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**RESEARCH ARTICLE**

Physiotherapists' lived experiences of decision making in therapeutic encounters with persons suffering from whiplash-associated disorder: A hermeneutic phenomenological study

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Abstract

Conceptual discussions related to clinical reasoning and decision making have evolved over the years from biomedical to incorporating more holistic approach to reasoning. Empirical studies exploring clinical reasoning and decision making in physiotherapy practice have mostly focused on aspects of managing persons with low back pain, such as exercise prescription, education and communicating diagnosis. There is a paucity of studies exploring decision making in whiplash-associated disorder (WAD); thus, the aim of this study was to explore the physiotherapists' lived experiences of decision making related to treating persons with WAD.

A qualitative research design based on hermeneutic phenomenological methodology was used in this study. Five participants (physiotherapists) were purposefully recruited, and data are collected via semistructured interviews, which were recorded and transcribed verbatim. Interpretative phenomenological analysis (IPA) was used as a method for analysing the data. Emergent, superordinate and master themes emerged from the data to illuminate the lived experiences under exploration.

Three master themes were identified: (1) sense of collaboration; (2) sense of being out of control; and (3) sense of emotional engagement (subthemes: feeling of satisfaction and feelings of distress and uncertainty).

A sense of collaboration revealed varied meaning related to the role of persons receiving care, suggesting a lack of conceptual clarity related to shared-decision making. A perceived loss of a sense of being in control was related to experienced emotions, such as feelings of distress and uncertainty. The findings of this study highlight the importance of providing space for reflection and mentoring in the workplace.

KEYWORDS

clinical reasoning, decision making, phenomenology, whiplash

1 | INTRODUCTION

Conceptual discussions related to clinical reasoning and decision making in physiotherapy practice have been an area of focus in the literature (Davies & Howell, 2012; Edwards, Jones, Carr, Braunack-Mayer, & Jensen, 2004; Edwards & Richardson, 2008; Shaw & DeForge, 2012). The discussions have highlighted different reasoning approaches, such as more biomedical, diagnostic reasoning (Jones, 1992) and more holistic reasoning approaches using collaborative, narrative, ethical and embodied-enactive reasoning (Edwards et al., 2004; Edwards, Braunack-Mayer, & Jones, 2005; Øberg, Normann, & Gallagher, 2015; Praestegaard & Gard, 2013). An integrated conceptualisation suggested a “bricoleur” approach, which involves using the most relevant clinical reasoning strategies within each clinical individual encounter (Shaw & DeForge, 2012). This “eclectic approach” incorporates the diversity of approaches physiotherapists may use within one decision-making moment (Davies & Howell, 2012). A recent evolutionary concept analysis found that clinical reasoning in physiotherapy is conceptualised as collaborative and intends to take a biopsychosocial approach (Huhn, Gilliland, Black, Wainwright, & Christensen, 2018). In addition to conceptual discussions, research has also explored physiotherapists' accounts of clinical reasoning in their practice.

Studies exploring physiotherapists' accounts of clinical reasoning have focused on different aspects, for example, the way in which ethical issues were integrated into their clinical practice decisions (Finch, Geddes, & Larin, 2005). Other studies have explored physiotherapists' clinical reasoning and decision making related to specific conditions, such as low back pain (Horler, Martyn, & Hebron, 2020; Langridge, Roberts, & Pope, 2015; Widerström, Rasmussen-Barr, & Boström, 2019). It is recognised that qualitative research is context specific (Rolfe, 2006) and thus the experience of decision making for other conditions and in other contexts may not reflect to nuances of decision making for persons with other disorders, such as whiplash-associated disorder (WAD).

WAD is a condition that mainly results from road-traffic accidents after the acceleration/deceleration moment of the neck (Sterling, 2014). Persons suffering from WAD often complain of neck pain, stiffness, and associated symptoms, such as dizziness, nausea, balance and visual disturbances, and post-traumatic stress (Foreman & Croft, 2002; Mercer, Jackson, & Moore, 2007; Ravn, Sterling, Lahav, & Andersen, 2018; Sterling, 2014). The traumatic and sometimes frightening nature of the preceding event can also lead to fear and distress (Russell & Nicol, 2009). The National Institute for Health and Care Excellence (NICE) whiplash guidelines (NICE, 2018) suggest physiotherapists offer multimodal therapy, including range of movement, strengthening and stretching exercises as well as some sort of manual therapy. Recognising the traumatic nature of the injury, NICE also recommends psychological strategies for persons with acute of post-traumatic stress. Furthermore, whiplash can lead to rare but serious pathoanatomical sequelae such as craniovertebral instability (Rebbeck & Liebert, 2014) and cervical artery dysfunction, which may

lead to diagnostic challenges and uncertainty (Graziano, Nitsch, & Huijbregts, 2013). These specific diagnostic challenges and the wide reaching effects on sufferers highlight the need for an individualised approach to physiotherapy management and the complexity of person-centred decision making. No studies have previously explored physiotherapists' decision making as a lived-through experience in relation to persons with WAD. Thus, it is the aim of this study to explore the physiotherapists' lived experiences of decision making with people suffering WAD.

2 | METHODOLOGY

2.1 | Study design

This qualitative study used hermeneutic (interpretive) phenomenological methodology (Annells, 1996; Smith, Flowers, & Larkin, 2009) to explore physiotherapists' lived experiences of decision making related to physiotherapy management of persons with WAD. Interpretive (or hermeneutic) phenomenology, originating from Heidegger's phenomenological analysis, aims to explore and understand the variation or nuances of specific lived-through experiences of individuals (Laverty, 2003; Nicholls, 2009). From this position, it is acknowledged that there is no single reality of truth and that the knowledge produced in the study is socially constructed and interpretative (Crotty, 2004). Ethical approval was obtained from a university ethics committee in the south of England.

2.2 | Participant recruitment

Physiotherapists who had experience of treating people with WAD were purposively recruited to the study via university e-mail directed to students currently undertaking postgraduate physiotherapy programmes. Information sheets explaining the study aim and design in detail were provided via e-mail for those potential participants expressing their interest. The inclusion criteria were physiotherapists who were practicing in the United Kingdom, who had at least 2 years of experience and had treated persons with WAD in the last 12 months. This was considered necessary for the participants to be able to speak in detail about concrete, lived-through situations of decision making regarding persons with WAD. Five physiotherapists who met the inclusion criteria volunteered and were recruited as participants of the study. All participants were undertaking postgraduate studies in musculoskeletal physiotherapy. Four participants worked in the NHS and one in private practice.

2.3 | Procedure

Each participant (physiotherapist) took part in one individual face-to-face, semistructured interview in a private room. Interviews were con-

ducted by the first author, a musculoskeletal physiotherapist with postgraduate training in research methods. By adopting a hermeneutic phenomenological attitude, the researcher-interviewer engaged in a double hermeneutic, aiming to make sense of the participants trying to make sense of their lived experiences related to the research interest. The interviews started with an open question: "Can you think of a patient suffering from WAD and explain to me in as much detail as possible your experience of decision-making for that patient?". Exploratory probes were used to encourage further descriptions of meaningful decision-making situations, for example: "you mentioned x could you help me understand that?," "what were your actions at that time?," and "can you explain y in more detail?" The interview guide was developed through a collaboration of all three researchers. The researcher-interviewer kept a reflective diary and added comments after following interviews. These comments were related to factors such as the participant's nonverbal communication and body language and the researcher involvement. The length of the interviews varied from 35 to 52 min. All five interviews were conducted, audio-recorded and transcribed verbatim by the same researcher-interviewer (first author).

2.4 | Analysis

The method of interpretative phenomenological analysis (IPA) by Smith et al. (2009) was used to analyse the transcribed interviews. Following IPA, six steps of analysis were applied.

At the beginning (first step), the first authors read and reread the transcribed text to get a sense of the whole transcription. While reading, the text was divided into "meaning units" ("parts" of the text containing a meaning). Next, initial notes were made (second step) consisting of descriptive, linguistic and conceptual comments related to search for meanings (both explicit and implied). In the third step, emergent themes were formed based on initial noting, which was the start of reducing the amount of data. Irrelevant comments not related to the research question were omitted in this stage of the analysis. In the fourth step, all emergent themes were organised to find meaningful connections. During the fifth step, the grouped emergent themes were allocated within superordinate themes based on the meanings they conveyed. After forming the superordinate themes, a move to the next interview transcription took place, and Steps 1 to 5 were repeated until all interviews were analysed. The last step took place once the final interview text had been analysed with this iterative process. This step included the search of meaningful connections between the transcripts, and the three master themes were formed. Each step of the analysis was reviewed and discussed with the research team (second and third authors). The hermeneutic circle was used throughout each stage of the analysis. This consisted of moving from the parts of the transcript to the whole, which repeatedly went back and forth to increase the depth of analysis and engagement with the text (Laverty, 2003). The researcher also used a reflexive diary to help her remain sensitive to her preunderstanding and its implications in the data analysis.

3 | FINDINGS

As a result of the IPA process, three master themes and two sub-themes emerged from the raw data conveying the qualitatively meaningful variation in the physiotherapists' lived-through experiences of people with WAD (Figure 1). These themes were sense of collaboration; sense of being out of control; and the sense of emotional engagement, which was subdivided into two subthemes: feelings of satisfaction and feelings of distress and uncertainty. Each of the three master themes with their subthemes are discussed below with examples from the raw data.

3.1 | Sense of collaboration

All participants in this study highlighted the significance of collaboration between them and the person suffering from WAD in the decision-making processes related to physiotherapy management of the condition. This master theme was characterised by the sense of shared decision making, getting the person "on-board," listening to the person and trust. However, accounts of shared decision making varied in meaning; although all participants alluded to shared responsibility in decision making, their accounts highlighted differences in their perceptions of who was dominant within this collaboration. Some participants implied a more therapist-centred decision making.

"... everything went really well and I felt extremely confident with the decisions [...] I was making for her ..."
(Participant 4, p. 16)

Participant 3, in her account, implicitly referred to the therapist's responsibility in the decision-making process.

"... you know at the end of the day again you look at kind of who is the most responsible" (Participant 3, p. 12)

Although Participant 5 perceived that it was important for the person with WAD to "feel in control," she described the challenge of engaging persons in collaborative decision making.

"... asking her however what she wanted to do, in regard with physiotherapy, she would be well you are the expert so what do you think I should do?" (Participant 5, p. 3)

Getting the person "on board" with the aims of the therapist was described as meaningfully related to successful collaboration in decision making in persons with WAD. In this regard, Participant 5 explicitly expressed her satisfaction with the collaborative scenario.

"...so if the patient is on-board with what you are doing, it makes you feel good about it ..." (Participant 5, p. 8)

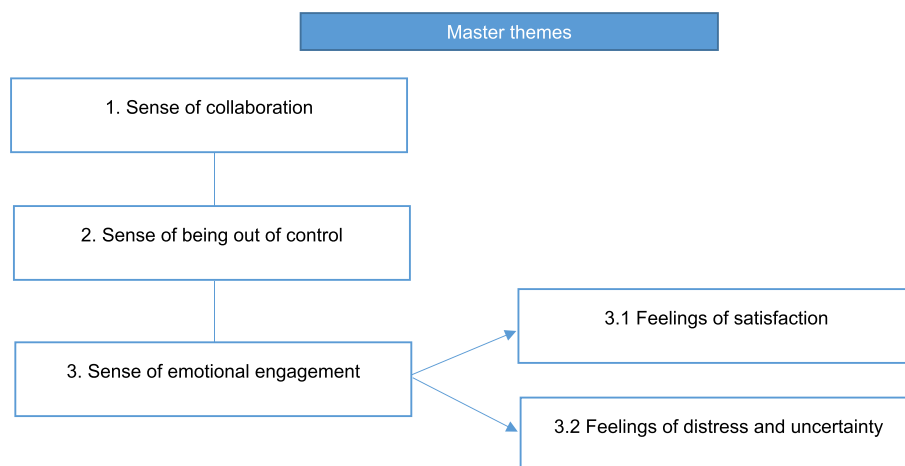


FIGURE 1 Master themes [Colour figure can be viewed at wileyonlinelibrary.com]

In their accounts of collaborative decision making, all participants highlighted the importance of listening to the person.

“...decision making wise quite led by how the patient responded rather than what were my tests telling me for example” (Participant 3, p. 10)

Trust was highlighted as important in collaboration, with trusting the persons with WAD being perceived as essential for successful collaboration. Contradictions within participants' accounts were evident; although they highlighted the importance of believing the person, the description of distrust dominated their descriptions of concrete situations.

“you know I always believe what someone is telling me [...] I think if you don't believe what someone is telling me, you ... it is a ... it's a very slippery road” (Participant 4, p. 7)

“... and you're thinking, yeah right so 'you have done them' (referring to home exercises), and you know that he probably hasn't” (Participant 4, p. 7)

Only one participant acknowledged the significance of the person with WAD trusting them but echoing other aspects of the sense of collaboration, which was related to the somewhat “patriarchal” sense of getting them on board with the physiotherapists' agenda; when discussing exploring persons' treatment preferences, she described examples of when persons had deferred to her expertise:

“Yeah it is easier, ehm ... I suppose it is easier because you have got that engagement, you have got that rapport ... because you feel confident that that patient had trust in what you are doing” (Participant 5, p. 18)

This distrust of persons' account of WAD was intertwined with and meaningfully related to the second master theme, the sense of being out of control.

3.2 | Sense of being out of control

A perceived sense of being out of control, as conveyed in the data, appeared meaningfully interrelated with the expressed feelings of frustration, distress and uncertainty. The findings of this study as such highlight the importance of providing space for reflection and mentoring in the workplace. The sense of frustration, as expressed by the participants, was related to factors such as time constraints, “stubborn patients,” “plateauing patients,” age, stage of healing and ongoing litigation. Some participants explicitly expressed their frustration in relation to one or more of these factors, whereas for others, the frustration was related to the overall decision-making process. Litigation was identified as a predominant source of their frustration but with differing meanings. Some participants expressed their fear and mistrust of the legal process, whereas for others, frustration was associated with questioning the authenticity of persons' stories or presentation related to WAD.

“I think the legal aspect can be very frustrating and scary as well, cause our notes are taken up from the insurance company and reviewed, and can have an impact on the progress they make” (Participant 2, p. 29)

“And I think that was the frustration side of thing, the fact that ... you had to look beyond what was kind of subjectively and objectively given to you and still treat the patient as, as though you are ... convinced that there is true pain, and that there is true limitation in her life” (Participant 3, p. 20)

The sense of being out of control, based on the participants' accounts, was meaningfully interrelated with the third master theme: the sense of emotional engagement.

3.3 | Sense of emotional engagement

Participants' accounts conveyed the experienced emotional engagement related to decision making in a positively and/or negatively related sense. This led to formation of two subthemes: feelings of satisfaction and feelings of distress and uncertainty, each conveying the qualitative variation in the participants' experience.

3.3.1 | Feelings of distress and uncertainty

Participants' accounts conveyed feelings of distress and uncertainty related to decision making for persons with WAD. To some extent, these more negatively related emotions were intertwined with the experienced sense of being out of control, with the presence of litigation being a meaningful factor.

"I don't want to be considered a poor physio that hasn't considered everything, and hasn't looked at every element that could be improved [...] I think you do that you can for the patient, but when that is looked at black and white at a legal situation, you ... I would never want to be in a situation where I miss something" (Participant 2, pp. 29–30)

However, these more negatively related emotions were additionally associated with feeling inadequate about oneself or the treatment outcome or uncertainty about the diagnosis or complexity of WAD.

"... I was initially quite positive [...] but yes a bit of frustration there that we didn't get the result she perhaps was looking for ..." (Participant 2, p. 17)

"I felt more frustrated about how I felt at the time, but I think reflectively, I felt like, I feel like I let her down ..." (Participant 5, p. 16)

"because I like to double check to see what is going on with her ... to see if it is my fault or something else" (Participant 1, p. 21)

"... whether or not you feel comfortable and confident [...] Or if you feel more out of your depth ..." (Participant 3, p. 15)

Participant 5 declared that seeking help from colleagues was scary and made her feel inadequate but subsequently addressed the irrationality of her feelings.

"... seeking help and making yourself look like you are a bit inadequate is quite a scary thing to do" (Participant 5, p. 16)

"... you can't always beat yourself up that some people don't respond" (Participant 5, p. 26)

3.3.2 | Feelings of satisfaction

All participants explicitly expressed their feelings of satisfaction to decision making, although in somewhat different words. These feelings were associated with experiences of successful moments in patient management and/or discharge.

"... you know it felt quite good, cause everything I did, did get him better" (Participant 2, p. 24)

"... the decision to finally discharge them is always great" (Participant 4, p. 25)

4 | DISCUSSION

The aim of this study was to explore participants' (physiotherapists) lived experiences of decision making in therapeutic encounters with persons suffering from WAD. Three master themes were identified from the data. These themes were interrelated with meanings from one theme overlapping with the next.

Although participants in this study alluded to shared decision making, there was variation in how it was "lived" with concrete examples revealing hegemony. Conceptualisations of shared decision making in the literature highlight collaboration between the therapist and the person receiving therapy and suggest considering wider collaboration, calling for greater inclusion of the persons family where appropriate (Hoffmann, Lewis, & Maher, 2020; Van Nistelrooij, Visse, Spekink, & De Lange, 2017). The aim of shared decision making is to enable persons to decide autonomously and freely and without interference or coercion (Van Nistelrooij et al., 2017). In this study, participants' descriptions related to collaboration during decision making revealed a somewhat "patriarchal" sense of getting the "patient on-board." These findings resonate with the findings of phenomenological studies in the context of low back pain (Stenner, Swinkels, Mitchell, & Palmer, 2016; Sullivan, Hebron, & Vuoskoski, 2019). Sullivan et al. (2019), exploring physiotherapists' lived experiences of communicating the diagnosis of chronic non-specific lower back pain to their patients, found that getting patients "on board" with the clinicians' perspectives was perceived as a way to build trust.

Trust was highlighted in participants' descriptions associated with experienced challenges in collaboration, as well as lacking trust in the accounts of persons with WAD, particularly in the presence of litigation. What was missing in the data of this study was consideration of the importance of persons having trust in their physiotherapist.

Research on the experience of whiplash sufferers has highlighted the importance of them having trust in their health provider (Russell & Nicol, 2009). Participants in this study described a lack of trust in persons' accounts creating challenges when listening to their stories. Active listening, however, was described as an essential element of decision making in therapeutic encounters with persons suffering from WAD. This echoes the findings of a grounded theory study in which "patients" were considered to be the most important source of knowledge for the physiotherapist, and the patients' stories were considered central to decision making for physiotherapists working in patient settings (Jensen, Gwyer, Shepard, & Hack, 2000). In addition, communication has been recognised as a "catalyst" for developing the therapeutic alliance (Søndenå, Dalusio-King, & Hebron, 2020) and, although the importance of active listening was recognised in the current study, other aspects of communication identified by Søndenå et al. (2020), such as empathy, were missing from the data. Conflict during collaboration may be reduced when there is a stronger therapeutic alliance (Pinto et al., 2012) and a reciprocal relationship between collaborative decision making and the therapeutic alliance has been recognised (Ferreira et al., 2013; Pinto et al., 2012). What was missing from the data in this study was acknowledgement of elements of the therapeutic alliance that may facilitate persons receiving care to gain control, such as fostering autonomy, sharing the journey, seeing the person and providing therapeutic space (Søndenå et al., 2020). This appeared to be related to the desire for participants to be in control of the therapeutic encounter.

The second master theme "sense of being out of control" was meaningfully related to factors that were deemed to be out of participants' control. A "sense of being out of control" was also expressed in relation to situations such as acquiring sufficient objective information, patients not being motivated, and on-going litigation. The perceived challenges with decision making for persons with on-going litigation echo the literature; for example, in a qualitative study conducted in The Netherlands, expert clinicians highlighted the perceived influence of compensation on rehabilitation and described conflicts with persons with WAD striving for compensation but also for recovery (Van Der Meer, Pieterse, Reneman, Verhoeven, & Van Der Palen, 2015). Participants' expressions in this study resonate with experiences of personal doubt and uncertainty expressed by physiotherapists related to communicating the diagnosis of chronic nonspecific low back pain to their patients (Sullivan et al., 2019) and are interrelated with the third master theme, sense of emotional engagement.

Participants discussed the "sense of emotional engagement" with decision making for people suffering from WAD. The emotional responses varied from feelings of anxiety to satisfaction. This resonates with the mixed emotions experienced by participants in a study exploring ethically-based clinical decision making, where participants appeared to struggle with decision making initially, whereas later on, the experience became satisfying for some (Finch et al., 2005). The decision to discharge patients was meaningfully related to experiencing feelings of confidence and satisfaction. Participants also experienced satisfaction when decisions were made collaboratively and

thus, for participants in this study, is intertwined with the sense of collaboration. However, experienced satisfaction is in contrast with "feelings of anxiety" expressed by participants in this study. The qualitative significance of emotional engagement in clinical reasoning in the context of physiotherapy practice has been acknowledged in previous (Kozłowski, Hutchinson, Hurley, Rowley, & Sutherland, 2017; Langridge, Roberts, & Pope, 2016).

In this study, the participants expressed feelings of distress and uncertainty related to clinical decision making for people with WAD, which may have meaningful implications to practice. The implications of uncertainty related to clinical decision making have been highlighted in previous research (Widerström et al., 2019). In medical students, low tolerance to uncertainty has been associated with the fear of making mistakes (Nevalainen, Kuikka, Sjöberg, Eriksson, & Pitkälä, 2012) and greater psychological distress (Lally & Cantillon, 2014). In addition, a recent review identified three studies, which all demonstrated association between tolerance to uncertainty and burnout in clinicians (Strout et al., 2018). Therefore, building tolerance to uncertainty in workplace is considered important for staff well-being.

4.1 | Implications

The findings of this study highlight the need for further training to help physiotherapists operationalise shared decision making in practice. As physiotherapy education evolves, an increase in philosophical exploration of ontology, epistemology and concepts such as power, autonomy and agency may facilitate physiotherapists in navigating the challenges of caring for persons with varying experiences, understandings and realities. In this study, participants' accounts of clinical decision making manifested a negative association with emotional engagement, such as feelings of doubt and uncertainty; highlighting the need to ensure staff wellbeing, for example, providing space and time in the workplace for strategies such as mentoring and huddles. Huddles have been shown to enhance the ability of less experienced staff to connect more empathetically with persons receiving care and their families (Turner, Locke, Jones, & Carpenter, 2019). Participants in the current study expressed reservations related to being judged by colleagues and, therefore, creating a supporting, development-oriented culture is important. Furthermore, reflective practice could help physiotherapists make sense of their emotional engagement during decision-making processes.

4.2 | Methodological considerations

Physiotherapists with a minimum of 2-year experience were recruited. They were all undertaking postgraduate study in musculoskeletal physiotherapy and were actively engaged in contemporary discussions and research. Purposefully recruiting physiotherapists from outside the University may have resulted in further variation and enhanced the credibility of the study. The first author kept a reflexive journal,

which she referred to while using the hermeneutic circle to question her preunderstanding and involvement in collecting and analysing the data. All three authors undertook dialogic discussion during the analysis process, with the second and third author offering alternative perspectives, thus strengthening the methodological quality of the study. A selection of quotes was used in order to illustrate how the themes were present in the data. Participant checking was not used as this study was not seeking to claim validity or generalisability, as these are incongruous with the phenomenological, interpretivist stance of this study (Denzin & Lincoln, 2005). Data saturation was not sought as the aim of phenomenology is to seek in-depth insights as opposed to constructing theory. Only five participants were included in this study, which can be seen as a limitation of the study. We believe that the interviews contained enough data to fulfil the aim of the study. We do not claim that findings of this study are transferable and humbly ask the reader to reflect on the findings in relation to their own practice and context.

5 | CONCLUSION

This qualitative interpretative phenomenological study explored physiotherapists' experiences of decision making with persons suffering from WAD. Following interviews with five physiotherapists, three master themes emerged; sense of collaboration; sense of being out of control; and sense of emotional engagement with decision making. The last master theme "emotional engagement" was subdivided in two themes: feelings of satisfaction and feelings of distress and uncertainty with decision making. As manifested in the data, a sense of collaboration appeared with varied meaning, revealing a lack of conceptual clarity related to shared decision making. A perceived sense of being out of control, as conveyed in the data, appeared meaningfully interrelated with expressed feelings of frustration, distress and uncertainty. The findings of this study as such highlight the importance of providing space for reflection and mentoring in the workplace.

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CONFLICT OF INTEREST

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REFERENCES

- Annells, M. (1996). Hermeneutic phenomenology: Philosophical perspectives and current use in nursing research. *Journal of Advanced Nursing*, 23, 705–713.
- Crotty, M. (2004). *The foundations of social research: Meaning and perspective in the research process* (1st ed.). London: Sage.
- Davies, C., & Howell, D. (2012). A qualitative study: Clinical decision making in low back pain. *Physiotherapy Theory and Practice*, 28, 95–107. <https://doi.org/10.3109/09593985.2011.571752>
- Denzin, N. K., & Lincoln, Y. S. (2005). *Introduction: The discipline and practice of qualitative research* (3th ed.). Thousand Oaks: Sage.
- Edwards, I., Braunack-Mayer, A., & Jones, M. (2005). Ethical reasoning as a clinical-reasoning strategy in physiotherapy. *Physiotherapy*, 91, 229–236. <https://doi.org/10.1016/j.physio.2005.01.010>
- Edwards, I., Jones, M., Carr, J., Braunack-Mayer, A., & Jensen, G. (2004). Clinical reasoning strategies in physical therapy. *Physical Therapy*, 84, 312–330.
- Edwards, I., & Richardson, B. (2008). Clinical reasoning and population health: Decision making for an emerging paradigm of health care. *Physiotherapy Theory and Practice*, 24, 183–193. <https://doi.org/10.1080/09593980701593797>
- Ferreira, P. H., Ferreira, M. L., Maher, C. G., Refshauge, K. M., Latimer, J., & Adams, R. D. (2013). The therapeutic alliance between clinicians and patients predicts outcome in chronic low back pain. *Physical Therapy*, 93, 470–478.
- Finch, E., Geddes, L., & Larin, H. (2005). Ethically-based clinical decision-making in physical therapy: Process and issues. *Physiotherapy Theory and Practice*, 21, 147–162. <https://doi.org/10.1080/09593980590922271>
- Foreman, S., & Croft, A. (2002). *Whiplash injuries: The cervical acceleration/deceleration syndrome* (3rd ed.). Baltimore: Lippincott Williams & Wilkins.
- Graziano, D. L., Nitsch, W., & Huijbregts, P. A. (2013). Positive cervical artery testing in a patient with chronic whiplash syndrome: Clinical decision-making in the presence of diagnostic uncertainty. *Journal of Manual & Manipulative Therapy*, 15, 45E–63E. <https://doi.org/10.1179/jmt.2007.15.3.45e>
- Hoffmann, T. C., Lewis, J., & Maher, C. G. (2020). Shared decision making should be an integral part of physiotherapy practice. *Physiotherapy*, 107, 43–49. <https://doi.org/10.1016/j.physio.2019.08.012>
- Horler, C., Martyn, K., & Hebron, C. (2020). Personalizing education: The clinical reasoning processes of physiotherapists using education for the treatment of people with chronic low back pain. *Physiotherapy Theory and Practice*, 1–10. <https://doi.org/10.1080/09593985.2020.1765437>
- Huhn, K., Gilliland, S. J., Black, L. L., Wainwright, S. F., & Christensen, N. (2018). Clinical reasoning in physical therapy: A concept analysis. *Physical Therapy*, 99, 440–456. <https://doi.org/10.1093/ptj/pzy148>
- Jensen, M., Gwyer, J., Shepard, K., & Hack, L. (2000). Expert practice in physical therapy. *Physical Therapy*, 9, 28–43.
- Jones, M. A. (1992). Clinical reasoning in manual therapy. *Physical Therapy*, 72, 875–884. <https://doi.org/10.1093/ptj/72.12.875>
- Kozlowski, D., Hutchinson, M., Hurley, J., Rowley, J., & Sutherland, J. (2017). The role of emotion in clinical decision making: An integrative literature review. *BMC Medical Education*, 17, 18–13. <https://doi.org/10.1186/s12909-017-1089-7>
- Lally, J., & Cantillon, P. (2014). Uncertainty and ambiguity and their association with psychological distress in medical students. *Academic Psychiatry*, 38, 339–344. <https://doi.org/10.1007/s40596-014-0100-4>
- Langridge, N., Roberts, L., & Pope, C. (2015). The clinical reasoning processes of extended scope physiotherapists assessing patients with low back pain. *Manual Therapy*, 20, 745–750. <https://doi.org/10.1016/j.math.2015.01.005>

- Langridge, N., Roberts, L., & Pope, C. (2016). The role of clinician emotion in clinical reasoning: Balancing the analytical process. *Manual Therapy, 21*, 277–281. <https://doi.org/10.1016/j.math.2015.06.007>
- Laverty, S. M. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods, 2*, 1–29.
- Mercer, C., Jackson, A., & Moore, A. (2007). Developing clinical guidelines for the physiotherapy management of whiplash associated disorder (WAD). *International Journal of Osteopathic Medicine, 10*, 50–54.
- NICE. (2018). Neck Pain–whiplash injury–NICE CKS. Retrieved 8 June, 2020, from <http://cks.nice.org.uk/neck-pain-whiplash-injury#!scenario>
- Nevalainen, M., Kuikka, L., Sjöberg, L., Eriksson, J., & Pitkälä, K. (2012). Tolerance of uncertainty and fears of making mistake among fifth-year medical students. *Family Medicine, 44*, 240–246.
- Nicholls, D. (2009). Qualitative research: Part two–Methodologies. *International Journal of Therapy and Rehabilitation, 16*, 586–592.
- Øberg, G. K., Normann, B., & Gallagher, S. (2015). Embodied-enactive clinical reasoning in physical therapy. *Physiotherapy Theory and Practice, 31*, 244–252. <https://doi.org/10.3109/09593985.2015.1002873>
- Pinto, R. Z., Ferreira, M. L., Oliveira, V. C., Franco, M. R., Adams, R., Maher, C. G., & Ferreira, P. H. (2012). Patient-centred communication is associated with positive therapeutic alliance: A systematic review. *Journal of Physiotherapy, 58*, 77–87.
- Praestegaard, J., & Gard, G. (2013). Ethical Issues in physiotherapy–Reflected from the perspective of physiotherapists in private practice. *Physiotherapy Theory and Practice, 29*, 96–112. <https://doi.org/10.3109/09593985.2012.700388>
- Ravn, S. L., Sterling, M., Lahav, Y., & Andersen, T. E. (2018). Reciprocal associations of pain and post-traumatic stress symptoms after whiplash injury: A longitudinal, cross-lagged study. *European Journal of Pain, 22*, 926–934. <https://doi.org/10.1002/ejp.1178>
- Rebbeck, T., & Liebert, A. (2014). Clinical management of cranio-vertebral instability after whiplash, when guidelines should be adapted: A case report. *Manual Therapy, 19*, 618–621. <https://doi.org/10.1016/j.math.2014.01.009>
- Rolfe, G. (2006). Validity, trustworthiness and rigour: Quality and the idea of qualitative research. *Journal of Advanced Nursing, 53*, 304–310. <https://doi.org/10.1111/j.1365-2648.2006.03727.x>
- Russell, G., & Nicol, P. (2009). 'I've broken my neck or something!' The general practice experience of whiplash. *Family Practice, 26*, 115–120. <https://doi.org/10.1093/fampra/cmn106>
- Shaw, J., & DeForge, R. (2012). Physiotherapy as Bricolage: Theorizing expert practice. *Physiotherapy Theory and Practice, 28*, 420–427. <https://doi.org/10.3109/09593985.2012.676941>
- Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenology analysis: Theory, method and research* (1st ed.). London: Sage.
- Sondenå, P., Dalusio-King, G., & Hebron, C. (2020). Conceptualisation of the therapeutic alliance in physiotherapy: Is it adequate? *Musculoskeletal Science and Practice, 46*, 1–19. <https://doi.org/10.1016/j.msksp.2020.102131>
- Stenner, R., Swinkels, A., Mitchell, T., & Palmer, S. (2016). Exercise prescription for patients with non-specific chronic low back pain: A qualitative exploration of decision making in physiotherapy practice. *Physiotherapy, 102*, 332–338. <https://doi.org/10.1016/j.physio.2015.05.004>
- Sterling, M. (2014). Physiotherapy management of whiplash-associated disorder (WAD). *Journal of Physiotherapy, 60*, 5–12. <https://doi.org/10.1016/j.jphys.2013.12.004>
- Strout, T. D., Hillen, M., Gutheil, C., Anderson, E., Hutchinson, R., Ward, H., ... Han, P. K. J. (2018). Tolerance of uncertainty: A systematic review of health and healthcare-related outcomes. *Patient Education and Counseling, 101*, 1518–1537. <https://doi.org/10.1016/j.pec.2018.03.030>
- Sullivan, N., Hebron, C., & Vuoskoski, P. (2019). "Selling" chronic pain: Physiotherapists' lived experiences of communicating the diagnosis of chronic nonspecific lower back pain to their patients. *Physiotherapy Theory and Practice, 1*–20. <https://doi.org/10.1080/09593985.2019.1672227>
- Turner, K., Locke, A., Jones, T., & Carpenter, J. (2019). Empathy huddles. *Journal of Neuroscience Nursing, 51*, 153–155. <https://doi.org/10.1097/jnn.0000000000000444>
- Van Der Meer, S., Pieterse, M., Reneman, M., Verhoeven, J., & Van Der Palen, J. (2015). How does injury compensation affect health and disability in patients with complaints of whiplash? A qualitative study among rehabilitation experts-professionals. *Disability and Rehabilitation, 38*, 211–217. <https://doi.org/10.3109/09638288.2015.1035455>
- Van Nistelrooij, I., Visse, M., Spekkink, A., & De Lange, J. (2017). How shared is shared decision-making? A care-ethical view on the role of partner and family. *Journal of Medical Ethics, 43*, 637–644. <https://doi.org/10.1136/medethics-2016-103791>
- Widerström, B., Rasmussen-Barr, E., & Boström, C. (2019). Aspects influencing clinical reasoning and decision-making when matching treatment to patients with low back pain in primary healthcare. *Musculoskeletal Science and Practice, 41*, 6–14. <https://doi.org/10.1016/j.msksp.2019.02.003>

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