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Experiences of intervertebral motion palpation in osteopathic practice — A qualitative interview study among Swedish osteopaths

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Intervertebral motion palpation;
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Summary *Background:* Assessment in manual therapy includes quantitative and qualitative procedures, and intervertebral motion palpation (IMP) is one of the core assessment methods in osteopathic practice. The aim of this study was to explore osteopathic practitioners' experiences of clinical decision-making and IMP as a diagnostic tool for planning and evaluation of osteopathic interventions.
Method: The study was conducted with semi-structured interviews that included eight informants. Content analysis was used as the analytical procedure.
Result: In total, three categories emerged from the analysis: strategic decision-making, diagnostic usability of IMP, and treatment applicability of IMP.
Conclusion: The study indicated that IMP was considered relevant and was given particular importance in cases where IMP findings confirmed clinical information attained from other stages in the diagnostic process as a whole. However, IMP findings were experienced as less important if they were not correlated to other findings.

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Introduction

As part of a manual medicine tradition, osteopathic practitioners are concerned with the diagnosis and treatment of pain syndromes and dysfunctions related to the musculoskeletal system (World Health Organization (WHO), 2010). Pathophysiological changes to musculoskeletal structures are perceived in osteopathic medicine as potentially responsible for both active and passive movement dysfunctions and may subsequently be assessed by active and passive diagnostic methods. Assessment of passive movement includes peripheral and axial (intervertebral) motion palpation (Trew, 2005).

Intervertebral motion palpation (IMP) is one of the main assessment methods in osteopathic medicine practice and is used to identify segmental dysfunction, i.e., intervertebral joint hypomobility or hypermobility (Haneline et al., 2008; Juel and Wallgren, 2003). This assessment method can be used with different foci, such as assessing joint play (quality of passive gliding movements) (Lewit and Rosinab, 1999; Maitland and Kawchuk, 1997; White iii and Panjabi, 1978), range of motion (quantity of movement) (Levangie and Norkin, 2011; Maitland and Kawchuk, 1997) or end-feel (the quality of the elastic barrier) (Lakhani et al., 2009; Maitland and Kawchuk, 1997).

Studies suggest that IMP may be a valid method for assessing intervertebral hypomobility (Haas et al., 2003; Hansen et al., 2006; Hazle and Nitz, 2012; Lakhani et al., 2009; Lewit and Rosinab, 1999; Quack et al., 2007; Shaw et al., 2012; Snodgrass et al., 2008). However, to our knowledge, no study has included more than one possible palpable quality, i.e., no comparisons have been made between end-feel qualities and/or quality of joint play in the final results. Quack et al. (2007) compared quantitative range of motion (ROM) test results with expert physical diagnosis results, and a study by Lakhani et al. (2009) assessed both end-feel and joint play but reported results only concerning end-feel.

Studies using both manual and some form of apparatus indicate to various extents that motion palpation may be used to assess variations in intervertebral mobility. Two independent studies suggest that assessment accuracy is increased when less force is applied (Hazle and Nitz, 2012; Lewit and Rosinab, 1999). However, the amount of force applied was not further presented other than as an internal comparison between the participants (Hazle and Nitz, 2012). Another study confirmed palpable findings via ultra-sound, partially based on positional findings, as tissue depth from the surface was compared to a manually diagnosed posterior transverse process, both pre and post treatment (Shaw et al., 2012).

In addition, published research articles during the last 15 years that studied IMP in relation to a therapeutic intervention mainly used high velocity low amplitude (HVLA) manipulations as the treatment method of choice (Haas et al., 2003; Hansen et al., 2006; Shaw et al., 2012).

Research on clinical decision-making in general and on IMP in particular is very limited in osteopathic medicine practice. Thomson et al. (2014) have presented results on diagnostic reasoning in a study on osteopathic medicine practitioners, and Esteves and Spence (2014) have researched and published results on palpatory diagnosis development in relation to neuroanatomical and neurophysiological adaptation. However, to the knowledge of the present authors, no studies have been published on the experiences of IMP in osteopathic practice.

Although IMP is considered a general diagnostic tool in osteopathic practice, little is known about practitioners' experience and use of this technique. The aim of this study was thus to explore osteopathic practitioners' experiences of clinical decision-making and intervertebral motion palpation as a diagnostic tool for planning and evaluating osteopathic interventions.

Method

Design

This interview study was done as part of a Master thesis project in osteopathic medicine at Dresden International University. The design was semi-structured interviews, and the analysis process was performed using inductive content analysis as described by Elo and Kyngäs (2008).

Participants

A convenient sample of Swedish osteopathic practitioners (D.O; Diploma in Osteopathy) with a connection to Swedish osteopathic education was approached in the spring of 2015 with both verbal and written information about the study. In total, nine were approached and eight accepted participation. The inclusion criteria were five or more years of clinical experience as a D.O, clinical practice including a variety of therapeutic osteopathic techniques, and regular use of intervertebral motion palpation as an assessment method. Written informed consent was collected before inclusion. In total, eight D.Os were included. Demographics are shown in Table 1.

Data collection

Semi-structured interviews were used for data collection. The interviews were conducted between February and April

Table 1 Informants demographics (n = 8).

Mean years of clinical experience	9 (range 5—22)
Gender	5 males 3 females
Place of work	• All informants worked in private clinical practice • 7 of the informants were involved in osteopathic educational institutions as lecturers or clinical tutors
Academic qualifications	All informants held undergraduate degrees in osteopathy (B.Sc., D.O.)

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