potential for reporting bias must be recognised in terms of over-representing positive aspects of using sport/PA within practice or remembering past events in a certain way that built a practice epistemology; however, this possibility was acknowledged in the data analysis. It is likely that the perspectives of those not

using sport/PA in their practice were not captured because they did not come forward and hence that gap in knowledge remains; this reflects the voluntary nature of research participation.

Diverse contextual experiences gave a wide range of perspectives on ‘sport as a therapy choice’ and arose from the heterogeneity of participants diverse workplace settings and organisational cultures, e.g., NHS and non-NHS, urban and rural, tertiary specialist centres, acute and community. However, paediatric experience of between five to thirty years represented reasonable homogeneity, as no neophyte practitioners were involved. Furthermore, a gender imbalance (three males and thirteen female participants) is noted which meant gender specific perspectives were not equally captured, although it did reflect the existing gender balance within the paediatric physiotherapy workforce. Lastly, the study was UK-based but there was no representation from Northern Ireland or Scotland. All of these factors represented possible variables and influences on participant responses which mean that general claims are bounded by the characteristics of the sample studied and it is preferable to talk of theoretical transferability to paediatric physiotherapists working with YPwD in similar settings and make suggestions rather than general claims and binding recommendations.

Strengths, methodological reflections and ideas for improvement

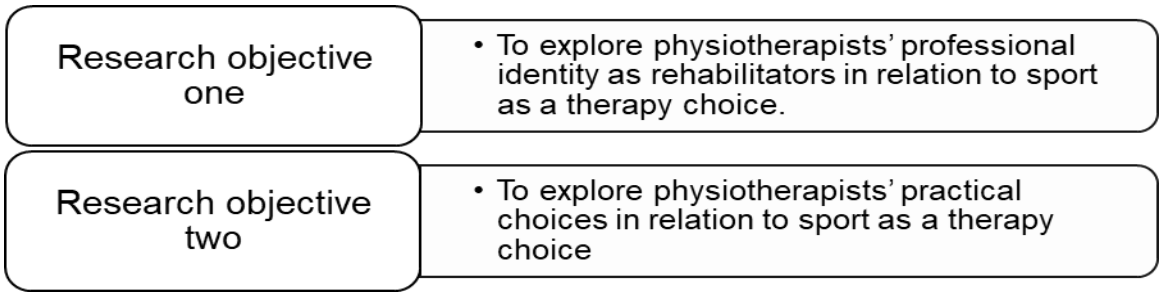
All types of qualitative interviews are a form of self-report and arguably may constitute a limitation since participants may not accurately report experiences due to recall, reporting and correspondent bias. However, I would argue that a strength of my study, was the degree of authenticity and credibility demonstrated in the numerous patient narratives shared by participants experienced in working with YPwD, likewise in how they shared beliefs and made thoughtful and reflective sense of their feelings about sport/PA in practice. In this sense, participants constituted reliable informants able to share rich experiences of ‘sport as a therapy choice’. Triangulation, through ethnographic approaches with formal observation of individual participants over an extended period would have helped to verify their self-report, inform the analysis and subsequently support the conclusions; however, my data collection took place at a time when the Covid-19 pandemic was restricting in-person data collection.

A further strength was the sharing of an initial analysis with participants after interview to check for accuracy of findings. Creswell (2023, p. 213) described this sharing of parts, other than the full transcript, as member checking and one validity strategy within a “multiple approach”. Other validity strategies advanced by Creswell (2023) were also deployed, such as presenting divergent perspectives, e.g., Emma’s valid reservations about using sport/PA in physiotherapy practice. When divergent perspectives were expressed by singletons it also cohered with IPA’s idiographic sensibilities (Smith et al., 2022; Smith & Nizza, 2022). Similarly, the use of rich descriptions to convey findings by presenting many perspectives within a single theme, was shown in the ‘shaped by context’ theme. However, other validity strategies, such as observation, were impossible due to Covid-19 restrictions. Similarly, a second interview would have been more rigorous way to check analytical authenticity; however, I was conscious of temporal constraints created by participants’ busy personal and professional lives. The addition of data from an online focus group may have enabled some triangulation of data through an additional data collection method, as well as facilitating co-construction of participant perspectives; however, the potential threat of social desirability bias, also temporal constraints and additionally the use of a focus group may have inhibited recruitment, as it would have necessarily meant a loss of anonymity for participants.

5.8 Summary

This chapter has located the six GETs within the wider context of extant research literature, albeit no research qualitatively explores the lived experiences of paediatric physiotherapists in relation to ‘sport as a therapy choice’. Contextualising highlighted the originality of findings in demonstrating how sport/PA created a rehabilitative place and space for paediatric physiotherapists. This chapter also considered thematic significance and finally framed the discussion through the lens of the original research aim and objectives. The research aim was to explore paediatric physiotherapists’ beliefs and lived experiences concerning ‘sport as a therapy choice’ in their practice with YPwD and explore how they made sense of it and was achieved through four research objectives. All objectives were explored through analysis of participants’ values and knowledge types concerning ‘sport as a therapy

choice' which emerged through use of research knowledge, practice epistemologies derived from experiential knowledge of paediatrics, clinical expertise as experienced practitioners and narratives based on experiences with YPwD and their families.



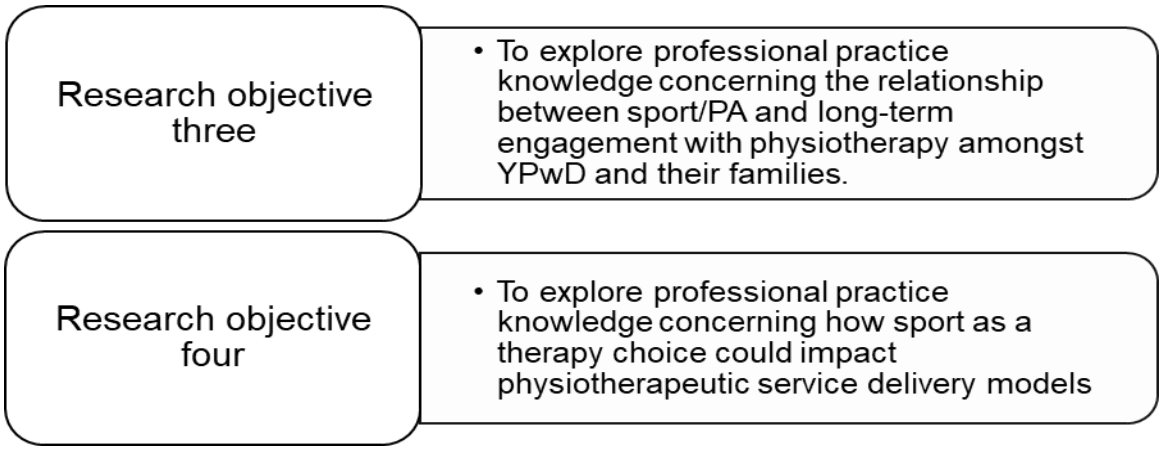
The rehabilitative identity in relation to 'sport as a therapy choice' meant first and foremost a retained identity as a physiotherapist; and adopting coach-like characteristics whilst deploying sport/PA did not challenge that. Rehabilitative identity accommodated wider conception of roles additional to remediation and was also grounded in largely positive beliefs about the participatory value of sport/PA, advocating equal access to sport/PA and how it could support relational work with certain YPwD and their families. This was experienced as creating rehabilitative space and place. Furthermore, meeting YPwD's needs within the context of changing professional and disability discourses favoured strengths-based approaches and in-context sport/PA experiences (Bonney & Smits-Engelsman, 2019; Imms et al., 2008; Imms & Green, 2020; King, 2018; Law & Darrah, 2014; Nicholls, 2010, 2012, 2016, 2018; Ullenhag et al., 2024).

Diverse personal experiences and contexts acted to create and sustain multi-dimensional rehabilitative identities as well as influencing practical choices in relation to sport/PA and was strongly observed within influencing organisational cultures and targets, professional perspectives and healthcare policies, personal positive experiences of sport/PA, environmental factors, societal discourses and familial culture. Epistemologies related to rehabilitative identity when using sport/PA echoed Hammond et al.'s (2016) comments about the nature and social construction of professional identity; alongside research fore-fronting biomedical and more inclusive models which consequently meant 'function' co-existed with 'fixing,' in relation to sport/PA and was selectively deployed according to individual circumstances. This

phenomenon highlighted the context-dependent nature of practice epistemology (Beenen et al., 2018; Bientzle et al., 2014, 2018).

Patient narratives functioned as an especially powerful resource of knowledge reinforcing practical choices in relation to sport/PA and this reflects extant research which notes the preference for experiential versus research knowledge in practice, e.g., participants' readily recalled accounts of success when sport/PA had made a difference in practice. Contexts also influenced practical choices in relation to sport/PA and were observed within resource allocation, location, built environments, organisational, familial and social cultures; all or any of these could act to create permissible or adverse conditions and therefore shape deployment of sport/PA as one tool in the toolbox.

The third and fourth objectives were more transparently located in participants' experiences of how and where they were using sport/PA with YPwD and how it sometimes supported the desired long-term engagement with physiotherapy. However, participants also recognised that sport/PA sometimes lacked the efficacy to realise this engagement for every YPwD because of the diverse participatory barriers revealed in shared narratives, e.g., some YPwD and their families lacked finance, transport, time or an interest in sport/PA. Participants therefore emphasised the need to place YPwD and their families at the centre when using sport/PA and



intuitively recognised theoretical principles associated with individualisation and family-centred care (Ullenhag et al., 2024) as well as relational aspects of the paediatric therapeutic alliance (Crom et al., 2020; Phoenix et al., 2020; Redmond & Parrish, 2008) without specifically referring to theoretical models. However, ICF and

‘F-words’ performed this function when play and fun was being associated with sport/PA.

Pluralism in practice and service delivery mirrored participants’ diverse ideas about the relationship of sport/PA to physiotherapy and the idea of sport/PA as one utilitarian tool alongside other tools, which reflected their multiple practice epistemologies. This was also a function of participants’ varying contexts, healthcare discourses and organisational cultures which created service environments where sport/PA had no recognised place in physiotherapy intervention and work that was more recognisably ‘clinical’ was privileged, and this alongside finance, facilities and geography could all act as barriers; elsewhere sport/PA was legitimised, positively embedded and valued as a platform for ‘in-context’ movement experiences, both now and in the future as adults with a disability. Such increasing awarenesses of the value and need to offer physiotherapy ‘ecologically’ and privilege function for YPwD is reflected within contemporary research (Bonney & Smits-Engelsman, 2019; Law & Darrah, 2014; Ullenhag et al., 2024). Participants’ ideas of sport/PA’s utility as a rehabilitative tool included comment about positive effects on discharge planning strategies and facilitating greater self-management, but not all recognised the multi-dimensional nature and wide-ranging psychological benefits noted in more contemporary research ideas characterising sport as an ‘assemblage’ associated with preferences, desires and pleasure and shaped by social, affective and material forces, rather than simply a vehicle to rehabilitate and normalise bodies (Carroll et al., 2021).

Overall, discussion of the wide-ranging GETs in relation to the extant literature provided a qualitative insight into the life worlds of paediatric physiotherapists using ‘sport as a therapy choice’ within their practice; and through analysis of their rich data, it was possible to see how they made sense of it from several perspectives. In so doing it was possible to see what mattered to them in the process, as they and their services emerge from the disruptions caused by Covid-19, whilst dealing with the complexities arising from medical advances in the field of childhood disability and societal expectations of healthcare. My study enabled the previously unheard voices of paediatric physiotherapists and one assistant to be heard in an under-researched area.

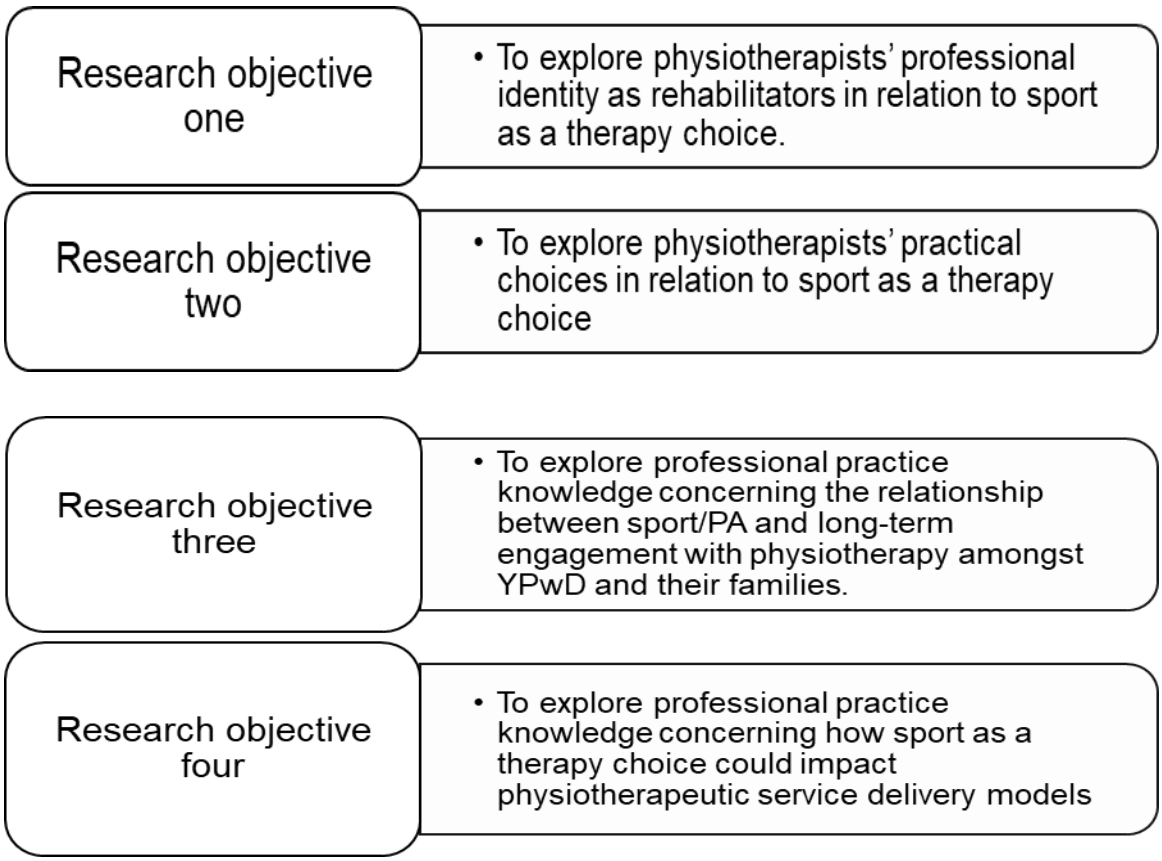
CHAPTER 6 - CONCLUSIONS

6.1 Introduction

This chapter presents a critical review of the study comprising a summary of findings and conclusions concerning possible implications for practice and pre-registration physiotherapy education. It additionally considers the originality of the research and includes critical reflection of my research journey, the research process, alongside suggestions for future research and a dissemination plan.

My study sought to explore the lived experiences of physiotherapists utilising sport/PA within their practice with YPwD and thus constituted an exploration of health-professional's psychology. Although Smith et al. (2022) identified IPA's initial focus on exploring the psychology of health and illness, it is now being used to examine the perspectives of those delivering health care. Hence it was valuable to explore for the first time how paediatric physiotherapists engaged individually and collectively with the experience of 'sport as a therapy choice' and uncover the significance it held for them both personally and professionally. Beyond the immediate idiographic and collective claims bounded by the group studied (Smith et al., 2022, p. 3) understandings may resonate further and positively inform the practice of other paediatric physiotherapists using 'sport as a therapy choice' with YPwD or considering doing so; and ultimately may improve experiences of physiotherapy for YPwD and their families, through a process of theoretical transferability.

Participants shared their accounts within single semi-structured remote video interviews supported by suitable probes and prompts to elicit sense-making concerning the phenomenon of 'sport as a therapy choice' (first order sense-making). Subsequently, through interpretative analysis I made sense of their sense-making (second order sense-making), a process likened to 'detective work' by Smith et al., (2022, p. 28). The 'double hermeneutic' is IPA's unique methodological hallmark and was crucial to uncover both covert philosophical and epistemological perspectives within the transcripts; and address the four research objectives.



The following six GETs and several PETs emerged from the IPA analysis (Tables 2b, 2c). The varied experiences of 'sport as therapy choice' represented were mediated cognitively, affectively and through professional behaviours and practices.

- Shaped by contexts – how diverse contexts deeply shaped participants' experiences of sport/PA.
- It's all about the kids – where the primary lens in experiences of sport/PA was YPwD and their needs.
- Conceiving and experiencing the relationship of physiotherapy and sport/PA – exploring the nature and purpose of physiotherapy and of sport/PA and how they experientially relate to each other.
- Sport/PA – a tool in the toolbox – experiencing the utility of sport/PA and its impact on paediatric physiotherapy service delivery alongside YPwD engagement.

- Locating identity – how experiences of sport/PA were creating a multi-dimensional rehabilitative identity.
- Embodiment of models – the wide-ranging roles played by models (ICF and 'F-Words') in experiences of sport/PA.

6.2 Summary of main findings

The research aim was to explore paediatric physiotherapists' beliefs and lived experiences concerning 'sport as a therapy choice' in their practice with the specific population of YPwD and how they made sense of it and was achieved through four research objectives. Objectives were explored through analysis of participants' values and knowledge types concerning 'sport as a therapy choice' which emerged through their limited reference to research knowledge, predominantly practice epistemologies derived from experiential knowledge of paediatrics, clinical expertise as experienced practitioners and narratives based on experiences with YPwD and their families.

The rehabilitative identity in relation to 'sport as a therapy choice' meant first and foremost a retained identity as a physiotherapist; and adopting coach-like characteristics whilst deploying sport/PA did not challenge that. Rehabilitative identity accommodated roles additional to remediation and was grounded in largely positive beliefs about the participatory value of sport/PA, advocating equal access to sport/PA and how it could support relational work with certain YPwD and their families. This was experienced as creating rehabilitative space and place. Furthermore, meeting YPwD's needs within the context of changing professional and disability discourses favoured strengths-based approaches and in-context sport/PA experiences.

Diverse personal experiences and contexts acted to create and sustain multi-dimensional rehabilitative identities as well as practical choices in relation to sport/PA and was strongly observed within influencing organisational cultures and targets, professional perspectives and healthcare policies, personal positive experiences of sport/PA, environmental factors, societal discourses and familial culture. Epistemologies related to rehabilitative identity when using sport/PA

underlined the nature and social construction of professional identity; alongside fore-fronting biomedical and more inclusive models which consequently meant ‘function’ co-existed with ‘fixing,’ in relation to sport/PA and were selectively deployed according to individual circumstances. This demonstrated multiple realities within participants’ use of sport/PA and reflected the context-dependent nature of practice epistemology. Furthermore, sense-making reflected and explored fundamental questions about the participatory purpose of physiotherapy for YPwD.

Patient narratives functioned as an especially powerful resource of knowledge reinforcing practical choices in relation to sport/PA and demonstrated the preference for experiential versus research knowledge in practice. Contexts also influenced practical choices in relation to sport/PA, e.g., resource allocation, location, built environments, organisational, familial and social cultures, all or any of these could act to create permissible or adverse conditions and therefore shape deployment of sport/PA as one tool in the toolbox.

The third and fourth objectives were more transparently located in participants experiences of using sport/PA with YPwD and how it sometimes achieved the desired long-term engagement with physiotherapy. However, participants also recognised that sport/PA sometimes lacked the efficacy to realise this engagement for every YPwD because of the diverse participatory barriers such as finance, transport, time or interest in sport/PA. Therefore, when using sport/PA, participants therefore recognised the importance of individualisation, family-centred care and relational aspects of the paediatric therapeutic alliance. This might be done without specifically referring to theoretical models, although ICF and ‘F-words’ were noted when play and fun was associated with sport/PA.

Pluralism in practice mirrored participants’ diverse ideas about the relationship of sport/PA to physiotherapy and the idea of sport/PA as one utilitarian tool alongside others, which reflected their multiple practice epistemologies. This was also a function of participants’ varying contexts, service delivery models, healthcare discourses and organisational cultures which created service environments where sport/PA had no recognised place in physiotherapy intervention and work that was more recognisably ‘clinical’ was privileged, and this alongside finance, facilities and geography could all act as barriers; elsewhere sport/PA was legitimised and

positively embedded and valued as a platform for ‘in-context’ movement experiences, both now and in the future as adults with a disability. This demonstrated increasing awarenesses of the value and need to offer physiotherapy ‘ecologically’ and privilege function for YPwD. Participants’ ideas of sport/PA’s utility as a rehabilitative tool included comment about positive effects on physiology, discharge planning strategies and facilitating greater self-management, but not all recognised its multi-dimensional nature and the wide-ranging psychological benefits.

Overall, my study provided qualitative insight into previously unseen life worlds of paediatric physiotherapists using ‘sport as a therapy choice’ within their practice; and through analysis it was possible to see how they made sense of it from several perspectives. In so doing it was possible to see what mattered to them in the process, as they respond to medical advances in the field of childhood disability and societal expectations of healthcare. My study enabled the previously unheard voices of paediatric physiotherapists and one assistant to be heard in an under-researched area.

6.3 Originality and contribution to research knowledge

The use of sport/PA within the paediatric physiotherapy ‘offer’ occurs within everyday practice but to date there had been no exploration of how paediatric physiotherapists experience and make sense of the phenomenon. The originality and contribution of my study lay in sharing hitherto unheard experiences of fifteen paediatric physiotherapists along with one assistant, and subsequent interpretations with others treating YPwD. Participants explained their ‘personal why’ concerning ‘sport as a therapy choice’ and through the double hermeneutic and hermeneutic circle, it was possible to explore covert idiographic and collective philosophical and epistemological perspectives. My study therefore differed from extant research literature which focusses on the benefits, associations, barriers and facilitators of sport/PA for YPwD, or experiences of sport/PA from the perspectives of YPwD and their families or how sport/PA should be operationalised for them; instead, my study focussed on how it was experienced by paediatric physiotherapists (Smith et al., 2022).

Although it is important to re-iterate that within IPA's contribution to knowledge, immediate claims are bounded by the group studied, an extension can be considered through theoretical transferability (Smith et al., 2022) according to the professional and experiential knowledge of readers working in similar contexts. Smith et al., (2022, p. 45) described this as a tripartite process where "the reader makes links between the analysis in an IPA study, their own personal and professional experience, and the claims in extant literature". The limited extant literature within the topic area necessarily impacted this tripartite assessment and is regarded as a limitation. However, it reflected the uniqueness of the topic area and the gap in the literature which provided a rationale for study. It also underlines the exploratory nature of the study and the appropriateness of a qualitative methodology.

Therefore, my study's original contribution is summarised as increasing awarenesses for those readers in similar contexts, (noting caveats in section 5.7). Firstly, how use of sport/PA was always context-related and might be context-dependent or context-contingent ranging across the personal, social, empirical and discursive. Context was a directly experienced phenomenon, e.g., personal positive experiences of sport and organisational cultures which privileged or marginalised sport/PA's role in practice, although the underlying discourses were not always recognised by my participants. This meant there were multiple realities concerning how sport/PA was experienced in practice ranging from signposting to more active integration.

Secondly, 'sport as a therapy choice' for YPwD was experienced by practitioners through a relational lens; sport/PA mattered to participants when it mattered to YPwD. Sport/PA and its associated non-clinical venues was shared as creating and maintaining the therapeutic alliance between participants and YPwD and their families in certain circumstances and in so doing it could potentially positively influence engagement with physiotherapy. This reinforced existing research on family-centred and relational approaches associated with conventional paediatric physiotherapy interventions.

Thirdly, ideas about sport/PA as one intervention tool raised awareness of its utility to create a neutral rehabilitative space and place in certain circumstances. This positively influenced practical strategies within mutual goal setting with smaller,

targeted therapeutic programmes, service delivery, discharge planning and liaison with community sports providers.

Fourthly, the study found that using sport/PA and adopting coach-like characteristics within physiotherapy practice did not challenge participants' sense of their own professional identity. This should be caveated by noting there was a minimum of five years' paediatric physiotherapy experience within the sample and that secure professional identities were associated with experience in my sample. The experiences of several participants also raised awareness of how sport/PA could expand professional identity to include roles beyond remediation, e.g. advocacy (Pickering, 2021).

Fifthly, the study raised awareness of how experiences of sport/PA in practice mapped to the values associated with ICF and 'F-Words models and that sport/PA could be a way of de-medicalising interventions and providing in-context movement experiences, especially in non-clinical settings. The models also provided a 'permission' to think less biomedically in relation to sport/PA participation which might be functional rather than 'perfectly' executed or might need equipment, such as running frames to accomplish, and simultaneously extended the concept of what constitutes the body.

Lastly, the study found that participants' meaning-making drew upon multiple epistemologies and philosophies within their experiences of 'sport as a therapy choice.' Collectively, there were multiple ways of knowing with a preference shown for experiential knowledge and patient preferences over the tacit research knowledge contained in biomedical or more progressive paradigms. This enabled "knowing practice" (Kinsella & Whiteford, 2009, p. 256) by physiotherapists who could better individualise care within the complexity of everyday practice (Beenen et al., 2018) and enable the simultaneous exercise of physiotherapy as science, art and craft (Nicholls and Gibson, 2012).

6.4 Implications for practice

Although this was only a singular IPA study using a purposive sample, it did gather professional practice knowledge from experienced participants working with YPwD in

acute (18.75%) and community settings (81.25%) who had experienced ‘sport as a therapy choice’, including where it had improved YPwD’s engagement with physiotherapy. These percentages closely matched those of the original EFDS survey (2014). Participants’ experiences when enacting ‘sport as a therapy choice’ raised awareness of specific phenomena (outlined below) which indicate physiotherapists working with YPwD in similar contexts could consider the selective and diverse use of sport/PA within their interventions, according to individual circumstances; and also prompts suggestions in aspects of physiotherapy education. However, my study design cannot create binding recommendations nor a prescriptive manual for practice.

Firstly, the importance attached by several participants to understanding the particular needs and cultures of YPwD and their families when enacting ‘sport as a therapy choice’; these included familial desires for normalcy and societal acceptance, or when negative or indifferent cultural attitudes to sport/PA created barriers to PLP and potential tensions within therapeutic relationships between clinician, YPwD and families. This raises awarenesses of interpersonal skills and associated relational and psychological perspectives which are summarised within psychologically informed physiotherapy and contextualised, family-centred care for YPwD and their families. It may therefore be useful if discrete perspectives associated with childhood disability as a distinct subset of paediatrics and cultural contexts were emphasised, particularly for neophyte paediatric physiotherapists and within the pre-registration physiotherapy curricula. The need to review curricula in areas previously regarded as non-core specialities, such as paediatrics, accords with current initiatives modernising future pre-registration physiotherapy education at the CSP which plays a critical role in shaping and quality assurance of programmes (CSP, 2022a; Minns Lowe et al., 2022).

A specific related aspect shared by several participants was the need of YPwD to feel more like ‘kids’ and less like patients within the clinical encounter, which resonates with King et al.’s (2018) idea of YPwD as ‘situated persons’ and NSF framework (2004) that talked of children with long-term conditions and their families desiring to ‘live ordinary lives’. Therefore, education on the impact of person-centred language and settings, ‘de-medicalisation’ and healthcare power discourses could be

considered for practitioners and in pre-registration curricula; additionally, practitioners could consider signposting to appropriate sport/PA alongside using non-clinical, mainstream community sports venues, local taster and outreach days to deliver sport/PA interventions (Clutterbuck et al., 2022). Such naturalistic community sport settings situate YPwD within their own local communities and may de-medicalise their experiences of disability and provide in-context movement experiences that enable practitioners to capture motor performances more closely aligned to a child's typical levels. Also, stronger partnerships between physiotherapy services and community leisure providers could facilitate access to venues and sessions hosted locally which could address access issues amongst economically disadvantaged families who make up a disproportionate percentage of those containing YPwD (Spencer et al., 2015). Quantitative studies comparing the engagement levels of YPwD in differing settings would of course strengthen the evidential base for such initiatives.

My participants' covert or missing talk concerning philosophical foundations, healthcare power discourses, neoliberalism and epistemological understandings, in the majority, suggests a need for introductory level content to be considered within curricula and training for students and clinicians (informing themselves and supporting students on placement). These knowledges had been previously identified as necessary if the profession is to adopt critical perspectives of itself and create new ways of thinking and practicing rehabilitation which meet evolving challenges in a 21st century healthcare economy (Nicholls, 2018, p. 263f). Similarly, Cheng-Hao Huang's (2021) searching Foucauldian critique of the nature of physical rehabilitation and by implication the rehabilitative identity prompted reflection concerning physiotherapy's essential purpose as a rehabilitative profession and the power wielded by practitioners in the healthcare encounter, power which they may be unaware of. Therefore, if YPwD and their families are to be empowered, it is important that both clinicians and students appreciate underpinning assumptions concerning narratives of normalisation and their categorisation of individuals with disabilities, as 'deployments of power'.

My study and Nicholls' work (2018) has caused me to consider are critical philosophical and theoretical perspectives appropriately introduced in pre-qualifying

physiotherapy curricula. As a physiotherapy lecturer, I have agency to enact such initiatives within the requirements of accredited course specifications and have reviewed taught content prior to teaching cycles. In addition, the opportunity exists to socially construct meanings and critique the idea of introducing or expanding these contents through the virtual community of physiotherapy lecturers/educators - In Beta, (2022) https://inbetaphysio.com) who experiment with different approaches to teaching and learning within physiotherapy education. Pre-registration education has the potential to enhance the evidence-based practice and internal processing of future individual clinicians, physiotherapy teams and ultimately the profession, as it is acknowledged that epistemic sophistication is "linked to better handling of the complexity and uncertainty of daily practice and the variety of evidence resources associated with this practice" (Beenen et al., 2018, p. 85); however, it would require further empirical study using validated outcome measures to establish proof of concept.

Specific content could reflect contemporary philosophical and psychological perspectives concerning the nature of sport/PA and paediatric rehabilitation e.g., psychological impacts of sport/PA, evaluating the idea of physical 'normalisation' for YPwD (Gibson et al., 2017) or using sport/PA as a tool solely to rehabilitate (Carroll et al. (2021) and considering what physiotherapy can achieve alongside sport/PA as 'physical literacy', in mitigating the impact of impaired body structure and function on YPwD's participation. This could increase awareness of the recognised psychological benefits of sport/PA, the integrative potential of experienced-based, in-context gross motor interventions in non-clinical settings and support one participant's suggestion to let sport/PA do the 'heavy lifting' around physiotherapy goals and thereby create smaller ("whittled down"), targeted formal physiotherapy programmes. Such programmes may be more achievable by YPwD and their families within a social framework of competing priorities and mean fewer appointments, with physiotherapy access reserved for intensive input at times of need, e.g., post-surgery or post-botulinus toxin interventions.

Another implication for practice concerns barriers to sport/PA participation highlighted by several participants, e.g., unawareness of suitable sport/PA opportunities and these could be addressed through Jessica's strategy of tasking

physiotherapy students to research and create accessible information for families; this simple but significant act could simultaneously address temporal pressures impacting NHS physiotherapists, constitute an authentic legacy project for the student and inform families. Similarly, the creation and sharing of online information resources may be a useful strategy. However, these would all require further quantitative study using validated outcome measures to establish proof of concept and effectiveness.

The importance of establishing positive, collaborative relationships with fitness professionals of all types (coaches, PE teachers and PTs) and in all settings when enacting 'sport as a therapy choice' sustainably was another emerging theme from my participants. The ongoing importance of such interpersonal skills are already highlighted in CSP liaisons with professional networks, such as APCP, to identify illustrative best practice case studies that benefit patients, whilst still recognising physiotherapists' specific role (Wadlow & Fordham, 2022). Therefore, emphasising the need to promote multi-professional rehabilitation is important to ensure both accessibility and sustainability and is currently being operationalised through integrated modules in pre-registration physiotherapy education (CSP, 2024). Just as Emma realised, Wadlow and Fordham (2022) also recognise that…

> Exercise prescription is not the reserve of the physiotherapy profession and the CSP welcomes the wider workforce in its pursuit to ensure rehabilitation is accessible to all (Wadlow & Fordham, 2022, p. 14).

In conclusion, although a singular IPA study with a purposive sample, my study did capture rich perspectives from experienced paediatric therapists and one assistant who had utilised sport/PA with YPwD and therefore it may inform the practice of those working with YPwD in similar settings and within pre-registration education. The potential of qualitative research to inform professional practice using hermeneutic phenomenology is manifold, as exploration of lived experiences "can gather rich data to influence service delivery, treatment of patients and policy agendas" (Rapport, 2005, p. 137). Furthermore, rigorous qualitative research has its place alongside quantitative, positivist approaches within evidence-based practice (Rapport, 2005) and within this balanced position, it is proportionate to say my study provides some suggestions concerning practice as well as informing future research.

6.5 Suggestions for future research

As qualitative research may act as a precursor to quantitative approaches (Greenhalgh, 2019) to understand participants' experience of a process and inform lines of enquiry, an appropriate next step would be to employ a quantitative approach to understand the outcome of a process (Smith et al., 2022); so, was it effective, was it accepted by YPwD and their families and was it deliverable by practitioners? This would require precise definition and quantification of the sport/PA intervention and any comparator physiotherapy intervention and the identification of suitable outcome measures validated for YPwD and/or families that could capture change, e.g., engagement with physiotherapy, physiological indicators relevant to physiotherapy goals or quality of life. Quantitative methods would inform the evidential base for using sport/PA within physiotherapy, through larger samples within adequately powered studies (Creswell & Creswell, 2023), e.g., online closed questionnaires which quantify and describe use of sport/PA by paediatric physiotherapists in the UK and globally, alongside outcomes. They could also include comparing the practices of physiotherapists working in the NHS and private/third sector, which was an unexplored area in my study.

Other qualitative areas that remain unaddressed are additional knowledges about 'sport as a therapy choice' which have been socially constructed in focus groups and evaluated using thematic analysis, which is more suitable for group data. Further research exploring experiences of 'sport as a therapy choice' with a sample drawn from all UK paediatric physiotherapists working with YPwD and a more even gender balance would be useful in supporting further theoretical generalisation to all UK-based paediatric physiotherapists. This would capture perspectives missing in my study, e.g., low male representation, no participants from Northern Ireland and Scotland, no non-APCP members and those not using sport/PA in their practice. This could include exploring awareness's concerning new paradigms (e.g., technologies extending the concept of the body) emerging within paediatric rehabilitation and how paediatric physiotherapists see them impacting and influencing their current and future everyday practice.

Finally, research focussed on YPwD and families about their understandings of 'sport as a therapy choice', as recipients of the intervention, could facilitate

triangulation by providing data from another perspective. This would complement the majority of extant literature which has explored their experiences of sport/PA, alongside barriers and facilitators but with less space devoted to how they related sport/PA to their physiotherapy programmes.

6.6 Dissemination

Findings will be most relevant to paediatric physiotherapists working with YPwD and therefore an abstract of this work was published in 2023 within the peer reviewed APCP professional journal. This was appropriate because it recognised the assistance provided by APCP in participant recruitment. Article publication in at least a two-star journal will also be sought, with Disability and Rehabilitation journal provisionally identified. An abstract was presented at the 2023 SPARC (Salford Postgraduate Annual Research Conference) and also at the 2023 APCP conference.

6.7 Reflections on my research journey

My research journey began in 2017 with professional doctorate taught modules, when research ideas were initially shared. The journey was characterised by periods of intense activity (data collection phase) alongside periods of stepping back and reflection dictated by work commitments as a part-time student. The linear journey reflected progressive personal development in terms of IPA skills that were supported by participation in the North-West IPA methodology group (Appendix 8.3) and regular meetings with my research supervisors.

I started the journey as a paediatric physiotherapist working with YPwD using sport/PA in everyday interventions and therefore identified as an ‘insider’ who shared the lifeworld of paediatric physiotherapists as a fellow practitioner. However, by the time of analysis and writing up, I was working as a physiotherapy lecturer and considered myself to be a paediatric physiotherapist with ‘insider knowledge’ of a specific lifeworld. My location enabled familiarity with clinical terminologies, e.g., CPIP or Selective Dorsal Rhizotomy and identification with participants’ personal experiences, e.g. positive patient narratives of sport/PA deployment and experiences of disability sport beyond clinical environments, through previous chairing of the local

disability sports association. This enabled a more insightful, informed and richer analysis but also required more dispassionate consideration of any bias or assumptions being brought into the analysis. Reflexivity concerning the impact of 'insider knowledge' and the 'insider position' on the analytical process must be acknowledged since IPA is an avowedly interpretative methodology, where researchers make sense of participants sense making (Smith et al., 2022) and is an integral part of the research process (Robson, 2011). As Smith et al. (2022, p. 20) noted it is not possible to disinvest yourself of your personal 'fore-structure' and the interpretative aim should be to prioritise the new object and new things and then make better sense of your own fore-structures following the encounter and subsequent interpretation. For me, this meant privileging the 'new object' of how my participants experienced 'sport as a therapy choice', rather than how I had experienced it in the past.

I also identified with sentiments expressed by Smith and Nizza (2022, p. 12-13) about the pros and cons of the 'insider position', as I still identified as a 'passionate participant,' and still experienced easy rapport as part of the 'tribe' without awkwardness in interviews. Furthermore, with no researcher versus participant power imbalance in play, I could position myself as the 'other' within the interview process (Flick, 2020). Remote interviewing did not inhibit my sense of togetherness or shared mutual understandings, and in viewed recordings this was evidenced in the way conversations freely flowed alongside silences and periods of shared humour. It genuinely felt as though I had known my respondents longer than the brief hour we shared and this allowed me to access richer data alongside a deeper analysis, such as when exploring the shared professional identity as rehabilitators of YPwD. My experiences resonated with those of Engward et al., (2022, p. 3) who identified closeness was possible in remote interactions with empathic listeners and how built rapport enabled mutually respectful relationships that ultimately "bolster the task of eliciting rich data to develop deeper understandings".

Furthermore, critical 'insider' understanding of my participants' contexts facilitated a richer analysis and insight into its influence on their sense making as in theme one (shaped by context); e.g., the positive influence of supportive inter-professional relationships in special schools and community paediatrics upon the

operationalisation of ‘sport as a therapy choice’, which had been my professional context for twenty-six years; or in previous positive personal experiences of sport. Obviously, as an insider, it was important to simultaneously balance my perspectives and I was conscious throughout interviews that the probing question must not become a leading question. Similarly, that my perspectives should not negate a data-driven analysis of participants’ experiences, although we sometimes concurred e.g., I had already realised, through my Masters research (Booth and Snowdon, 2019) that using sport/PA is not a panacea for all YPwD and my participants shared that same sensible caveat, despite their obvious enthusiasm.

In conclusion, the idea of my professional doctorate journey as one of personal development coheres with Roberts (2002, as cited in Careers Research and Advisory Centre, 2015) who noted that…

> the product that the PhD researcher creates is not the thesis – vital though that is to their subject area through the creation of original knowledge – no, the product of their study is the development of themselves.

Certainly, all phases of the professional doctorate challenged me to refine my ideas and my relationship to the research. I have found myself questioning some assumptions and being reinforced in others, within practice as a paediatric physiotherapist and latterly as a lecturer in paediatric physiotherapy. These included considering physiotherapy’s biomedical origins and how they continue to influence practice and act as the primary referent for evidence-based practice in physiotherapy for YPwD; or reflecting on how the concept of self-management in rehabilitation needs to be considered alongside that of responsibilisation, for those YPwD and families who lack agency; or being confirmed in my thinking about the limitations and appropriate applications of sport/PA as a rehabilitative tool. In addition, thinking reflexively about what legitimises physiotherapy knowledge and the discourses of power at work in healthcare across professional roles and between physiotherapist and YPwD and their families.

I had expected these questionings to be prompted by the Professional Doctoral programme (both taught and thesis phases) at HE8 level, having read Lee (2009).

> If the doctoral programme does not as some point make you deeply question your role, the knowledge and skill you use and your professional practice and

> identity, then it is not interrogating your practice at a level commensurate with a professional doctorate (Lee, 2009, p. 26-27).

My studies, research and participants' sense-making reinforced my philosophical location as a qualitative researcher since the multiple meanings brought to the phenomenon of 'sport as a therapy choice,' were congruent with relativist and interpretivist philosophies. Sport/PA within physiotherapy was and could be socially constructed by physiotherapists in multiple ways and multiple ways of knowing justified IPA as the qualitative methodology of choice, as it could accommodate the interpretative spaces created by human ambiguity. In the same way that Nicholls recognised pluralism in practice (2018, p. 263) with his hope for a 'thousand physiotherapies'; for my participants, making sense of 'sport as a therapy choice' with YPwD also meant that a 'thousand physiotherapies bloom.'

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8.1 APPENDIX 1 – GLOSSARY OF TERMS

(THESIS-SPECIFIC DICTIONARY)

Adapted sports – Adaptive sports are competitive or recreational sports for people with disabilities. They often run parallel to typical sport activities. However, they allow modifications necessary for people with disabilities to participate and many sports use a classification system that puts athletes with physical challenges on an even playing field with each other. Often used interchangeably with parasport or disability sport.

Adherence (in healthcare) - the extent to which a person's behaviour corresponds with agreed recommendations from a healthcare professional. Often used interchangeably with compliance.

Association of Paediatric Chartered Physiotherapists – Professional network of physiotherapists working with children and young people with a current membership of more than 2,300.

Behaviour Change Technique Taxonomy (BCTT) - BCTT offers a reliable method for specifying, interpreting and implementing the active ingredients of interventions to change behaviours that can be used by researchers and practitioner communities. The Medical Research Council funded its development.

Beneficence (in research) - action that is done for the benefit of others. This principle states that research should 'do no harm'. The purpose of health research is to discover new information that would be helpful to society.

Boolean operators - Boolean logic defines logical relationships between terms in a search. The *Boolean search operators* are **and**, **or** and **not** and are used to narrow or broaden literature searches.

CASP - Critical Appraisal Skills Programme produces critical appraisal tools which enable users to systematically assess the trustworthiness, relevance and results of published papers.

Cerebral Palsy – cerebral palsy (CP) is the most common cause of long-term childhood neurodisability (incidence of 3 per 1000 live births) and represent the largest single disability type on the caseload of Paediatric Physiotherapists. CP is an overarching term for a collection of permanent disorders of movement and posture which cause activity limitations and are often accompanied by impairments in

sensation, perception, cognition, communication and behaviour, by epilepsy and in the longer term by secondary musculoskeletal problems**.**

CINAHL - Cumulative Index to Nursing and Allied Health Literature The database is an index to literature with a focus on nursing and allied health professions.

COM-B - The COM-B model of behaviour is widely used to identify what needs to change in order for a behaviour change intervention to be effective. It identifies three factors that need to be present for any behaviour to occur: capability, opportunity and motivation. These factors interact over time so that behaviour can be seen as part of a dynamic system with positive and negative feedback loops. Motivation is a core part of the model and the PRIME Theory of motivation provides a framework for understanding how reflective thought processes (Planning and Evaluation processes) and emotional and habitual processes (Motive and Impulse/inhibition processes) interact at every moment leading to behaviour (Responses) at that moment.

Co-morbidities – Comorbidities are the presence of two or more diseases in the same person.

Compliance (in healthcare) - a term used to describe how well a patient or client is carrying out the recommendations made to them by their health professional. Often used interchangeably with adherence.

COPM – Canadian Occupational Performance Measure is an outcome measure designed for use by occupational therapists to assess client outcomes in the areas of self-care, productivity and leisure. Using a semi-structured interview, the COPM is a five-step process which measures individual, client-identified problem areas in daily function.

CPIP - Cerebral Palsy Integrated Pathway is a follow-up pathway for children with cerebral palsy or suspected cerebral palsy. Regular checks carried out by physiotherapists allow early detection of changes in muscles and joints with the option of earlier treatment for children and young people.

Disability sports - disability sports are competitive or recreational sports for people with disabilities. They often run parallel to typical sport activities. However, they allow modifications necessary for people with disabilities to participate and many sports use a classification system that puts athletes with physical challenges on an

even playing field with each other. Often used interchangeably with parasport or adapted sport.

Disability sports discourse – how we define, think and communicate about disability sport (the body of knowledge), e.g., how it is organised, who takes part in it and the relationships between all of these. These enable the construction of meaning.

Empirical – Derived from or guided by the senses (experiment or observation) rather than by theory or logic.

Engagement (within healthcare) – comprising in a positive affective state, acceptance of the physiotherapy intervention goals and confident self-management of a health condition, by YPwD and their families.

Environmental factors (as conceived in the ICF model) - which may function as a barrier or to facilitate activity and participation, e.g., physical barriers to participation, legal and social structures, or societal attitudes to disability.

Epistemic beliefs (EB's) – healthcare professionals' subjective understandings about the nature of knowledge and the process of knowing. These can range from simple EB's (knowledge as certain and absolute) to sophisticated EBs (considering knowledge as variable, constructed, and tentative).

Epistemology (in healthcare) - the philosophical study of the nature, origin, and limits of human healthcare knowledge.

Frame football – an adapted form of football designed for children and young people who use a walker or crutches for their daily mobility to move around and may have restricted mobility.

'F-Words' in child neurodisability – The 'F-words' focus on six key areas of child development (based on the ICF model) …function, family, fitness, fun, friends and future, with the aim of incorporating these concepts into every aspect of clinical service, research and advocacy regarding disabled children and their families.

Gamification – integration of games design, games style and games techniques into a non-game context, e.g., feedback mechanisms.

Gantt chart – a graphical depiction of the year-by-year project schedule.

GMFCS - Gross Motor Function Classification System categorises children and young people with CP into 5 levels depending on their motor function and their use of equipment and mobility aids.

GMFM - Gross Motor Function Measure is an outcome measure and assessment tool designed and evaluated to capture changes in gross motor function over time and/or with intervention in children and young people with cerebral palsy.

Hermeneutics – the philosophical underpinning and theory of interpretation.

ICF – Created by the World Health Organization, the International Classification of Functioning, Disability and Health is a multi-purpose classification which describes health and health related domains in the whole population. The domains cover health condition, body structure and function, activity, participation, personal and environmental factors.

ICF-CY - Created by the World Health Organization in 2007, the International Classification of Functioning, Disability and Health (child and youth version) is a derived and expanded version of the ICF that provides specific content and additional detail to cover the body functions and structures, activities and participation, and environments of particular relevance more fully to infants, toddlers, children and adolescents. ICF-CY used a common language of function that can be applied across disciplines and national boundaries to advance services, policy and research on behalf of children and youth. Its additional items were merged back into the main ICF model in 2012.

Idiographic (within IPA) – concerned with the 'particular' to enable a detailed depth of analysis. How particular phenomena have been understood by a particular people in a particular context.

Inclusion (within disability) – accessibility and integration that allows those with disabilities to fully participate in society without barriers to achieve their goals, to the best of their abilities and desires. (NB Inclusion is also associated with issues of race, ethnicity, and gender).

Inclusion discourse (within disability) – how we define, think and communicate about disability inclusion, e.g., how it is organised, who takes part in it and the relationships between all of these. These enable the construction of meaning.

Interpretative Phenomenological Analysis (IPA) – a qualitative research approach built upon the theoretical foundations of phenomenology, hermeneutics and idiography.

Interpretivist – an approach to knowledge that focuses on the way that human beings interpret and make sense of their reality.

Interview guide – a list of questions or keywords that are used flexibly by the interviewer within semi-structured interviews to maintain focus on the topic area.

Mainstream sports – a phrase illustrative of a particular societal discourse, where mainstream describes the nature of sports as "normal," conventional, or the usual way of doing things. Its presence assumes the existence of the 'other,' i.e., non-mainstream sports.

Medical model of disability – Arising solely from a biomedical perspective of disability and assumes people are disabled by their impairments or differences. The model is focussed only on the health condition and its impact on body structure and function. Any impairments or differences should be 'fixed' or changed by medical and other treatments, even when the impairment or difference does not cause pain or illness.

Medline – a bibliographic database that contains more than 27 million references to journal articles in life sciences with a concentration on biomedicine. A distinctive feature of MEDLINE is that the records are indexed with 'Medical Subject Headings' (MeSH).

Methodological rigour – a standard which demonstrates detail, accuracy, trustworthiness and credibility, within the theoretical framework underpinning research methods/procedures used.

Neoliberal reforms (in UK healthcare) – usually associated with a general orientation towards a strongly market-based approach, which emphasises deregulation, minimalisation of the State, privatisation, and the emergence of individual responsibility.

Neoliberal disability discourse - where disabled people are often viewed as '*costly* bodies' who use up limited healthcare resources or as 'potentially financially burdensome.' This negative evaluation can be further exacerbated by the neoliberal 'responsibilisation' for one's health, which widely ignores social determinants of health – including factors such as poverty, inequality, poor built environment, social exclusion, and poor public policies and services – that create and perpetuate health inequalities, and lead to compromised access and utilisation of healthcare services by people with disabilities.

Non-maleficence - an obligation not to inflict harm on others. It is closely associated with the maxim primum non nocere (first do no harm)

Ontology – concerns the nature of being it refers to what sort of things exist in the social world and assumptions about the form and nature of that social reality.

Parasport – parasports are competitive or recreational sports for people with disabilities. They often run parallel to typical sport activities. However, they allow modifications necessary for people with disabilities to participate and many sports use a classification system that puts athletes with physical challenges on an even playing field with each other. Often used interchangeably with disability sport or adapted sport. Some parasports are variations on existing able-bodied sports, while others such as goalball have been specifically created for persons with a disability and do not have an able-bodied equivalent.

Parasport discourse - how we define, think and communicate about parasport (the body of knowledge), e.g., how it is organised, who takes part in it and the relationships between all of these. These enable the construction of meaning.

Participation (as conceived in the ICF model) - involvement in a life situation with involvement conceived as constituting more than a mere presence, but an active involvement.

Personal factors (as conceived in the ICF model) - include age, gender, resilience, social background, education, character and past experiences (WHO, 2002). These factors will influence a person's internal psychological state and be demonstrated in their beliefs, values, feelings and motivations.

Phenomenology – a philosophical approach to the study of human lived experiences.

Physical activity - any body movement using skeletal muscle that results in energy expenditure greater than 1.5 metabolic equivalent of task (MET).

Physical leisure participation – leisure which includes structured or unstructured physical and sports activities involving gross motor skills and cardiovascular work.

Physical self-concept - Physical self-concept is the individual's perception of themselves in areas of physical ability and appearance. Physical ability includes concepts such as physical strength, body fat, co-ordination and endurance, while appearance refers to attractiveness.

Physiotherapy - Physiotherapy is the largest Allied Health Profession (over 59,000 Health and Care Professions Council (HCPC) -registered UK practitioners, but only around 28,000 are employed within the NHS - CSP, 2018b).

Physio Tools ® - Physiotherapy exercise software programme

Peers with typical development – children without disabilities who have the behaviour, intellectual abilities and functional skills typically seen in children of that age.

PEO - Population, exposure and outcome (or themes) - headings used to identify key terms in literature searching.

PICO - Population, Interest, Context, Outcome - headings used to identify key terms in literature searching.

PIO - People, intervention and outcome (or themes) - headings used to identify key terms in literature searching.

Practice epistemologies – Theories about how knowledge is sought and applied in clinical practice.

Reflexivity (in qualitative research) – a critical thought process where the researcher examines how their personal perspectives may be influencing the data and research; with the aim of improving validity.

Remote interviewing – where the interviewer is geographically separated from the participant. The interview happens either via voice call only or most often also includes video and other tools.

Sedentary behaviour - any waking behaviour in a sitting, reclining or lying posture, but redefined for young people with disabilities who could be self-propelling wheelchairs or being active whilst maintaining a seated-postures or reaching for objects, whilst subject to spasticity or involuntary movements.

Segregated sport – events or coaching/training sessions where participants with disabilities are separate from non-disabled peers.

Selective dorsal rhizotomy – neurosurgery to reduce spasticity where the post-operative physiotherapy required is highly intensive.

Semi-structured individual interview – a relaxed style of interview, which has some key pre-planned questions, with supplementary prompts/probes contained in an interview schedule; but where it is possible to deviate from the indicative order to accommodate different participant viewpoints.

Social constructionism – an approach which assumes that participants construct their own social reality and that researcher and participant will construct meaning together.

Social model of disability – The social model of disability is a way of viewing the world, developed by disabled people. The model states that people are disabled by barriers in society, not by their health impairment or difference. These barriers make it difficult or impossible for individuals with impairments to attain their valued aspirations and can be physical, like buildings not having accessible toilets or attitudinal.

Social prescribing - the means and practice of health care professionals referring or signposting people to local non-clinical services. Recognising that people's health is determined by a breadth of social, physical, emotional and environmental factors, social prescribing schemes approach health improvement in a holistic way, helping people improve areas of their lives likely to contribute to their entire health and wellbeing. Services linked with social prescribing schemes might include volunteer groups, befriending, gardening, arts-based activities, healthy eating and cooking schemes, or sports and physical activity.

Societal discourse – how we define, think and communicate about topics (the body of knowledge), e.g., people, disability, social structures. These enable the construction of meanings about social reality.

'Supercrip' – A common stereotype observed in the disability literature; someone who overcomes their disability in ways that are often seen by the public as inspiring. This stereotype has been associated with competitive para-athletes.

Therapeutic alliance - The therapeutic relationship between patient and provider which is considered a principal component of patient-centred care and patient engagement.

Therapeutic recreation – an approach in the USA which utilises leisure participation to improve general wellbeing and quality of life. Also known as Recreational therapy, it is a systematic process that utilizes recreation and other activity-based interventions to address the assessed needs of individuals with illnesses and/or disabling conditions, as a means to psychological and physical health, recovery and well-being.

Transparency – The fundamental ethical obligation, within the write up of the study, to clearly describe the research processes (data, analysis, methods, and interpretive choices) underlying their claims in a way that allows others to evaluate them.
Unconscious bias – a distortion in the data collection, analysis or interpretation which the researcher is unaware of. Such distortion prevents neutrality and creates conclusions based just as much on who a person is as on the data gathered and presented. Unconscious bias can lead to false assumptions and untrustworthy conclusions. NB This is a term drawn from the quantitative research paradigm.
Valorisation (of para-athletes) – process of elevating para-athletes based on admiration and awe of their achievements, as observed in the 'Superhumans' strap line of the 2012 Paralympics. Links to 'supercrip' narratives.

8.2 APPENDIX 2 – GANTT CHART (Project timeline)

Activity	2019 - Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Complete Professional Doctorate modular element												
Formal Literature Review for ethics												
Research supervision record and learning agreement												
Consideration of research design												
Ethics preparation												

Activity	2020 - Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Ethical application, approval and refinement as required												
PPI (research design)												
Literature Review ongoing updates												
Recruit participants												
Data Collection & transcription												
Data analysis												
Interim Assessment												
Annual Progress report and self evaluation												
Review learning agreement												

Activity	2021 - Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Literature Review ongoing updates												
Recruit participants												
Data Collection & transcription												
Data analysis												
Interim Assessment												
Annual Progress report and self evaluation												
Review learning agreement												
Ethics resubmission if required												

Activity	2022 - Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Literature Review ongoing updates												
Data transcription												
Data analysis												
Internal evaluation												
Annual progress report and self-evaluation												
Review learning agreement												
Preliminary drafting thesis												

Activity	2023 - Months											
	1	2	3	4	5	6	7	8	9	10	11	12
Literature Review ongoing updates												
Data transcription												
Data analysis												
Preliminary drafting thesis												
Annual progress report and self-evaluation												
Review learning agreement												

Activity	2024 – Months (Submission deadline date 30.9.2024. Completion 30.3.25)											
	1	2	3	4	5	6	7	8	9	10	11	12
Literature Review ongoing updates												
Write up thesis												
Notice of intention to submit												
Annual progress report and self-evaluation												
Submit thesis												
Viva voce												

8.3 APPENDIX 3 – METHODOLOGICAL MUTUAL SUPPORT & GUIDANCE

Membership of Northwest Interpretative Phenomenological Analysis Group
(a community of practice)

Date attended	Learning outcomes
18.01.19	The essence of the IPA method is… • an embodied interpretation brought alive for the reader which connects them with the participant. • Considering the intrinsic motivations of participants. • Ensuring reflexive analysis • Transparency about what theories you associate with participants and analyse accounts on their own terms before applying theories (hermeneutics of analysis and hermeneutics of empathy • Constant revisits of literature review for new theory, as new articles appear
08.03.19	Ensuring trustworthiness within the analysis and interpretation by • member checking • 'thick' descriptions and quotes • use of frameworks • be interpretive enough. • be phenomenological enough. • awareness of researcher bias (reflexivity) The function of the findings chapter is descriptive – the 'what' (hermeneutics of empathy) The function of the discussion chapter is the 'why' (hermeneutics of suspicion/questioning). A deeper interpretation. Discussed in a broader context, e.g., implications for practice. Importing theoretical concepts/frameworks Reflexivity – show awareness of the debate about rigour in IPA
26.04.19	Philosophical underpinnings of different IPA approaches. Defending your choice of methodology Demonstrating an understanding of the controversies and who influenced you most and why (Heidegger)
13.12.19	IPA interviewing skills. Locating the sweet spot between empathy and interpretation Participant centred. Aim is data generation and co-creation
2020	IPA group face to face meetings were suspended from March 2020 onwards, as campus closed. Resuming September 2020 online each Wednesday afternoon & will attend if not at work.

21.07.20	Reinforced the philosophical underpinnings (ontology and epistemology) of my chosen methodology and justified choice. Heideggerian form of IPA and why.
11.11.20	IPA group remotely – discussing strategies for remote interviewing. Platforms, data governance
24.02.21	Quality in qualitative research Shared perspectives arising from IA with the group about mechanisms for ensuring quality in qualitative research. Members shared their experiences and strategies used along with recommended texts (Lincoln & Guba) Nature of IPA research & constructivist criteria.
14.04.21	Remote interviewing and IT data storage considerations Data analysis and understanding your role as a researcher. Usefulness of member checking Transparency
14.07.21	Email to Dr India Amos about sample size and IPA
20.01.22	IPA meeting – previous meetings since April have been unable to attend due to undertaking a Postgraduate certificate in Teaching & Learning in Higher Education and to obtain fellowship status of HEA, which takes place at the same time. Video shared by Jonathan Smith and advice about new edition of his main text, plus signposting to other useful texts.
25.04.22	Informal meeting with fellow IPA researcher and lecturer Discussed new IPA texts available by Smith and Nizza updated 2021 version of 2009 IPA book by Smith
01.06.22	Discussion around write up formats – combining discussion and analysis chapters. The nature of IPA analysis and the double hermeneutic (making sense of participant's sense making). Other Q & A's around ensuring rigour within IPA research (references shared to 'Long' article on rigour and reliability in qualitative research), sample sizes.
02.11.22	Discussion around shared IPA resource created through library services to share useful texts. Further discussion about achieving depth of my analysis using IPA
2023	Liaison with Dr India Amos on preferred topics areas in future Offered to introduce discussions on i)The use of computer aided software within data analysis – pros and cons and justifying your choices. ii)Being reflexive and demonstrating reflexivity in written work. iii)Request for input on Viva preparation
08.02.23	Introduced discussion on the use computer aided software and remote interviewing with references. Themes emerging were physicality, deep dynamic relationship with data & ownership.
26.04.23	Viva advice presentation by Dr Lorraine Trainor How to effectively prepare for your Professional Doctorate viva
24.05.23	IPA work shared by one of the group members, followed by an open forum discussion on her analysis and eventual choice of GETs and how they nested with personal experiential themes.

	IPA is theoretically dense. Looking for the best fit within GETs – research with human participants is messy and ambiguous and there is not always perfect clarity in the way themes nest together.
15.11.23	Theoretical transferability in IPA & nature of claims made. Quality & rigour in IPA.
12.12.23	Discussion around why choose IPA over other methodologies. Pros and cons of respondent validation when used in IPA studies.
25.01.24	Unable to attend as lecturing at that time.
21.03.24	Meeting cancelled.
28.05.24	Dr Ann Leyland – Reflections on the doctoral journey and tips for publication.

8.4 APPENDIX 4 – RESEARCH DOCUMENTATION

Appendix 8.4.1 – University ethical approval

University of Salford MANCHESTER

Research, Enterprise and Engagement
Ethical Approval Panel

Doctoral & Research Support
Research and Knowledge Exchange,
Room 827, Maxwell Building,
University of Salford,
Manchester
M5 4WT

T +44(0)161 295 2280

www.salford.ac.uk

21 May 2020

Dear Susan,

RE: ETHICS APPLICATION–HSR1920-070 – Exploring the beliefs of paediatric physiotherapists about 'sport as a therapy choice' in relation to children and young people (yp) with disabilities.

Based on the information that you have provided, I am pleased to inform you that application HSR1920-070 has been approved.

If there are any changes to the project and/or its methodology, then please inform the Panel as soon as possible by contacting Health-ResearchEthics@salford.ac.uk

Yours sincerely,

Professor Andrew Clark
Chair of the Research Ethics Panel

Appendix 8.4.2 – Research Privacy notice

RESEARCH PRIVACY NOTICE
(PROCESSING YOUR PERSONAL DATA)

General

The researcher needs to collect, process and use participants' personal data (limited to name, work telephone number and/or work email) for the sole purpose of recruiting participants to the research study.

In collecting, processing and using data the researcher will comply with the requirements of the Data Protection Act 1998 (DPA) and the General Data Protection Regulation (Regulation (EU) 2016/679) (GDPR) which govern the processing of personal information.
Personal information means any information relating to an identified or identifiable living person. An identifiable person is one who can be identified, directly or indirectly, in particular by an identifier such as a name, identification number, online identifier or by one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that person. Processing is any activity carried out involving personal information, including holding and storing it in any format, both digital and hardcopy.

The researcher takes the matter of data security and protection extremely seriously. The personal data you provide during the recruitment procedure is securely held and will be treated confidentially and with sensitivity. This study will not involve collecting, processing or using any sensitive and special category personal data, which is generally defined as information related to racial or ethnic origin, political opinions, religious or other beliefs, physical or mental health, other medical information including biometric and genetic data or criminal offence data relating to criminal allegations, proceedings, convictions or related security measures.

How your personal information is secured.

Your personal data will be stored on the Salford network in a secure location with restricted access, to prevent unauthorised parties, who have no right or need, from accessing the data.

How long your personal information is kept.

Your personal data will only be kept until seven years after the end of the study (seven years is the current guide for NHS projects).

How your personal information is processed – legal basis for processing.

It is necessary for the researcher to collect, process and use your personal data in order to recruit participants to the research study. Processing is therefore necessary for performance of the legitimate task of research purposes relating to participant recruitment. The researcher will only process personal data if you consent, and its use is not likely to have an adverse effect on any individual.

Sharing your personal data with third parties

Your personal data will not be shared with any third parties and will only be known to the researcher.

Appendix 8.4.3 – Participant information sheet (PIS)

University of Salford MANCHESTER

(APPENDIX 8.6)

Participant information sheet

Study title:	Making sense of 'sport as a therapy choice' for paediatric physiotherapists working with young people who have disabilities
Chief investigator	Sue Booth
Telephone number	Use email address below for contact

Study Sponsor: University of Salford

I am a student at Salford University and would like to invite you to take part in my research study. Before you decide I would like you to understand why the research is being done and what it would involve for you. Take time to read the following information clearly, so you can decide whether to take part. Talk to colleagues about the study if you wish and please feel free to ask me if there is anything that is not clear.

I am doing this project to produce a thesis for a Professional Doctorate (Health and Social Care). The project considers 'sport as a therapy choice', including multiple aspects of sports and physical activity in conjunction with physiotherapy exercise programmes. Therefore, I need to get the views/thoughts of paediatric physiotherapists about this.

Participant name:

You will be given a copy of this information sheet to keep.

Version 7 01.07.2021

1. What is the purpose of this study?

The study has been designed to explore and give voice to the often-unheard beliefs of Paediatric Physiotherapists working with disabled children and young people. It is hoped that a better understanding of beliefs about 'sport as a therapy choice' in relation to paediatric physiotherapy programmes might help to better support children and young people. The study will contribute towards a thesis required for completion of a Professional Doctorate in Health and Social Care.

2. Why have I been invited?

You have been invited as part of a purposive sample of 5-9 Paediatric Physiotherapists. Some of you have indicated your willingness to take part in research on the Association of Paediatric Chartered Physiotherapists membership form.

3. Do I have to take part?

Your decision to participate is entirely voluntary. You may refuse to participate and can withdraw your data without giving a reason. Your refusal to participate or wish to withdraw would not have any consequences. You can request that any information you provide be withdrawn, providing the request is made before the data is analysed and used in the final thesis.

Version 7 01.07.2021

4. What will happen to me if I take part?

If you participate in the study having read this information sheet, you will be asked to sign a consent form to show you have been informed about the study and understand what it involves. The researcher will contact you to arrange an interview that will last between 45 minutes and one hour.

This will be at a time and place that is convenient to you. This will be done remotely via video/audio call or at work in a place where you can speak freely and where you would not be disturbed. The interview will be recorded.

For most people one interview will be enough, but if you need to have a break, or if you need more time to talk, a second interview could be arranged.

At the end of the interview there will be a chance to talk over any questions that may have come up from the interview; this will not be recorded. The researcher can also give you information about appropriate services/support you might contact if you need more information.

The researcher will arrange to send you a brief summary of information obtained to check the content and will then contact to make sure you agree with the information that they got from your interview, or to answer any queries she has about what you said. If you wished to meet again, this will be up-to-you.

If at any time in the future, you should lose the capacity to consent, the researcher will retain the data you had already provided and use it confidentially in connection with the original purpose, you consented for.

5. Expenses and payments

You will not be paid for taking part in this study.

6. What will I have to do?

If you agree to take part in the study, you will be interviewed (see section 4).

7. What are the possible disadvantages and risks of taking part?

You are being asked to give-up some of your time to take-part in the study.

There should be very few risks to you taking part. In some studies, some people have found that talking about their feelings/experiences can be upsetting. The researcher will try to be as sensitive as possible to your needs and the interview will be designed for you to talk about things that you feel comfortable with, for example recounting accounts from both the past and the present. If you become upset the interview will be stopped until you are ready and want to carry on.

Version 7 01.07.2021

You will meet the researcher remotely or in a workplace that you choose. You will not be asked to travel to anywhere unfamiliar.

8. What are the possible benefits of taking part?

The direct benefit of taking part is that your contribution might help to improve knowledge within Paediatric Physiotherapy and influence service delivery in the future.

9. What if there is a problem or I want to complain?

If you have a concern about any aspect of this study, you should firstly speak to the researcher Susan Booth by using the email S.J.Booth1@salford.ac.uk

If you remain unhappy and wish to complain formally you can do this by contacting the study supervisors:
Professor Garry Crawford
(0161 295 6557) or email
g.crawford@salford.ac.uk
or
Dr Nicky Spence
(0161 295 0700) or email
n.spence@salford.ac.uk

If the matter is still not resolved, please forward your concerns to Professor Andrew Clark, Chair of the Health Research Ethical Approval Panel, Allerton Building, Frederick Road Campus, University of Salford, Salford, M6 6PU
(0161 295 4109) or email
a.clark@salford.ac.uk

10. Will taking part in this study be kept confidential?

The interview will be recorded and then written up word for word by the researcher, using only your pseudonym name. The researcher will check that the recording and the written transcript are the same. She will then erase the recording. The transcript will be kept on a password-protected laptop computer. Identifying details will never appear in any final report and any publication, so people reading these will not be able to identify you. The written transcripts will never be linked to your real name and further ethical approval will be sought if they are used in any other future research. All interview data transported on USB memory sticks will be anonymised through use of pseudonym names and encrypted to protect against loss. The supervisors may also view the interview data collected.

Participants should be aware that if they reveal anything related to criminal activity and/or something that is harmful to self or other, the researcher will have to share that information with the appropriate authorities. If that happens, the researcher will act in accordance with her professional Code of Conduct.

Direct quotations form participants may be used within the final study, but they will use the pseudonym name you have selected and contain no personal details to disguise your identity. The link between the pseudonym name and personal details will be known only to the researcher to ensure that your identity remains anonymous and confidential. Names and contact details of research participants (personal data) will be stored on a password protected computer, accessed only by the researcher.
(See enclosed Research Privacy Notice for further details)

The hard copy documents relating to the administration of this research, such as the consent form you sign to take part, will be kept in a folder called a site file or project file. This is locked away securely on university premises. The folder might be checked by people in authority who want to make sure that researchers are following the correct procedures. These people will not pass on your details to anyone else. These documents will be destroyed seven years after the end of the study.
(*Seven years is the current guide for NHS projects).*

11. What will happen to the results of the research study?

The main outcome of the study is a 40,000-word thesis for a Professional Doctorate at Salford University. The thesis will appear in the University of Salford repository of thesis (USIR) and the national thesis repository (ETHOS).

Findings will be shared with the Association of Paediatric Chartered Physiotherapists, Paediatric Physiotherapy/Occupational Therapy Service of Bolton Foundation NHS Trust, and a brief executive summary sheet offered to participants. The summary and project will be written without any personal details, so that no-one is able to identify you.

Findings will be written up in a paper for an academic or professional journal and/or presentation at a conference in a poster format, abstract or presentation.

12. Who is sponsoring the study?

The sponsor of the study has the duty to ensure that it runs properly and that it is insured. In this study, the sponsor will be the University of Salford.

13. Who has reviewed this study?

All research in the NHS is looked at by an independent group of people called a Research Ethics Committee, to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given a favourable opinion by the Salford University Ethics Approval Panel.

16. Further information and contact details

Contact Susan Booth by using the email S.J.Booth1@salford.ac.uk

Version 7 01.07.2021

Appendix 8.4.4 – Participant consent form

University of Salford MANCHESTER

(APPENDIX 8.6)

Participant consent form

Study title:	Making sense of 'sport as a therapy choice' for paediatric physiotherapists working with young people who have disabilities
Chief investigator	Susan Booth
Telephone number	Use email address below for contact
Supervisors	Professor Garry Crawford and Dr Nicky Spence

Participant name	

	Please read the following statements and put your initials in the box to show that you have read and understood them and that you agree with them	**Please initial each box**
1	I confirm that I have read and understood the information sheet dated [01.07.2021], version number [7] for the above study.	
2	I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
3	I understand that my involvement in this study is voluntary and that I am free to withdraw without giving any reason and without any consequences.	
4	I understand that I can only withdraw my data from the study and ask for it not to be included and subsequently destroyed, providing the request is made before the data is analysed and used in the final thesis.	
5	I understand I will receive no payment for taking part in the study.	
6	I consent to audio/video recording of my interview, which will be stored confidentiality (delete as preferred).	
7	I agree to the anonymised use of my quotations in outputs form the study.	

Version 5 01.01.2021

University of Salford MANCHESTER

To be filled in by the participant

I agree to take part in the above study.

Your name	Date	Signature

To be filled in by the person obtaining consent

I confirm that I have explained the nature, purposes and possible effects of this research study to the person whose name is printed above.

Name of investigator	Date	Signature
Susan Booth	30.07.2021	Susan Booth

Filing instructions

1 copy to the participant
1 original in the Project or Site file

Version 5 01.01.2021

Appendix 8.4.5 - Verbal script and interview schedule

Hi *participant name*

2.Introduction to researcher and thank you so much for taking part, the study is to explore your experiences of 'sport as a therapy choice' and your beliefs about using sports/physical activity within your practice and for you to share these experiences freely with the researcher

3. You have had the Participant Information Sheet – have you any further questions?

4. Confirm pseudonyms of their choice. Selection was provided by the researcher, if they preferred to select from that (*write pseudonym initial on name sheets to ensure same pseudonym is not selected more than once)*

5. Information/support contact details available at end, in case of any concerns

6. It is possible to stop the interview, if you wish to, for any reason

7. Reminder that interview will be recorded & transcribed, plus sound check (count *1-10)*. *(I will be the only person who will see or hear the recording)*

8. Start the recording – click on 3 dots (more actions). Click start recording from drop down box. MS teams does give a warning banner at top visible to all, to say that recording is in progress.

Topic area	Questions/prompts
Disability sports/physical activity within everyday practice	**1**.Could you tell me if you have used sports or any other physical activities within your physiotherapy programmes? ***Prompt for more information.*** *Why/why not? Can you give me some examples?*
Paediatric Physiotherapy programmes	**2**.Where do your patients normally do their programmes and when? e.g*.,* home, leisure centre, school, other place. ***Prompt for more information.*** *Do you think it matters where they do it?* *Why do you think that?* **3**.E.g., Have you ever used virtual technology, e.g., Nintendo Wii Sport as part of physiotherapy programmes? ***Prompt for more information.*** *What do you feel about using virtual technology?*
Engagement with Paediatric Physiotherapy programmes **Barriers and facilitators**	**4**.What have been your experiences regarding engagement with physiotherapy programmes? ***Prompt for more information.*** *What do you feel about that?* **5**.From past experience what has been the best way to approach the need to stretch, strengthen and exercise, to make it more meaningful/more fun/more long lived?

	Prompt for more information. *Can you say more about that?* *Can you give any examples?*
Beliefs about the relationship between Paediatric Physiotherapy programmes and disability sports/physical activity **What constitutes physiotherapist's role and legitimate scope of practice and why?**	**6**.What are your feelings about the relationship between physiotherapy, sport and physical activity? ***Prompt for more information.*** *How have you experienced this relationship in the past?* *Examples - signposting patients to sport/physical activity.* *- embedding sport/physical activities into physiotherapy interventions* *- re-badging physiotherapy exercises as football exercises* *[Use the visual resources shown below, as required. Achilles stretch sheets of Run England and Physio tools version and/or case study from North Wales project]* *Have models (ICF/'F-Words') influenced your feelings?* *Have surrounding discourses influenced your feelings?*
Beliefs about the concept	**7**. Could you tell me what 'sport as a therapy choice' means to you ***Prompt for more information.*** *Can you say more about why you feel that?*

End

1.Participant thanked.

2. Recording stopped by clicking on 3 dots (more actions) and select stop recording from drop down box. Warning box appears – are you sure you want to stop the recording? opt for 'stop recording'.

3. Asked if any concerns have arisen as a result of the interview – resources file available.

4.The recording will be transcribed.
Any relevant comments made after the recording stopped will be recorded in field notes.
Data analysis will follow – themes will also be shared for your thoughts.

5.At the conclusion of the study, a thank you letter will be sent to you via same channels used for the invitation. It is planned to disseminate findings by publication in a professional journal (APCP), a pdf copy will be emailed to all participants if they are happy to provide their work email address.

6. CLICK LEAVE BUTTON (red button with telephone symbol) TO END THE Microsoft Teams call and you are returned to the calendar diary view.

Appendix 8.4.6 COREQ 32 item – checklist

Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

Please indicate in which section each item has been reported in your manuscript. If you do not feel an item applies to your manuscript, please enter N/A.

For further information about the COREQ guidelines, please see Tong *et al.*, 2017: https://doi.org/10.1093/intqhc/mzm042

No.	Item	Description	Section #
Domain 1: Research team and reflexivity			
Personal characteristics			
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?	Section 3.2
2.	Credentials	What were the researcher's credentials? *E.g. PhD, MD*	Introduction
3.	Occupation	What was their occupation at the time of the study?	Introduction
4.	Gender	Was the researcher male or female?	Title page
5.	Experience and training	What experience or training did the researcher have?	Introduction
Relationship with participants			
6.	Relationship established	Was a relationship established prior to study commencement?	Section 3.2
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? *E.g. Personal goals, reasons for doing the research*	Section 3.3.2
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? *E.g. Bias, assumptions, reasons and interests in the research topic*	Section 3.1
Domain 2: Study design			
Theoretical framework			
9.	Methodological orientation and theory	What methodological orientation was stated to underpin the study? *E.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis*	Section 3.1
Participant selection			
10.	Sampling	How were participants selected? *E.g. purposive, convenience, consecutive, snowball*	Section 3.3.1
11.	Method of approach	How were participants approached? *E.g. face-to-face, telephone, mail, email*	Section 3.3.2
12.	Sample size	How many participants were in the study?	Section 4
13.	Non-participation	How many people refused to participate or dropped out? What were the reasons for this?	Section 4
Setting			
14.	Setting of data collection	Where was the data collected? *E.g. home, clinic, workplace*	Section 3.2
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?	Section 3.2

16.	Description of sample	What are the important characteristics of the sample? *E.g. demographic data, date*	Section 4
Data collection			
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Section 3.4
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?	N/A
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?	Section 3.2
20.	Field notes	Were field notes made during and/or after the interview or focus group?	Section 3.2
21.	Duration	What was the duration of the interviews or focus group?	Section 4
22.	Data saturation	Was data saturation discussed?	Section 3.1.2
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings			
Data analysis			
24.	Number of data coders	How many data coders coded the data?	Section 4.0
25.	Description of the coding tree	Did authors provide a description of the coding tree?	Table - Section 4
26.	Derivation of themes	Were themes identified in advance or derived from the data?	From data
27.	Software	What software, if applicable, was used to manage the data?	N/A
28.	Participant checking	Did participants provide feedback on the findings?	Section 4.0
Reporting			
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? *E.g. Participant number*	Section 4
30.	Data and findings consistent	Was there consistency between the data presented and the findings?	Section 4
31.	Clarity of major themes	Were major themes clearly presented in the findings?	Section 4
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Section 4

When submitting your manuscript via the online submission form, please upload the completed checklist as a Figure/supplementary file.

If you would like this checklist to be included alongside your article, we ask that you upload the completed checklist to an online repository and include the guideline type, name of the repository, DOI and license in the *Data availability* section of your manuscript.

Developed from: Allison Tong, Peter Sainsbury, Jonathan Craig, Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups, International Journal for Quality in Health Care, Volume 19, Issue 6, December 2007, Pages 349–357, https://doi.org/10.1093/intqhc/mzm042

Appendix 8.4.7 - JBI Critical Appraisal Checklist for Qualitative Research

Reviewer_____Date_____

Author _____Year_____Record Number_____

		Yes	No	Unclear	Not applicable
1.	Is there congruity between the stated philosophical perspective and the research methodology?	☐	☐	☐	☐
2.	Is there congruity between the research methodology and the research question or objectives?	☐	☐	☐	☐
3.	Is there congruity between the research methodology and the methods used to collect data?	☐	☐	☐	☐
4.	Is there congruity between the research methodology and the representation and analysis of data?	☐	☐	☐	☐
5.	Is there congruity between the research methodology and the interpretation of results?	☐	☐	☐	☐
6.	Is there a statement locating the researcher culturally or theoretically?	☐	☐	☐	☐
7.	Is the influence of the researcher on the research, and vice- versa, addressed?	☐	☐	☐	☐
8.	Are participants, and their voices, adequately represented?	☐	☐	☐	☐
9.	Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	☐	☐	☐	☐
10.	Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	☐	☐	☐	☐

Overall appraisal: Include ☐ Exclude ☐ Seek further info ☐

Comments (Including reason for exclusion)

Appendix 8.4.8 CASP qualitative checklist

CASP
Critical Appraisal Skills Programme

www.casp-uk.net
info@casp-uk.net
Summertown Pavilion, Middle Way Oxford OX2 7LG

CASP Checklist: 10 questions to help you make sense of a **Qualitative** research

How to use this appraisal tool: Three broad issues need to be considered when appraising a qualitative study:

- Are the results of the study valid? (Section A)
- What are the results? (Section B)
- Will the results help locally? (Section C)

The 10 questions on the following pages are designed to help you think about these issues systematically. The first two questions are screening questions and can be answered quickly. If the answer to both is "yes", it is worth proceeding with the remaining questions. There is some degree of overlap between the questions, you are asked to record a "yes", "no" or "can't tell" to most of the questions. A number of italicised prompts are given after each question. These are designed to remind you why the question is important. Record your reasons for your answers in the spaces provided.

About: These checklists were designed to be used as educational pedagogic tools, as part of a workshop setting, therefore we do not suggest a scoring system. The core CASP checklists (randomised controlled trial & systematic review) were based on JAMA 'Users' guides to the medical literature 1994 (adapted from Guyatt GH, Sackett DL, and Cook DJ), and piloted with health care practitioners.

For each new checklist, a group of experts were assembled to develop and pilot the checklist and the workshop format with which it would be used. Over the years overall adjustments have been made to the format, but a recent survey of checklist users reiterated that the basic format continues to be useful and appropriate.

Referencing: we recommend using the Harvard style citation, i.e.: *Critical Appraisal Skills Programme (2018). CASP (insert name of checklist i.e. Qualitative) Checklist. [online] Available at: URL. Accessed: Date Accessed.*

CASP
Critical Appraisal Skills Programme

Paper for appraisal and reference:

Section A: Are the results valid?

1. Was there a clear statement of the aims of the research?

Yes ☐ Can't Tell ☐ No ☐

HINT: Consider
- what was the goal of the research
- why it was thought important
- its relevance

Comments:

2. Is a qualitative methodology appropriate?

Yes ☐ Can't Tell ☐ No ☐

HINT: Consider
- If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants
- Is qualitative research the right methodology for addressing the research goal

Comments:

Is it worth continuing?

3. Was the research design appropriate to address the aims of the research?

Yes ☐ Can't Tell ☐ No ☐

HINT: Consider
- if the researcher has justified the research design (e.g. have they discussed how they decided which method to use)

Comments:

CASP
Critical Appraisal Skills Programme

4. Was the recruitment strategy appropriate to the aims of the research?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider
- If the researcher has explained how the participants were selected
- If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
- If there are any discussions around recruitment (e.g. why some people chose not to take part)

Comments:

5. Was the data collected in a way that addressed the research issue?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider
- If the setting for the data collection was justified
- If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
- If the researcher has justified the methods chosen
- If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews are conducted, or did they use a topic guide)
- If methods were modified during the study. If so, has the researcher explained how and why
- If the form of data is clear (e.g. tape recordings, video material, notes etc.)
- If the researcher has discussed saturation of data

Comments:

CASP
Critical Appraisal Skills Programme

6. Has the relationship between researcher and participants been adequately considered?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider
- If the researcher critically examined their own role, potential bias and influence during (a) formulation of the research questions (b) data collection, including sample recruitment and choice of location
- How the researcher responded to events during the study and whether they considered the implications of any changes in the research design

Comments:

Section B: What are the results?

7. Have ethical issues been taken into consideration?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider
- If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- If approval has been sought from the ethics committee

Comments:

CASP
Critical Appraisal Skills Programme

8. Was the data analysis sufficiently rigorous?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider
- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- If sufficient data are presented to support the findings
- To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

Comments:

9. Is there a clear statement of findings?

Yes ☐
Can't Tell ☐
No ☐

HINT: Consider whether
- If the findings are explicit
- If there is adequate discussion of the evidence both for and against the researcher's arguments
- If the researcher has discussed the credibility of their findings (e.g. triangulation, respondent validation, more than one analyst)
- If the findings are discussed in relation to the original research question

Comments:

CASP
Critical Appraisal Skills Programme

Section C: Will the results help locally?

10. How valuable is the research?

HINT: Consider

- If the researcher discusses the contribution the study makes to existing knowledge or understanding (e.g. do they consider the findings in relation to current practice or policy, or relevant research-based literature
- If they identify new areas where research is necessary
- If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used

Comments:

8.5 APPENDIX 5 – LITERATURE SEARCH RESULTS

8.5.1 CINAHL search

Select / deselect all | Search with AND | Search with OR | Delete Searches | Refresh Search Results

	Search ID#	Search Terms	Search Options	Actions
☐	S30	S19 AND S29	Search modes - Boolean/Phrase	Results (224) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S29	S2 AND S27	Search modes - Boolean/Phrase	Results (224) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S28	S19 AND S20 AND S21 AND S22 AND S27	Search modes - Boolean/Phrase	Results (0) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S27	S23 OR S24 OR S25 OR S26	Search modes - Boolean/Phrase	Results (88,252) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S26	self management	Search modes - Boolean/Phrase	Results (9,052) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S25	engagement	Search modes - Boolean/Phrase	Results (14,695) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

☐	S24	compliance	Search modes - Boolean/Phrase	Results (51,514) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S23	adherence	Search modes - Boolean/Phrase	Results (26,751) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S22	S19 AND S20 AND S21	Search modes - Boolean/Phrase	Results (1) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S21	S17 OR S18	Search modes - Boolean/Phrase	Results (17,326) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S20	S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14 OR S16	Search modes - Boolean/Phrase	Results (1,781) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S19	S1 OR S2 OR S3 OR S4 OR S5 OR S6	Search modes - Boolean/Phrase	Results (2,320) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S18	"physical therapy"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed	Results (15,231) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

			Search modes - Boolean/Phrase	
☐	S17	physiotherapy	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (4.956) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S16	"adolescent with disabilities"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (1) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S15	"youth with disabilities"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (145) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S14	"children with disabilities"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed	Results (631) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

			Search modes - Boolean/Phrase	
☐	S13	"child with disabilities"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (34) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S12	"disabled adolescent"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (2) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S11	"disabled young people"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (22) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S10	"disabled young person"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed	Results (2) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

			Search modes - Boolean/Phrase	
☐	S9	"disabled youth"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (12) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S8	"disabled children"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (1,173) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S7	"disabled child"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (50) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S6	"paediatric physiotherapist"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed	Results (1) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

			Search modes - Boolean/Phrase	
☐	S5	"paediatric physiotherapist"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (1) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S4	"paediatric physiotherapists"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (3) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S3	physiotherapist	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (2,320) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL
☐	S2	Physiotherapist	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed	Results (2,320) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

			Search modes - Boolean/Phrase	
☐	S1	"sport as a therapy choice"	Limiters - Published Date: 20080401-20180431; English Language; Peer Reviewed Search modes - Boolean/Phrase	Results (0) Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL

8.5.2 HDAS search

HDAS Export

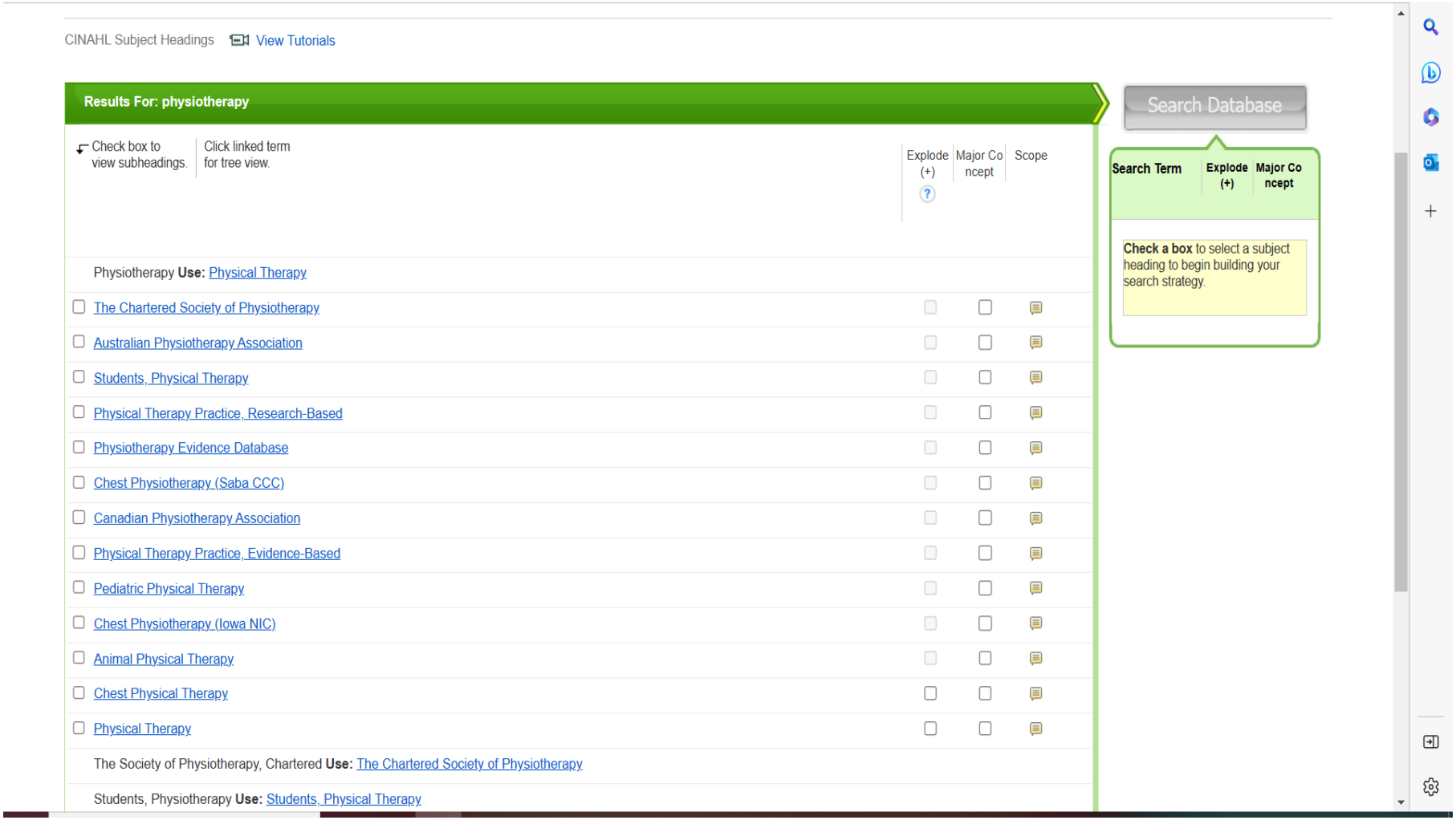
Search Strategy S Booth

Strategy 695023

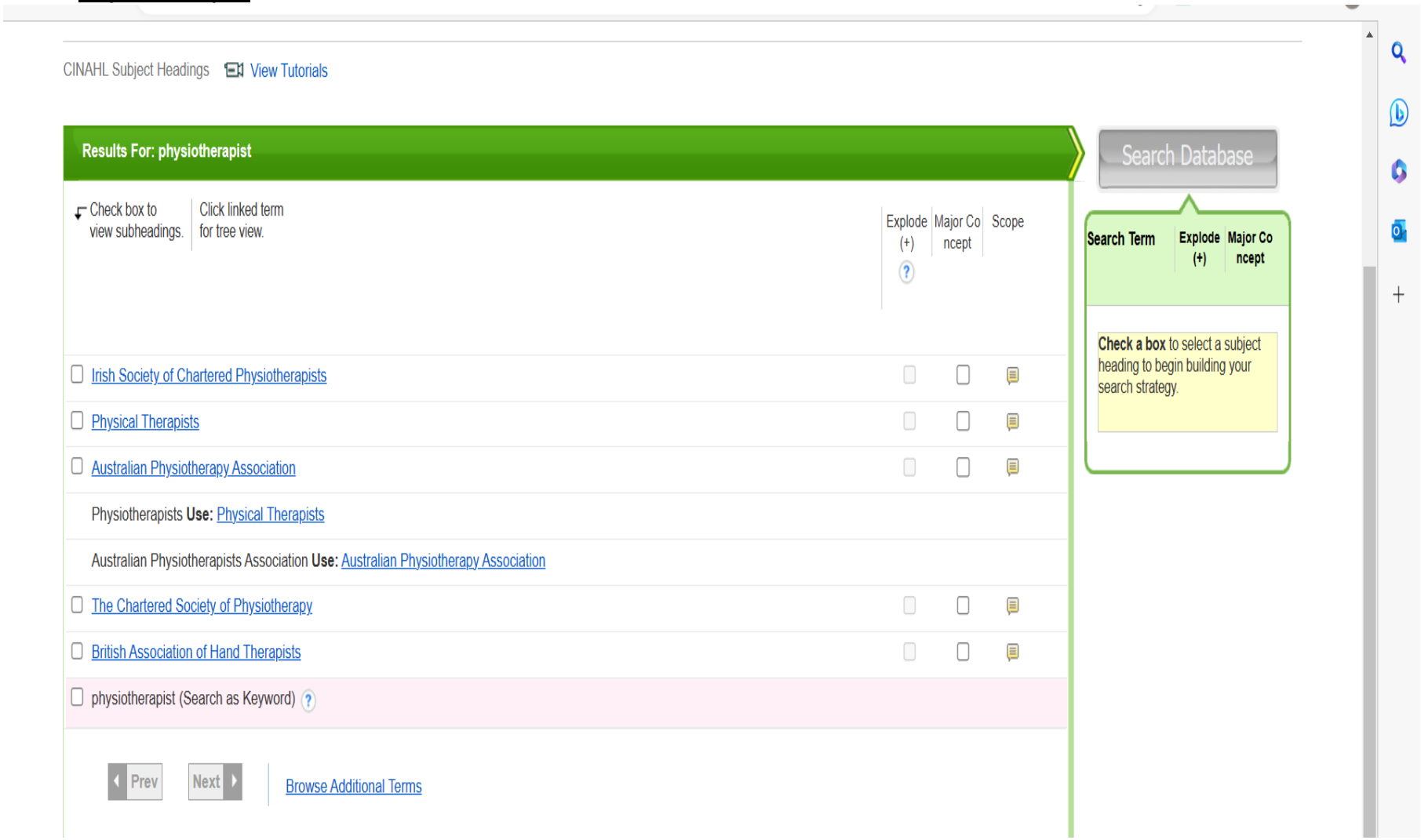
#	Database	Search term	Results
1	CINAHL	(physio OR physiotherap* OR therap* OR "allied health" OR "physical therap*").ti,ab	503416
2	CINAHL	(sport* OR activit* OR exercise* OR exertion OR team).ti,ab	458070
3	CINAHL	(child* OR youth OR "young person" OR "young people" OR youngster*or paediatric or).ti,ab	442364
4	CINAHL	"CHILD, DISABLED"/	10114
6	CINAHL	"SPORTS PARTICIPATION"/	1186
7	CINAHL	"SPORTING EVENTS"/	5274
8	CINAHL	"ATHLETIC TRAINING"/	6382
9	CINAHL	"AQUATIC SPORTS"/	887
10	CINAHL	"SPORTS, DISABLED"/	1939
11	CINAHL	(1 AND 2 AND 3)	5068
12	CINAHL	(4 AND 11)	176
13	CINAHL	(1 AND 6)	40
14	CINAHL	(1 AND 10)	56
15	CINAHL	(1 AND 9)	34
16	CINAHL	(1 AND 8)	270
17	Medline	(physio OR physiotherap* OR therap* OR "allied health" OR "physical therap*").ti,ab	2559968
18	Medline	(sport* OR activit* OR exercise* OR exertion OR team).ti,ab	3263276
19	Medline	(child* OR youth OR "young person" OR "young people" OR youngster*or paediatric).ti,ab	1342327
20	Medline	(17 AND 18 AND 19)	15435
21	Medline	*"DISABLED CHILDREN"/	4723
22	Medline	(20 AND 21)	138

8.5.3 CIHAHL Subject headings search

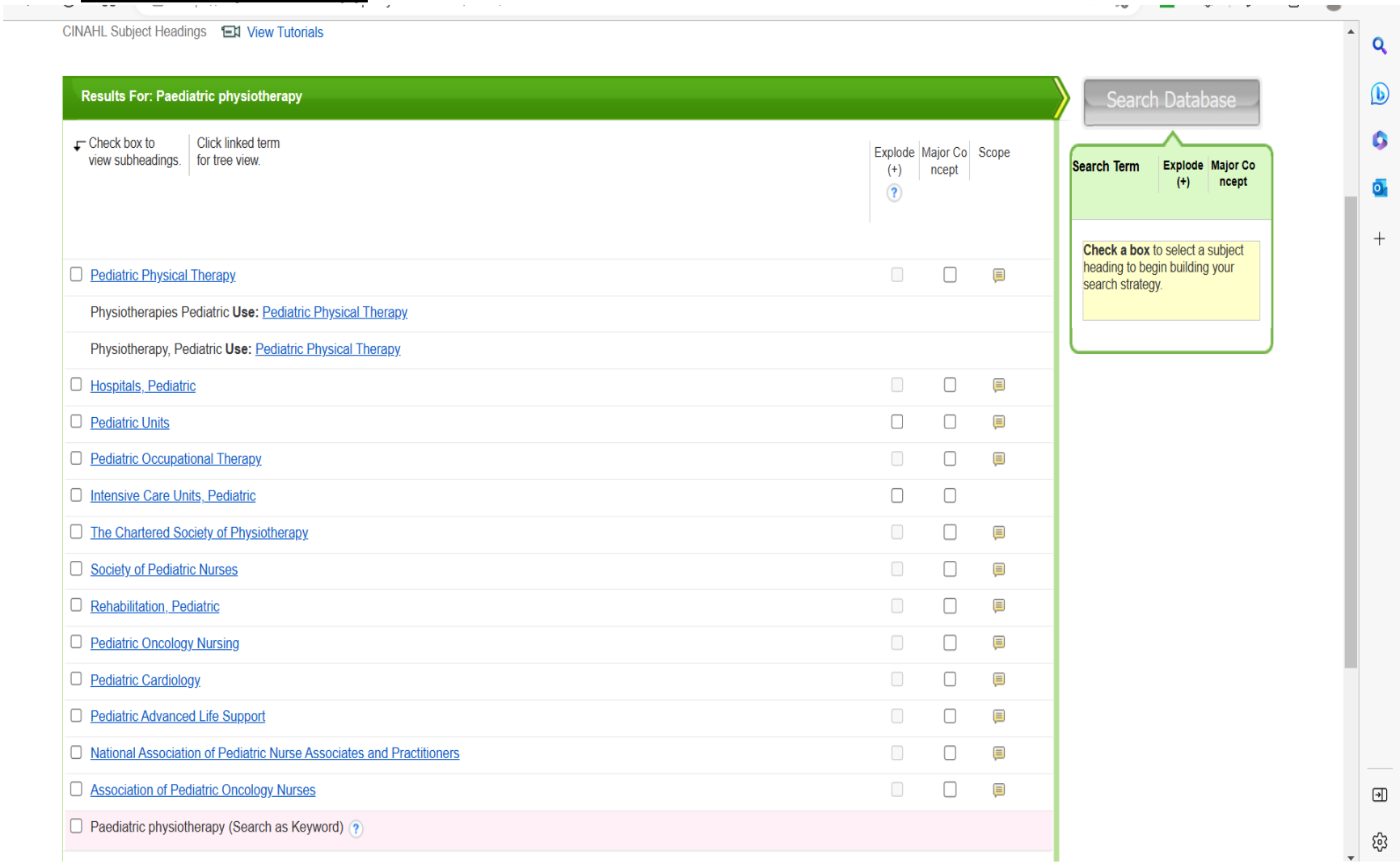
– Physiotherapy



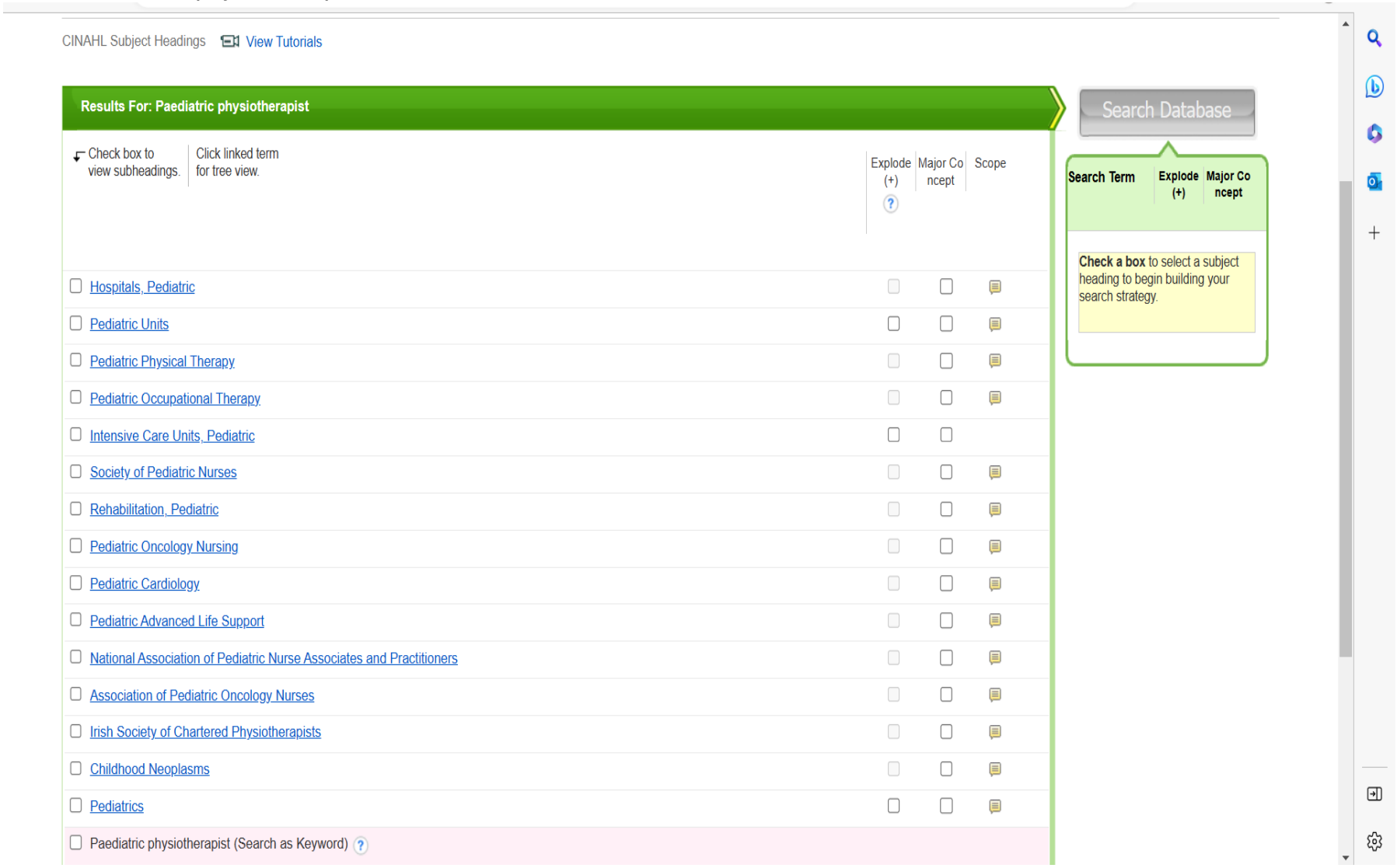
- Physiotherapist



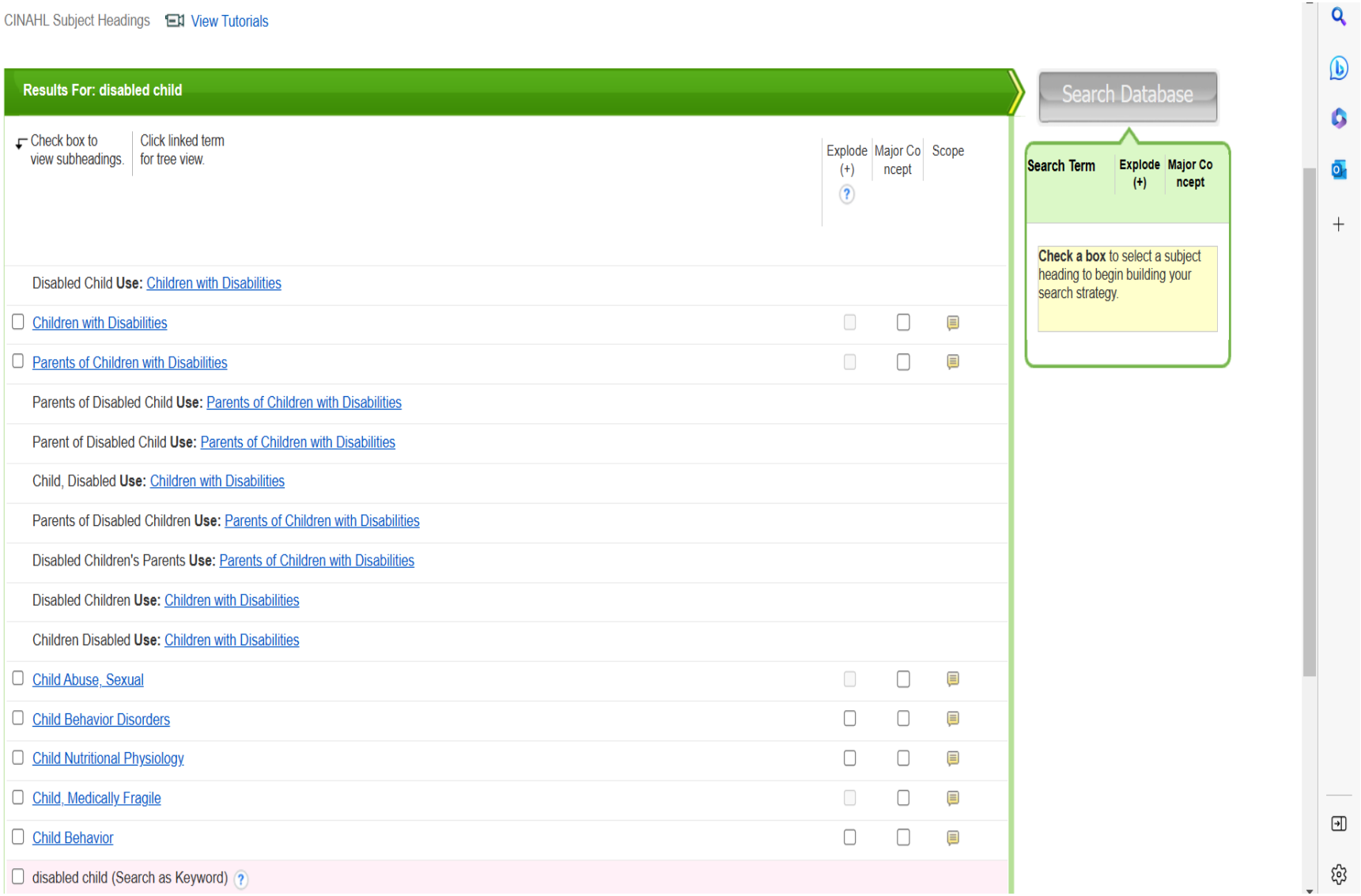
- Paediatric Physiotherapy



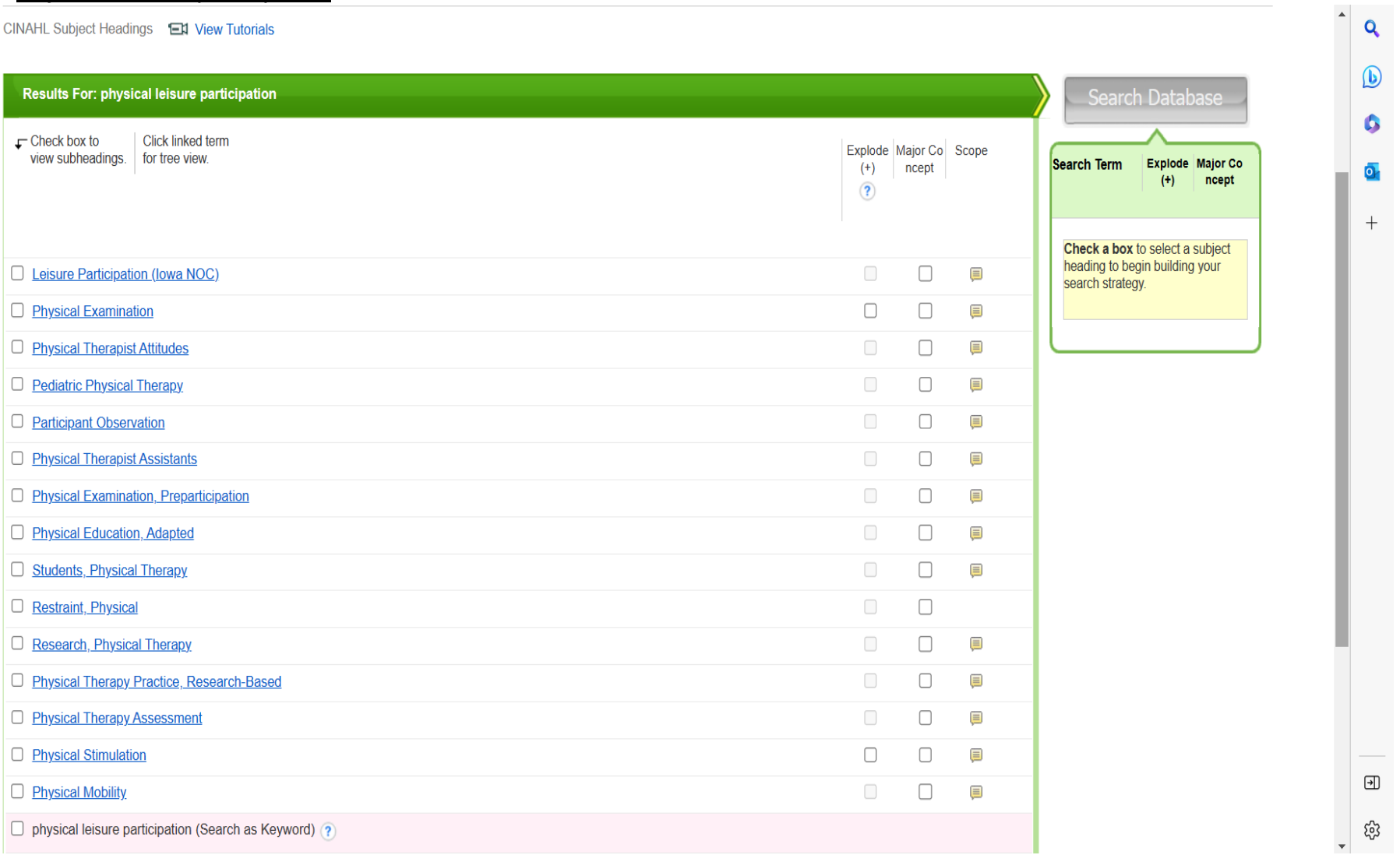
- Paediatric physiotherapist



- Disabled child



- Physical leisure participation



8.6 APPENDIX 6 - PARTICIPANT DOCUMENTS

8.6.1 Extract of initial analysis shared with Jack

Service – Operating in a self-contained geographical setting. Governmental health service.

Physiotherapy is part of a joint therapies service with OT and SALT, seeing a wide variety of conditions for ages from birth to school leaving age.

Participant – Highly experienced physiotherapist. Works with 3 primary domains of children.

i) Routine MSK clinic ii) Dyspraxic children iii) Children with Cerebral Palsy

Meaning making	Making initial links With any applicable/possible theoretical models or recognised strategies or references in academic literature	Raw data summary Direct quotes italicised
Reducing overall number of PT exercises will increase likelihood of sustaining the activity. Underlying assumption that natural activities are normalised and inherently more sustainable.	Research lit on strategies to promote PT adherence.	Sport and physical activity and long-term adherence Yes, but need to assess that the sporting activity is achieving all that is required from PT point of view based on the PT assessment, e.g., if the annual CPIPs review reveals stretching needs, then could see if their gymnastic activity included TA stretching, quads strengthening and any other required specific target areas and if this proved to be the case would be happy to just encourage them to do the *natural* activities. This promotes longevity because kids are engaged. The key is that the activity must address all the target areas, if anything is missing, would ask them to do an extra activity to meet that requirement. That extra activity is then invariably less than the standard PT exercise programme *which they roll their eyes at and seems too big to start.* Thus, it's more manageable because its just 2 or 3 focussed exercises and

Awareness of what programmes demand of YPwD and their families - *mountains of stuff* Secure in PT professional knowledge and role.	Paed PT professional identity and role and coach's role	rest can be maintained through their natural activity and participation. *A smaller programme gets the buy in 'cause you're not asking them to do a mountain of stuff that their friends don't have to do.* The PT's professional expertise and role is to identify (*tease out*) those missing areas through their knowledge of the child (body, anatomy and personal), e.g., weaknesses within the impairment domain of the child. The coaches have a different skill set and PTs can't have that expertise on every sport. No experiences of role confusion when using sport as a PT
Personal experiences of sport have shaped beliefs. Good personal experiences with coaches have shaped beliefs.	Paed PT professional identity and role and coach's role Research lit on negative aspects of competitive sport	Personal experiences of sport influencing practice and beliefs Worked with personal trainers. Involvement in sports teams Have relatives who are professional sports people. So, I respect the knowledge of a coach or people who have trained in sports and see their knowledge base as complimentary to those of a physio Had good relationships with coaches without arrogance or protectiveness and working towards common goals. Neither experienced external organisational pressure from coach's/clubs to win at all costs and this conflicting with PT input. Have felt pressure from highly motivated/driven kids, e.g., competitive footballer not heeding message about pacing and graded exercise/tissue tolerance. *Her intrinsic motivation and her intrinsic win at all costs was detrimental to her recovery.* It's a phenomenon seen more in adults, mostly in patients on caseload, the more they compete, the more warm-ups and warm downs, resources (e.g., Strength and conditioning staff) they can access which helps avoid any issues around overtraining or overuse injuries.
Having something	The significance of	Reflecting on relationships with sport and recreation dept

wrong is disturbing for children. Benefits of de-medicalising. Sport as a normalising factor *Scrutinise* – a forensic examination. In that scrutiny do the children feel they themselves have been pulled to pieces. Naturalistic settings are better – *pure nature.*	labels and settings F-words model (fun) The significance of labels and settings on motor performance ICF model (environmental factors)	It's important because it moves it to be something community-based instead of being a hospital or clinic appt. This matters because of the social implications for children – there is something wrong with them and they need intervention and treatment. When the dept puts on their summer activity programme (open to all) and grades it for the patients to take part, then it means you are going to have a good time, rather than you are going to an appt because something is wrong with you. *It's really benefitted them.* The clinic encounter is so different because as PT's we assess and scrutinise their physical skills because it's our job to assess the impairment and they are trying harder so we don't see their natural ability. That scrutiny involves picking apart each motor component. *We absolutely pull them to pieces.* To be active in a group, closer to home, it's so much more *natural to the kids, there's more engagement, even their movement patterns are a lot more fluent and you get a more honest assessment of their movement patterns without them trying to move in a way they think is the correct way.* Clinic settings have often made self-regulation issues worse. It's the kids' perception of why they are there that makes a difference. Alternative settings have been hugely beneficial made the participant more effective in the treatment because it's the natural setting…*pure nature* unlike the guessing game in the clinic. Kids find it better too because it's a graded programme within their current capability to ensure some initial success and enjoyment. *So that has been the world of good.* Normalised and naturalistic is hugely important. Creates a less intensive environment to learn motor skills at their own pace, using trial and error without pressure, being scrutinised or over-coached. It also saves PT time, avoiding provision of input that wasn't needed and

		promotes more efficient targeted treatment.
Meanings attributed to labels by children and PT's. Where does that anxiety come from – is it the clinical environment?	The significance of labels Child and family-centred care	Importance of labels to children – coach/PT, athlete/patient Hugely important and have used the word coach so much. Feels it removes the anxiety of the parents, who experience anxiety when their child has an impairment; this anxiety is always going to be projected or interpreted by the child. Naturalising the situation and taking away the clinical nature reduces the anxiety, albeit as PT's we are clinicians who are trying to manage impairment, which is not disregarded. Not over-medicalising reduces anxiety. Being solution-based and goal orientated is better than fear-evoking.
Power imbalances negatively affect the therapeutic alliance.	Hierarchies of oppression Discourses of power within healthcare	Power imbalance within the clinical environment noted between kids and clinicians. Clinicians and hospitals can be intimidating. *Making things more natural is in everybody's interests and gains better results.*
Characteristics associated with a coach are more likely to promote the therapeutic alliances.	Hierarchies of oppression Discourses of power within healthcare	Clinician associated with power, intimidation, scrutiny whereas coach is socially interpreted as being more facilitative, more supportive, more of an equal. The participant has considered power imbalances and their consequences even more now that they have moved from treating adults to children. This has been underlined through an encounter with a child who has an extreme fear of health settings and health personnel, but who needed more PT input due to the specific condition. It took considerable thought/effort to break down those power perceptions and needed the use of CBT and ICF principles, to demonstrate the purpose of being there and resolve to be child-led in goal setting, e.g., use polo shirts rather than white uniform and clinical area more child-friendly. The experience with this child forced the participant to do even more to address these power imbalances.

8.6.2 Extracts of Jack's analysed interview document

Developing experiential statements for participant named Jack.
R= Researcher, Participant initial of pseudonym in black. PT – physiotherapy/physiotherapist
[normal font for descriptive notes]

[italicised font for linguistic notes & non-verbal utterances e.g., laughter, significant pauses, hesitations and body language e.g., scratching head or looking away]

[underlined font for conceptual notes]

Experiential statements	*Line*	*Transcript*	*Exploratory notes*
Thinking about what YPwD and their families need because they have anxiety. Dilemma as a clinician to say be less clinical – does it diminish professional identity. Finding the right balance. Placing feelings/needs of families and children first.	748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767	J: Yeah, and I think it's [pause] it's removing some of the anxiety, erm, you know, being a parent myself, if you think there is an impairment or a limitation in your child, it does evoke anxiety and that anxiety is always going to be projected or interpreted by the kid. So, to naturalise some of it, to take away the clinical nature of, I mean I appreciate we are clinicians and we are, erm, [pause] trying to manage impairment, not disregarding that, but it's trying to [pause] not over medicalise, not cause excessive anxiety. It's trying to be solution-based rather than and, you know, goal oriented rather than, erm fear-evoking. And when you get an anxious parent turn up to a clinic, there's, and for the kid there's always that imbalance of power, where the	Meanings attributed to labels by children and Jack. The significance of labels - it's more than a name Where does that anxiety come from? – is it the clinical environment? *Some of it* – not realistic to think it can't be removed completely. Jack accepts the dilemma for professional identity for a clinician to be less clinical. Impairment recognised to be managed not fixed in YPwD. Avoiding *over medicalising* to decrease anxiety Placing feelings/needs of families and children first. Power imbalances negatively affect the therapeutic alliance. *Always* – inevitable?

	768 769 770	clinicians are intimidating, the hospital environment is intimidating.	Hierarchies of oppression and discourses of power are at work within healthcare.
Thinking about how YPwD and their families engage with PT. The coach persona is more acceptable and addresses power imbalances.	771 772 773 774 775 776 777 778 779 780 781 782	Erm, to make things more natural is just…in everybody's best interests and I think gains better results, but I do think if you start to just break down some of those power imbalances where you're the clinician, you're the intimidating, scrutinising, as opposed to being a coach who I think socially is interpreted as being more facilitative, more supportive, err, more of an equal and a supportive factor than, erm, an intimidating factor. I think, I think, that's quite good.	*More natural* – implied that clinical is not natural or 'normal'. Jack feels these power imbalances and the need to address them. *Intimidating* – a strong word, aggressive overtones *Scrutinising* - Jack thinking about how physiotherapists operate their role is to forensically identify the deviance from the 'normal'. For Jack, the positive characteristics associated with a coach reset the power balance and are more likely to promote an equal therapeutic relationship.

Experiential statements	*Line*	*Transcript*	*Exploratory notes*
Personal context influencing professional behaviour. Social context of disability sport is changing beliefs of YPwD.	842 843 844 845 846 847 848 849 850 851 852	I think, I think on a personal level I've always been a sporty person so from that side it's something that I have always naturally, erm, gravitated towards and promoted. I think it's reducing my patients' perceptions, erm, challenging my patients' perspectives, so, erm, a lot of them wouldn't go to [named cycle project] Life because they didn't want to be perceived as disabled or they would, erm, perceive it as for the severely disabled, your GMFCS level four and fives, as	Personal experience of sport is recognised as informing her beliefs around its use in PT. Promotion is a natural sequel of gravitation. Labels herself as *sporty person* For the YPwD, identifying yourself as having a disability and the stigma associated with that is being challenged through disability sport discourse. Social context of disability sport changing beliefs of YPwD about disability and

	853	opposed to your ones and twos.	categories of disability – they're a more able disabled subset
What kids wanted, but what they are now thinking.	854 855 856 857 858 859 860 861	Erm, you know, a lot of them wouldn't go to the disability sports sessions that we put on, because again they would perceive them for, erm, a…higher disability than they wanted to be, or they didn't want to identify as having a disability. I think…it's possibly not changed my practice but it's changed, not completely	Stigma of disability present in minds of more able YPwD How kids are experiencing disability sport is changing due to an acceptance
Kids experiences of disability sport are changing.	862 863 864 865	changed but it's in the process of challenging a lot of my patients' perspectives and improving their access because they're quite accepting that	Environment is changing. *all forms*
Feeling the social environment is changing.	866 867 868 869	disability comes in all forms, and, erm, they're more accepting that it doesn't have to be the defining feature of them. I think, you know, they sort of thought that if they	YPwD broadening their self-identity beyond their disability.
Thinking about our kids with disabilities and what they believe and why about their involvement in sport/PA.	870 871 872 873 874 875 876 877 878	were, they were within that cohort, it was almost like a black and white camp, you were either disabled or you weren't. Your level of disability, erm, wasn't, was irrelevant, you were either disabled or you weren't disabled and therefore they would have to identify with people who they didn't feel were, err, it's just challenging all of those [pause] beliefs, I guess.	YPwD had simplistic view, media portrayals challenging their binary notions (*black and white*) of being disabled or not disabled, rather than seeing it as a spectrum, which had led them not to feel identified with a cohort of people with severe disabilities. Jack links increased engagement with altered beliefs.
Linking increased engagement with these altered beliefs.	879 880 881 882 883	Erm, I've seen a lot more engagement in, erm, [named cycle project] with kids just accepting they may need a modification to the bike, but they can still do it, erm, it's getting there, still a way to go	Jack feels there has been change but anticipates there is still more to come.

8.6.3 GETs and PETs for Jack

GETS and PETs for Jack.

Theme	Page Line	Quote
Theme 1 – Past experiences and contexts I work within are influencing my practice.		
Jack's personal experiences of sport shape professional practice	27.842	*I think on a personal level I've always been a sporty person so from that side it's something that I have always naturally, erm, gravitated towards and promoted.*
Jack's geographical location provides an immediacy and responsiveness in terms of inclusion and promotion of sport.	5.143	*we're unique in the sense that because we're an isolated island and we're a small island.*
Jack's environmental facilities facilitate the use of sport/PA.	18.555	*the more competitive they become in our community, the more resources that are available to them.*
Jack is aware of social attitudes towards disability and impact on YPwD.	27.849	*they didn't want to be perceived as disabled.*
Media portrayals of disability sport are changing the perceptions of YPwD.	27.865	*they're quite accepting that disability comes in all forms, and, erm, they're more accepting that it doesn't have to be the defining feature of them.*
Jack thinking about pressure of peers with TD and using it as a motivator	12.377	*I think peer pressure is always seen as such a negative but there's a natural peer pressure in wanting to keep up with your friends that really supports participation and really supports my programmes*
Theme 2 – Thinking about what my kids need.		
Our kids with disabilities and how	8.247	*kids actually also wanted fun.*

they engage with physiotherapy and sport/PA.	19.605	*it's taking it away from it being you're going to an appointment because something's wrong with you to you're just going to go and have a good time.*
Kids are individuals and not all like sport.	31.984	*that also works on the premise that all kids are going to be sporty and they may not have a personality and choices that means that they like baking or crafts [laughs] individualise that to the service user.*
Have a desire for normalcy and activity in non-clinical settings.	21.670	*yeah, normalised and naturalistic, I think is hugely important.*
	20.625	*it's just so much more natural to the kids, there's more engagement.*
Kids who compete in sport experience internal pressures	18.569	*I think it's not been an organisational pressure; I think it's been an intrinsic pressure that the kids have put on themselves just from being that way inclined, it's their personality but not, erm, organisational pressures.*
Theme 3 – Thinking about the relationship of PT and sport/PA.		
Inclusion/integration seemed the best thing to do.	8.223	*the kids would engage more if it was based on the, err, likes, dislikes and what brought them meaningful, joyful, enjoyable and purposeful activities.*
Linking my CBT theory into the integration	12.383	*So, from a cognitive behavioural therapy point of view, oh, I've come to start asking the kids what they think they could achieve,*
Having confidence about who should deliver after discharge	29.933	*I think it gives me a great deal more confidence to discharge because I still know that if I'm discharging them towards their training or to a coach, that…they are…there's still oversight of them, there's still oversight*

Theme 4 – How I feel sport/PA works for me.		
It's creating engagement.	14.427	*I'm quite happy to just encourage them to do the natural activities, and I think that then promotes your longevity of it because they're engaged.*
It means I can discharge kids sometimes and see them just when they need it.	29.910	*Yeah, definitely for your cerebral palsy kids, erm, with regards to them, if we are quite satisfied that their participation and their sports and activities and hobbies are sufficiently fulfilling their physical needs on an impairment or an activity level, then we're quite happy to discharge them to maintain through their sports and activities and hobbies and then just bring them in for episodic care.*
Active participation in sport/PA means my PT programme can be smaller and focussed.	14.444	*I'm asking them to do a lot…fewer. I'm not giving them a three-page exercise programme which they roll their eyes at and seems too big to start.*
Sport and sport venues are natural phenomena and de-medicalise the encounter.	19.605	*it's taking it away from it being you're going to an appointment because something's wrong with you to you're just going to go and have a good time.*
	24.755	*So, to naturalise some of it, to take away the clinical nature of,* *I mean I appreciate we are clinicians and we are, erm, [pause] trying to manage impairment, not disregarding that, but it's trying to [pause] not over medicalise, not cause excessive anxiety.*
A coach persona is more acceptable and addresses power imbalances	25.773	*I do think if you start to just break down some of those power imbalances where you're the clinician, you're the intimidating, scrutinising, as opposed to being a coach who I think socially is interpreted as being more facilitative, more supportive, err, more of an equal and a supportive factor than, erm, an intimidating factor.*

Theme 5 – Knowing my identity when I use sport/PA.		
Jack's identity feels secure because she knows her professional knowledge base.	16.511	*I respect the knowledge of a coach, or people who have trained in sports. I respect their knowledge base is different to my knowledge base, but they're complimentary.*
Jack adopts a dual identity – a clinical identity as identifying and addressing impairment but also having coach characteristics	24.757	*I mean I appreciate we are clinicians and we are, erm, [pause] trying to manage impairment, not disregarding that.*
	25.777	*being a coach who I think socially is interpreted as being more facilitative, more supportive, err, more of an equal and a supportive factor than, erm, an intimidating factor.*
Theme 6 – Experiences of ICF model when using sport/PA.		
ICF is useful to identify meaningful goals.	7.208	*so naturally we went towards that model.*
	6.227	*it was a conscious development based on feedback.*
ICF builds the relationships with YPwD and families.	6.168	*we've recently moved towards the ICF model and in our initial interviews with many of our new patients, erm, we would actually use that as part of the goal setting with the patients.*
Legitimacy of participation	6.182	*we've done a lot of work around the ICF and using that as our initial interview, err, just to make sure that our goals are patient-centric and, erm, and meaningful to them.*
	4.95	*the fundamental theory is participation*

8.6.4 Extract from reflective field notes/journal entry for Ava

Great rapport in the interview, easy to chat with. Another enthusiast for using sport/PA but I guess it was bound to be like this because they were all a self-selecting sample, unlikely that those who weren't using sport/PA or who were ambivalent about it would have come forward.

Such an interesting interview, I can see how her past experiences as a para-athlete are shaping her perspectives on sport/PA in her practice, but it's more than that, she has had past experiences of receiving physiotherapy and also received coaching as a competitor. She's got perspectives on sport/PA from so many angles.

She's got a real handle on working with kids too, loads of mentions about needing to make things fun and that's one of her big reasons for using sport/PA. children's main occupation is to play etc. Also, she really gets the tedium of conventional physio exercises – it's just never going to work in the long term. When she said about dressing physio exercises up to make them exciting, you could see she saw a need to address that. Talked lots too about making things functional to make it meaningful for the kids. She couldn't see any point in keeping physio separate from sport/PA which makes sense if the physio is so boring for kids.

Talked a lot about kids who compete in sport, so am thinking this insight is partly coming from her own experiences.

I thought someone might feel some role confusion about using sport/PA but she's fine with it (another one!) and just sees herself as a physio but with the useful bits of a coach's characteristics.

When we got onto the bit where she said about not treating kids as patients and using the ICF, she was thinking about the power of an alternative identity where kids are concerned. She really doesn't feel the medical model works for her kids…no ownership, no control and no empowerment for them and no power. Sounds like she uses ICF a lot. She really wants to empower kids and families – talked loads about that, but no mention of Foucault and his discourses of power!!

Definitely thinks it works better when kids and families are already sporty, *so families always play a really big part, erm, unless the child is super-motivated themselves* sounds like she has a good idea of how much a physio can do here.

She knew loads about disability sport and is knowledgeable about the media portrayals like Paralympics etc and positive impact it has had on attitudes, also had a lot to say about coaching competing athletes who have a disability, guess this comes from her background.

She really gets the psychological benefits of sport/PA for kids with disabilities and their families, so reducing isolation, peer support, self-esteem etc. Another narrative to prove the point – she had a few to share!

A few points to say about how sport/PA is affecting the service pathways – help with discharge planning etc.