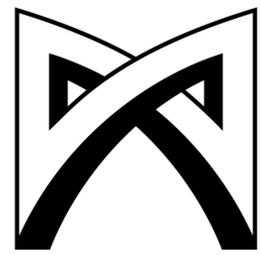




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PERSPECTIVES TO DATA-DRIVEN AND THEORY-DRIVEN QUALITATIVE ANALYSES IN EXPLORATION OF PHYSIOTHERAPISTS' COMPETENCIES

ABSTRACT

Research methods in the field of adult education are diverse.

We have utilized theory-driven and data-driven qualitative analyses in our studies exploring physiotherapists' competencies after undergoing a continuing education.

Differing approaches both presented their distinct strengths and limitations that are further explored in this poster presentation.

Both approaches have their advantages depending on the scrutinized phenomenon.

RESEARCH PARADIGMS and methods in the field of adult education are diverse. Phenomena can be explored from several theoretical or methodological viewpoints that all offer differing assets in gaining a deeper understanding of the phenomenon in question. At times it is challenging to choose which method is the most suitable for the research topic. In our studies we have examined the competencies of physiotherapists who have undergone a continuing education that aims to enhance and deepen the skills of experienced physiotherapists working in musculoskeletal direct access physiotherapy. In these studies we have utilized both theory-driven and data-driven qualitative analyses to examine interview data gathered from physiotherapists and their educators to gain a more profound insight of the physiotherapists' competencies. The aim of this presentation is to offer perspectives to data-driven and theory-driven qualitative analyses in practice drawn from our research experiences.

THEORY-DRIVEN ANALYSIS

We interviewed ten trained and experienced physiotherapists about their clinical reasoning processes with their low back pain clients (Roine et al, 2023). The interview data were analysed with theory-driven qualitative content analysis (QCA) following the steps guided by Margrit Schreier (2012). QCA as a method aims to understand meanings and features of the phenomenon by using a coding frame to conceptualize the data in a systematic way. The coding frame, specifically the theoretical lens that the data was examined with, was the existing theoretical knowledge about the clinical reasoning models that physiotherapists typically use with musculoskeletal clients. The objective was to identify the utilized clinical reasoning models from the physiotherapists' descriptions of their client case. Based on the data, the physiotherapists presented to use either hypothetico-deductive or systematic (check-list) clinical reasoning model when examining their low back pain client in direct access practice after the continuing direct access education.

DATA-DRIVEN ANALYSIS

We interviewed eleven physiotherapy educators who provide continuing direct access education for physiotherapists about their perceptions of physiotherapists' competencies and continuing education (Roine et al, 2024). The interview data were analysed with data-driven manner with reflexive thematic

Theory-driven approach	Data-driven approach
Theoretical lens enables focusing on the phenomenon in question	Requires more dwelling with the whole data
All gathered data not necessarily fully used	All data can be used
Theory-focused	Participant-focused
Theoretical lens guides but also purposefully restricts the handling of the data and analysis	Subjectivity of researcher allows for deep interpretation of data but also enables risk of personal beliefs influencing the interpretations
Theory enables a systematic analysis of data	Organic exploration of data provides flexibility
Enables comparisons across studies	Findings limited in specific context

Perspectives to theory-driven and data-driven approaches.

analysis as guided by Braun & Clarke (2022). The aim of the analysis was to achieve an understanding of the shared meanings within the interview data. Two main themes, or core competencies, were formulated on the basis of the data: 1) Interaction as grounds for meaningful clinical reasoning and 2) Continuing professional development in an expert role.

PERSPECTIVES TO DIFFERENT APPROACHES

These differing approaches, data-driven and theory-driven qualitative analysis, both presented their distinct strengths and limitations. Theory-driven analysis enabled to focus on the scrutinized phenomenon, in this case clinical reasoning, through the chosen theoretical lens. This approach sharpened the analysis, yet some of the data was left outside of the final analysis simultaneously narrowing the analysis. Data-driven reflexive thematic analysis enabled a comprehensive examination of all gathered data. As all aspects of the phenomenon were scrutinized, an in-depth analysis was achieved. Yet as a method it requires more dwelling with the whole data and the researcher also has to pay attention to their preconceptions or jumping into conclusions too fast.



Preliminary synthesis of findings of physiotherapists' competencies.

CONCLUSION

In exploration of physiotherapists' competencies, the theory-driven analysis was a fitting choice when a specific area of competence that has an appropriate theoretical framework was under examination. However, reflexive thematic analysis was a better choice when wider perspectives to and deeper understanding of competencies in general was needed. Overall, both data-driven and theory-driven qualitative analyses as methods have their advantages when examining the multifaceted professional competencies of trained and experienced physiotherapists.

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CONCLUSIONS

- Theory-driven approach enabled focusing on the scrutinized phenomenon yet simultaneously narrowed the analysis
- Data-driven approach enabled an in-depth analysis yet required more dwelling with the data and called for researcher reflexivity
- Complementary use of both approaches enriched the understanding of physiotherapists' multifaceted professional competencies overall

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