

How learning methodologies can influence reliability of palpation in osteopathic field: a mixed-method study. (ABSTRACT)

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Background

Palpation is the core of osteopathic therapy and it is a complex task not easy to teach or learn (1-2).

Trials suggest that training might increase the reliability of palpation in detection of bony landmarks, nevertheless the poor dependability of the examined tests suggests that teaching methods have to be reviewed (3-5).

Our previous study aimed to investigate if the reliability of palpation of bony landmark could be affected by different types of training (group and individual learning) provided in different training sessions. Students and expert osteopaths were asked to perform a palpation of pelvis bony landmark in different sessions, in order to understand if reliability could be improved during the different periods of training (6). The results of our trial suggested that different training sessions might increase reliability of palpation, however this improvement was mainly related to examiners' levels of experience. As a matter of fact, younger students worsened their palpations during the different sessions, while expert osteopaths improved their palpatory skills. These results might have been related to students' level of attention and to the importance given by the single subject to the trial.

Although the type of training was effective for expert osteopaths, this type of learning was not adequate to students' needs.

In this context, an efficient teaching method has to be defined. Studies that analyze the best way to improve osteopathic teaching methods defining students' needs and optimizing their learning experience, is fundamental to give credibility to osteopathic profession.

This mixed-method study defines the best learning method for AIMO's students through the use of semi-structured interviews. To demonstrate if the learning experience provided will be effective in the improvement of osteopathic palpation, a quantitative study will be performed before and after the interviews.

Methods

The study will be divided in three phases.

In the first phase students of the 3rd, 4th and 5th year of AIMO institute will be invited to detect asymmetries of pelvis in three models with one hidden leg length of discrepancy. Students will be asked to palpate PSIS and great trochanter as learned during the normal osteopathic lessons.

During the second part of this trial different semi-structured interviews will be executed. Five students from the 3rd, 4th and 5th year will be asked to reply to a semi-structured interview which will include questions related to their idea of the most "useful" learning method.

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Other semi-structured interview will be carried out to a group of six teacher of osteopathic principles. These interviews will be created to understand their suggestion for improving the learning experience of students.

The results collected from the interviews carried out in the second phase will be used of last part of this trial. Students of 3rd, 4th and 5th years will be divided in three groups. The first group of students will follow a teaching method based on students interviews, the second group will follow a training deducted by teacher interviews, the third group will follow the standard training provided during the standard lessons.

Students will be than asked to perform the same type of palpation done in the first phase of the study on another three different models.

The number of students included in the first and third phase of this trial will be related to the number of students registered in each classrooms.

Students that participated to the second part of the study will be excluded. Subjects used as models in this phase will be different from the first phase.

Statistical Analysis:

Reliability of palpation will be calculated before and after trainings. Comparison between the group will be made in order to assess the most effective way of teaching.

Statistical analysis will consider the match between the evaluations and the actual side of the leg length discrepancy, the statistical significance will be set at 0,05. A uni-variaded statistical analysis will be used to evaluate the main effect of: years of experience, types of training, height of the discrepancy, considering separately the type of bony landmarks palpated.

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(6) Lavazza, C., Milano, V., Abenavoli, A., & Maggiani, A. (2018). How type and number of training sessions influence the reliability of palpation. *Journal of bodywork and movement therapies*, 22(2), 396-401.