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What is Known About How Physiotherapy Students Make Sense of Movement as a Component of the Clinical Reasoning Process? A Scoping Review

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Abstract

Background: Observing and analysing movement is a core component of the diagnostic process of physiotherapists and yet, little is known about how students understand the role of movement within the clinical reasoning process. In recent years, there has been an increase in research regarding the importance of movement within the reasoning process of physiotherapists. The way in which movement is observed and analysed directly impacts diagnostic and therapeutic decisions.

Purpose: This purpose of this scoping review is to determine what is known about how students understand movement and the role of movement within the clinical reasoning process.

Methods: A systematic search of the databases CINAHL, ERIC, GALE, PubMed, MEDLINE and SCOPUS between the years of 2011 and 2021 was conducted by the author. Reference lists of included studies were also scanned. Studies were included if they discussed the concept of movement in relation to the clinical reasoning process, how students learn to clinically reason, or how physiotherapists incorporate movement into their reasoning processes, and qualitative data analysis was undertaken.

Results: Ten articles remained after the screening processes. Data was extracted, by one reviewer, into a template that included the characteristics of each paper and four key themes were developed in order to answer the research question. These themes will be discussed further throughout this review.

Conclusion: The findings of this review suggest that there is limited evidence regarding how students understand movement within the clinical reasoning process. Further research on this topic is important for the physiotherapy profession, academics and clinical educators as it might demonstrate a gap in the way that clinical reasoning is currently taught and could create a shift in the way movement is considered as a component of the clinical reasoning process.

I INTRODUCTION

Clinical reasoning is a vital component of the assessment and diagnostic process for physiotherapists (Wijbenga, Bovend'Eerd & Driessen, 2019). Throughout the literature, clinical reasoning is described as a complex and challenging skill, consisting of reflective reasoning and pattern recognition that is developed and honed over time (Chowdhury & Bjorbækmo, 2017; Huhn et al., 2019; Wijbenga, Bovend'Eerd & Driessen, 2019). There are many components to the clinical reasoning process. However, physiotherapists uniquely rely on their understanding of movement and movement analysis to drive their reasoning (Sebelski et al., 2020). Øberg, Normann & Gallagher (2015) discuss the idea that clinical reasoning requires the analysis of movements both enacted and perceived by both the patient and therapist to allow the therapist to gain a deeper understanding of patient limitations and facilitate change throughout the patients' movement system.

Despite clinical reasoning being an essential element of physiotherapy practice, there is little formal teaching around this process at university. This is because it is highly dependent upon clinical experiences and so most of the teaching occurs on placement (Wijbenga, Bovend'Eerd & Driessen, 2019). This can result in limited discussions and reflection around the components and processes involved in the reasoning process, as there tends to be a larger focus on the teaching of clinical skills (Wijbenga, Bovend'Eerd & Driessen, 2019). There is a need to better understand how students perceive clinical reasoning and, specifically, their understanding of movement within the reasoning process to better understand how to effectively teach this skill.

There is currently a paucity of research on how physiotherapy students make sense of their own and their patients' movements throughout the clinical reasoning process. The purpose of this review is to determine what is currently known about how physiotherapy students make sense of movement within their clinical reasoning processes while on placement.

II LITERATURE SEARCH STRATEGY

A search of the databases CINAHL, ERIC, GALE, PubMed, MEDLINE and SCOPUS was conducted on the 06/10/2021. The keywords used for this search were (physiotherapy OR "physical therapy" OR physiotherapist OR "physical therapist") AND ("clinical reasoning" OR "clinical judgement") AND (movement* OR body OR biomechanics). These keywords were selected by the author to ensure that articles from outside of Australia were not missed. Keywords including, student*, learn* and placement were not included in this search as the results were significantly decreased when these words were included, see Table 1 for a full list of inclusion and exclusion criteria. The search was limited to include only journal articles published in English within the last ten years and duplicates were removed within each database. The articles were then screened for relevance by one reviewer, based on title and abstract. The keywords that were required were physiotherapy or physical therapy, clinical reasoning, and movement, body, or embodiment. The remaining 19 articles were screened based on the full text and 9 were excluded.

Quantitative and qualitative studies and expert opinion papers were included in the search, as suggested in the recommendations by Khalil et al. (2016). Ten articles remained and the reference lists were screened for any missed papers, however no further relevant papers were found.

Results are depicted in Table 2 for individual databases and Figure 1 for the screening process. Included data are summarised in Table 3. See the Appendix for a detailed summary of the excluded papers (Table 4) and the search terms used (Table 5).

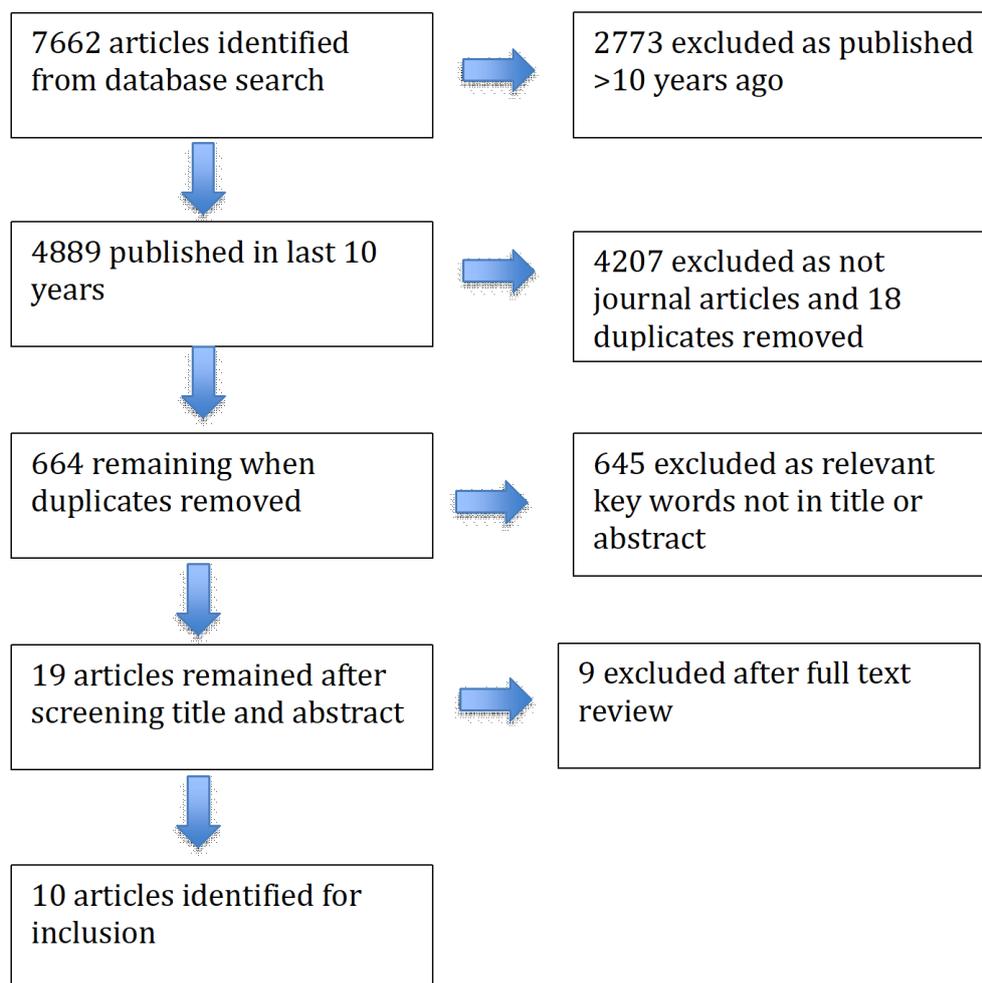
Table 1
Inclusion and Exclusion criteria

Inclusion Criteria	Exclusion Criteria
Papers referred to physiotherapist clinical reasoning processes	There was no full text available
There was a reference to an understanding of movement	The focus was on clinical reasoning as it relates to a specific diagnosis or framework and not the processes or components of clinical reasoning
There was mention of clinical reasoning protocols	The clinical reasoning processes discussed did not include any reference to movement
There was mention of how students are currently taught to clinically reason	There was no discussion of the clinical reasoning process or no mention of movement within the clinical reasoning process
Papers published between the years of 2011 and 2021	Language other than English
Papers in English	
Papers of any study design were considered (including expert opinion)	

Table 2
Database Search Results (completed 06/10/2021)

Database search	Results
CINAHL	72
ERIC	1
GALE	553
PubMed	122
MEDLINE	6793
SCOPUS	121
Total	7662
Total after excluded those published >10 years ago	4889
Total after limiting to journal articles only and duplicates removed	664
Total after screening title for relevance: keywords: clinical reasoning, movement and physiotherapy/physical therapy	19
Total after full text review and screening of reference lists	10

Figure 1
Prisma diagram outlining screening process



A Data extraction

To determine the key themes relating to this topic, data was extracted into a template created by the author. The characteristics of the ten papers - including, title, year of publication, country of origin, key objectives of paper and main findings – were documented by the author. As this review was completed independently data was extracted and analysed by one reviewer.

Table 3
Summary of articles included in this review

Authors	Year	Origin	Key Objectives	Study Type and Methodology	Summary of findings
Covington & Barcinas	2017	USA	Observe how clinical educators take note of and encourage students' understanding of movement in clinical practice	Qualitative study: 5 physio's, 5 students Participant interviews, observation and document analysis	For students to better understand movement, educators need to concentrate on students understanding of movement and its effect on patients, establish a link between movement and patient care, and develop the concept that movement is an embodied part of practice (create a philosophy around movement).

Authors	Year	Origin	Key Objectives	Study Type and Methodology	Summary of findings
Dingenen et al.	2018	UK	To outline and discuss a Movement Evaluation Model, to assist clinicians in assessing movement	Concept analysis	The Movement Evaluation Model provides a framework to assist clinicians in analysing and evaluating movement patterns, while considering individual, environmental and task specific constraints. The aim of this model is to promote clinicians to consider the importance and role of movement in the clinical reasoning process.
Gard, Nyboe & Gyllensten	2020	EU	To understand how physiotherapists from different countries clinically reason around body awareness and how this effects their clinical practice with patients suffering from mental health and musculoskeletal pain disorders	Qualitative study: 36 Physio's Focus groups	Physiotherapists understood body awareness as being aware of sensations and emotions to control pain or other symptoms. Clinical reasoning skills will improve as body awareness understanding improves because therapists require a connection between body and mental awareness to consider information provided in the assessment and respond to the patient's reaction to the treatment.
Huhn et al.	2019	USA	To understand aspects of physiotherapist clinical reasoning to improve teaching, research and assessment	Concept analysis	The three key domains of clinical reasoning, as it pertains to physiotherapy, include cognitive, psychomotor (movement) and affective. The role of movement was integral to the clinical reasoning process and integrated in knowledge and expert practice. Physiotherapists use both observation of movement as well as the use of their bodies and hands to influence the clinical reasoning process.
Øberg, Normann & Gallagher	2015	Norway	Discuss an enhanced model of clinical reasoning with a focus on embodied and enactive reasoning	Expert opinion	An embodied-enactive clinical reasoning model is discussed. This model combines the movement of patient, the experiences of the therapist (through touch or gestures) and the interaction between the two to form a deeper reasoning process.

Authors	Year	Origin	Key Objectives	Study Type and Methodology	Summary of findings
Qutishat et al.	2021	UK	To compare educator's and student's perspectives on learning clinical reasoning skills using the ICF framework	Qualitative study: 6 new graduates 5 educators Focus groups	Found that the ICF framework assisted in guiding students to achieve a patient-centred and holistic approach and assisted them in navigating the complexities of clinical reasoning. Students felt education around reasoning skills was limited by time constraints, workplace environment and level of mentor support. Mentors felt that students were unable to bridge the gap between theory and practice.
Rahlin et al.	2018	USA	Discuss the need for a paradigm shift in clinical reasoning within paediatric physiotherapy from a focus on expected milestone development and "teaching" to correct deformities, to a perception-action-cognition approach	Expert opinion	The perception-action approach brings the focus of clinical reasoning to affordance, embodiment and adaptive value. Examination and intervention strategies should encourage spontaneous movement and assess the ability of the child's body systems to perceive and adapt movement to changes in the environment. A shift in teaching clinical reasoning needs to occur to focus on these skills, rather than simply teaching students expected milestones.
Sebelski et al.	2020	UK	To discuss the need for the physiotherapy profession to recognize the interrelatedness and importance of movement and movement analysis to the clinical reasoning process	Expert opinion	Movement and movement analysis form the foundation of the physiotherapy profession, however, there has been no clear description of movement or significant exploration of how movement influences the clinical reasoning process. Physiotherapy education needs to be altered to ensure that both patient and therapist movement form a part of the clinical reasoning process and a standardised instruction describing movement analysis needs to be developed.

Authors	Year	Origin	Key Objectives	Study Type and Methodology	Summary of findings
Smedel & Gjelsvik	2020	Norway	Discusses what changes need to be addressed within the physiotherapy profession to continue moving forward in the current health climate	Expert opinion	States the role of movement and movement analysis as the foundation of the physiotherapy profession and illustrates the need to include these components into the clinical reasoning process. Questions whether physiotherapy students are educated on movement and movement analysis adequately to make sense of them within their clinical reasoning process. However, this is not discussed further.
Vaughan-Graham et al.	2017	Canada	Assesses how neurorehabilitation physiotherapists (Bobath certified only, a highly specialised form of physiotherapy) make sense of movement within their clinical reasoning processes	Qualitative study: 22 expert neuro-physio's Interviews	The neurological physiotherapists looked at movement from a whole-body perspective, not individual segments. They noted the key components of movement were postural control, alignment, variability and adaptability in movement. There was no discussion regarding how non-specialised physiotherapists conceptualize movement within their reasoning processes.

III RESULTS

All the papers analysed in this review were published in the last six years, demonstrating that the incorporation of movement into the clinical reasoning process is a newly emerging area of research within the physiotherapy profession. There is a significant lack of research in this area. This is made evident by the fact that 40% (n=4) of the papers found were professional commentary discussing the need to begin educating students and clinicians on the importance of considering movement within their clinical reasoning processes. These commentaries also discussed the urgent need for further research in the area of clinical reasoning.

A further 40% (n=4) of the papers found were qualitative studies. Of these four papers, two studied how physiotherapists understand movement and body awareness and two were concerned with the ways in which students are taught about movement and whether current strategies used to teach students to clinically reason are effective. A significant limitation of these studies was the small sample sizes, with the largest sample size being 36 participants (Gard, Nyboe & Gyllensten, 2020). In one study data were gathered from both students and qualified physiotherapists, and only qualified physiotherapists in the remaining three studies. All four of these studies' methodology included either detailed interviews (n=2) or focus groups (n=2).

The remaining two papers were conceptual papers. One of these papers suggested an alternative to the current techniques used to educate students on clinical reasoning. The other looked at a possible alternative framework to encourage clinicians to consider movement more widely within their clinical reasoning processes.

Through the analysis of these papers, four key themes were developed by the author to assist in answering the research question, “what is known about how physiotherapy students make sense of movement within the clinical reasoning process?”. These themes were:

- How is clinical reasoning currently taught and what are the key components?
- How could movement be included in clinical reasoning models/education?
- How do physiotherapists conceptualise movement within their reasoning processes?
- How are students taught to make sense of movement within their clinical reasoning processes?

The results of this review will be synthesized under these four key themes and discussed.

IV DISCUSSION

A *How is clinical reasoning currently taught and what are the key components?*

Educating students on clinical reasoning is challenging and complex due to its contextual and adaptive nature, made up of both therapist and patient perspectives (Huhn et al., 2019). It integrates knowledge with critical thinking, ongoing analysis and reflection, and requires continuous communication and collaboration with the patient (Huhn et al., 2019). To guide physiotherapy students through this process, the International Classification of Function, Disability and Health (ICF) is commonly used as a framework (Qutishat et al., 2021). This framework utilises a holistic approach, combining the personal and contextual factors that impact the patient with the theoretical knowledge, critical thinking and reflection of the therapist (Qutishat et al., 2021). The ICF framework encourages students to consider the bodily structures and functions that are affected, the associated activity and participation restrictions and any environmental or personal factors that might impact the patient (WHO, 2002). There is no attention drawn to movement or movement analysis throughout this framework.

Most of the education around clinical reasoning occurs during workplace-based education (placement) (Qutishat et al., 2021). This provides students with the opportunity to translate knowledge, bridge the theory practice gap and refine their reasoning skills (Qutishat et al., 2021). There are, however, limitations to teaching clinical reasoning skills in this manner. Qutishat et al. (2021) state that students felt that they were unprepared to clinically reason in a workplace environment and often felt that they were not at the level their educators expected. This was because educators noticed that students did not have the required critical thinking skills to develop their clinical reasoning and that they would often utilise non-individualised treatment ‘scripts’ rather than reason through the patients’ presentation (Qutishat et al., 2021).

Students felt that using the ICF framework to guide their clinical reasoning skills prompted them to take a holistic view of the patient and consider factors such as the environment or caregivers (Qutishat et al., 2021). However, they were unable to connect these factors with how they influence the treatment plan and the patient, nor were they able to identify any other factors that could influence their reasoning (Qutishat et al., 2021). This demonstrates that the way clinical reasoning skills are currently taught does not appear to make students understand how to think critically about a patients’ presentation or feel prepared to clinically reason effectively once they enter the workforce. The framework doesn’t encourage an awareness of how movement and movement analysis influence the reasoning process, despite students and new graduate physiotherapists being expected to adequately assess the movement of patients and treat patients with movement.

B *How could movement be included in clinical reasoning models/education?*

Øberg, Normann and Gallagher (2015) discuss the embodied-enactive reasoning model. Within this model, both the patient and the therapist are seen as bodily agents, interacting with their environment and participating in the treatment (Øberg, Normann & Gallagher, 2015). For

embodiment to be fully understood, the physiotherapist must consider the body to be the basis of expression and experience, as well as a biological organism (Øberg, Normann & Gallagher, 2015). This means that the assessment of the patient must not only consist of direct observation and discussion around the patient's experience, but also of communication through gestures and handling of the patient and their responses to this (Øberg, Normann & Gallagher, 2015). Within this clinical reasoning model, movement analysis refers to both the direct observation of the patient's posture, stability and dynamic movements as well as the physiotherapists movements, gestures, what is felt during 'hands-on' assessments and how the patient responds to these movements (Øberg, Normann & Gallagher, 2015).

The enactive component of this reasoning model refers to the cognitive processing that occurs during a patient encounter (Øberg, Normann & Gallagher, 2015). The physiotherapist's clinical reasoning is not simply a mental process occurring in the brain, but a process that is being informed by what the therapist and patient are experiencing throughout the duration of the session (Øberg, Normann & Gallagher, 2015). The reasoning process is constantly changing based on what the therapist is feeling or seeing and how the patient is adapting their movements to the environment or to the handling techniques (Øberg, Normann & Gallagher, 2015). This embodied-enactive reasoning model has a significant focus around movement, movement analysis and the perception of movement by both therapist and patient.

Rahlin et al. (2019) are calling for a shift in clinical reasoning to change the way paediatric physiotherapists assess and treat movement disorders. Rahlin et al. (2019) are encouraging physiotherapists and educators to stop assessing movement disorders in children based on 'taught' milestones and correcting abnormal movement patterns to what is considered 'normal'. The perception-action-cognition model is made up three key elements: affordances, embodiment, and adaptive value (Rahlin et al., 2019). Affordances refer to the characteristics of the environment that encourage the patient to act, embodiment is the way the patient interacts with the environment to achieve the task, and adaptive value refers to how meaningful achieving the task is to the patient (Rahlin et al., 2019). For example, if a child with upper limb spasticity wants to reach for a toy the affordance would be the toy, embodiment would be the way the child has to move to reach the toy, and the adaptive value would be how much the child wants to play with the toy and what they are willing to do to get it. The higher the adaptive value, the more likely the child will complete the task. As it stands, physiotherapists assess, reason and treat children based on what is expected for their age and they attempt to correct movement patterns to be as close to 'normal' as possible. However, Rahlin et al. (2019) state that clinically reasoning and treating in this way can decrease the functionality of movement, as well as decrease spontaneous exploration. By incorporating embodiment into the clinical reasoning process, physiotherapists will encourage children to move freely, explore their environments, and learn about their bodies, proportions and stability (Rahlin et al., 2019).

Finally, Dingenen et al. (2018) discuss their movement evaluation model. This model focuses on combining the analysis of the patient's preferred movement approach with cognitive movement control on different occasions and in different environments (Dingenen et al., 2018). This will assist in determining the factors that could impair movement and their effect on movement health (Dingenen et al., 2018).

The above clinical reasoning models provide alternatives to the current ICF framework and all place a significant emphasis on movement and movement analysis within the clinical reasoning process.

C *How do Physiotherapists conceptualise movement within the clinical reasoning process?*

Huhn et al. (2019) discuss how physiotherapists conceptualise clinical reasoning. They suggest that clinical reasoning should be comprised of three key components: cognitive, affective and psychomotor (Huhn et al., 2019). Cognitive aspects refer to the knowledge translation, critical thinking and reflection required to build and improve clinical reasoning skills (Huhn et al., 2019).

Affective skills refer to the emotional component of learning and are essential for clinical reasoning, as any activity that enhances the emotional state will increase learning and memory (Huhn et al., 2019). Psychomotor skills refer to the role of movement within the clinical reasoning process, specifically the observed movement of the patient and the experienced movement of the therapist (handling, touch etc.) (Huhn et al., 2019).

A study by Vaughan-Graham et al. (2017) supported the conceptualisation of movement suggested by Øberg, Normann and Gallagher (2015). They found that specialised neuro-physiotherapists considered the patient's alignment, stability and control of movement, as well as their own movements and handling to be key elements within their reasoning processes (Vaughan-Graham et al., 2017).

Similarly, Gard, Nyboe and Gyllensten (2020) found that physiotherapists used awareness of their patient's bodies and their own to teach patients about movement, control pain and improve functional movement patterns.

All studies that questioned how physiotherapists conceptualise movement within the clinical reasoning process came to a similar conclusion. Movement in clinical reasoning is not only about observing a patient but combines the movement of the patient and their interaction with the environment with how the therapist interacts with the patient; what they feel, their handling and the effect this has on the patient.

D *How are students taught to make sense of movement within the clinical reasoning process?*

There was only one study found that discussed how clinical educators could help students to better understand movement and its role in clinical reasoning. Covington and Barcinas (2017) agree that physiotherapists must be able to accurately analyse and understand movement to improve the health of their patients. They state that only expert physiotherapists have been found to understand the movement of their patients and understand how to use their own movement and body to assess, treat, or communicate with their patients (Covington & Barcinas, 2017). Through their study, they discovered five key stages in developing students' understanding and use of movement in physiotherapy practice. These were:

1. Taking note of prior knowledge and adapting to individual learning needs;
2. Providing the student with direction for learning;
3. Building students' understanding of movement and the impact it can have on patients;
4. Connecting how movement effects patient care (reflective discussion); and
5. Developing students' conceptualisation of movement in practice and promoting a movement philosophy (Covington & Barcinas, 2017).

Incorporating these five stages into student education while on placement may guide their understanding of movement and movement analysis within the clinical reasoning process.

E *Why is this important to the physiotherapy profession?*

Smedel and Gjeslvik (2020) state that physiotherapists are the specialists of movement within the health professions and yet the current clinical reasoning framework taught to students has no mention of movement or movement analysis (Sebelski et al., 2020).

For physiotherapists to remain specialists of movement, physiotherapists and students alike need to gain a deeper understanding of movement and movement analysis and be encouraged to integrate these concepts into their clinical reasoning processes (Smedel & Gjeslvik, 2020).

F *What further research is needed?*

This scoping review has revealed that there is only a limited amount of research on the subject of movement and clinical reasoning and further research is required in this field. As illustrated

throughout this review, the available literature discusses the importance of a paradigm shift throughout the profession to include movement and movement analysis into clinical reasoning (Dingenen et al., 2018; Øberg, Normann and Gallagher, 2015; Rahlin et al., 2019; Sebelski et al., 2020; Smedel & Gjelsvik, 2020). Possible models to integrate movement and movement analysis into the clinical reasoning process have been proposed (Dingenen et al., 2018; Øberg, Normann and Gallagher, 2015; Rahlin et al., 2019), and the way in which expert physiotherapists conceptualise movement has been studied (Gard, Nyboe & Gyllensten, 2020; Huhn et al., 2019; Vaughan-Graham et al., 2017). There has been one study that considered how clinical educators enhance students' understanding of movement throughout the clinical reasoning process and a framework was developed to guide educators through that process (Covington & Barcinas, 2017).

There are no studies that consider the student's understanding of movement and movement analysis or how they make sense of these concepts within the clinical reasoning process. The current level of education students receive regarding movement and movement analysis is unknown. It is also unclear as to how much time clinical educators allow for education surrounding movement and movement analysis while students are on placement, or if clinical educators feel they have adequate knowledge of these concepts to provide this education.

This scoping review highlights the shortage of research in this area and illustrates the need to discover how students make sense of movement and movement analysis within their clinical reasoning processes. This could allow the physiotherapy profession and clinical educators to realise the limitations in students' knowledge, enhance students' learning in this area and possibly create a paradigm shift to integrate movement and movement analysis into clinical reasoning processes.

V LIMITATIONS

One significant limitation of this scoping review is that it was undertaken independently by one author and so there is a risk of bias and error due to a lack of duplicate screening and testing of forms. There is also a possibility that this review did not include all relevant literature as only one author completed the search and it was not completed in consultation with a librarian.

VI CONCLUSION

The ability to analyse, conceptualise and correct movement forms the foundation of physiotherapy practice. An understanding of the principles of movement is crucial to the reasoning process, however, this has only been shown to be evident in expert physiotherapists (Covington & Barcinas, 2017). The current framework used to guide students through the clinical reasoning process has no mention of movement and it is unclear if students are educated on these principles throughout their studies (Smedel & Gjelsvik, 2020).

This review identified 10 papers to answer the question, "what is known about how physiotherapy students make sense of movement within the clinical reasoning process?" It has demonstrated the need for further research in this area as only 4 papers were qualitative studies and the remaining 6 were made up of expert opinion (n=4) and concept analyses (n=2). Despite the limitations of this review, it has illustrated the need for further research on this topic. This could allow educators, physiotherapists and academics to recognise any gaps that might be evident in student learning and implement ways to rectify this. This research could also form the basis for change within the profession, to move towards a reasoning framework that encompasses embodied and enactive reasoning.

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Appendix

Table 4
Excluded Papers

Reference	Reason for exclusion
Dimitriadis, Skoutelis & Tsipra 2016	Article discussed clinical reasoning in relation to a specific framework used with neurological patients. No mention of how movement influences clinical reasoning.
Håkstad, Obstfelder & Øberg 2018	Study assessed how interaction and communication with parents of preterm babies influenced clinical reasoning. No mention of how movement influences clinical reasoning
Holdar, Wallin & Heiwe 2013	Study discussed factors that affect clinical reasoning but there was no mention of movement
Jones et al. 2021	Study assessed aspects of a specific model of clinical reasoning that related to patients' pain. No mention of how movement can influence clinical reasoning
Kelly et al. 2019	Discusses how what is happening in students' bodies affects their learning, for instance, what could be done to prevent burnout in medical professionals. Doesn't discuss clinical reasoning skills or understanding of movement. Not specific to physiotherapy.
Mandel et al. 2020	Clinical reasoning is specific to hip precautions post THR. No mention of how movement can influence the clinical reasoning process
McDuff et al. 2021	Full text not available
O'Donovan, Campbell & Norman 2017	Assessed physiotherapists competence in relation to clinical reasoning. No mention of key components of clinical reasoning or movement
Riley, Swanson & Cleland 2020	Clinical reasoning processes were specific to back pain and there was no mention of movement throughout the clinical reasoning process.

Table 5
Search Strategy for SCOPUS

Search terms used on 06/10/2021	Results (n)
1 (physiotherapy OR physiotherapist OR "physical therapist" OR "physical therapy")	142,675
2 ("clinical reasoning" OR "clinical judgement")	15,485
3 (movement OR body OR biomechanics)	4,691,789
4 (#1 AND #2 AND #3)	121

