

Osteopathic structural techniques training: development of a student feedback questionnaire

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1. Introduction

1.1 Osteopathic structural techniques

Osteopathy is one of the numerous treatment approaches within manual and manipulative therapies for the management of a variety of musculoskeletal and non-musculoskeletal conditions. In the USA osteopathic physicians are fully licensed to practice medicine or surgery, whereas in Europe, Australia and New-Zealand, osteopaths are first contact practitioners trained in private or academic institutions with Bachelor or Master degree levels and provide only osteopathic manipulative treatments (OMT).

Osteopathic structural techniques (OST) and particularly High Velocity Low Amplitude Thrusts (HVLAT) are considered by the public as the hallmark of OMT and may convey apprehension due to the rare but dramatic iatrogenic effects¹. A wide range of manual techniques described in the *Authorized Osteopathic Thesaurus*² are used for the treatment of somatic dysfunction, a functional disturbance of the tissues of the musculoskeletal system and related vascular and neurological components³. HVLAT may be similar to the manipulative chiropractic or physiotherapy techniques, but osteopaths usually describe their use within the osteopathic paradigm, a patient-centered approach rather than a disease-centred healthcare system⁴, as distinctive from other physical therapies.

1.2 Acquisition of osteopathic skills

The consensus is to teach OST every year from the first year, gradually teaching more complicated and refined methods to develop their skills⁵. The students are told the best way to retain and perform the techniques taught in class: practicing by themselves regularly, to develop better control and dexterity, as described in neurophysiological studies⁶. Immediate verbal feedback during the practical classes has also been shown in the chiropractic field to help the students retain the technique better⁷.



1.3 Getting feedback from students' training

Continual assessments and examinations are used to ascertain the students' theoretical and clinical knowledge. This provides objective feedback concerning their understanding of the teaching material. Another method to have direct feedback on the results of the teachings may be necessary to analyze the students' opinion on their own practical skills and knowledge in OST. The aim of our study was to develop a questionnaire for students, to inform the faculty on the comprehension and integration in clinical practice of the teaching given in OST. Collecting data could help educators address students' specific problems to adapt and improve the training processes.

2. Methods

2.1. Designing the survey

Four areas were covered: (1) OST definition and understanding, (2) possible cognitive and manual problems preventing OST practice, (3) possible fears preventing OST practice and (4) personal attitude during lectures. The survey was sent out to all CEESO final year students (n=53). Each question was scaled from 1 (strongly agree) to 4 (strongly disagree) providing rating average (RA). The survey was then created using SurveyMonkey[®], an online survey tool (<http://SurveyMonkey.com>).

2.2. Data collection and statistical analysis

All data were collected and exported to the GraphPad Prism 5[®] software (GraphPad Software, Inc.; La Jolla, CA) for statistical analysis. Chi-square test for comparison was used and α was set at 0.05.

3. Results

We collected 44 responses (83% response rate); 2 were incomplete and 42 were analysed. They were 15 male and 27 female (mean age = 24.2 \pm 2.5 years) in our sample. They self-reported a relatively high level of dedication (RA=1.71) both to private study and work carried out during lecture sessions and described no difference between the types of learning difficulty faced in OST and other osteopathic techniques (p=0.39).

3.1. OST description

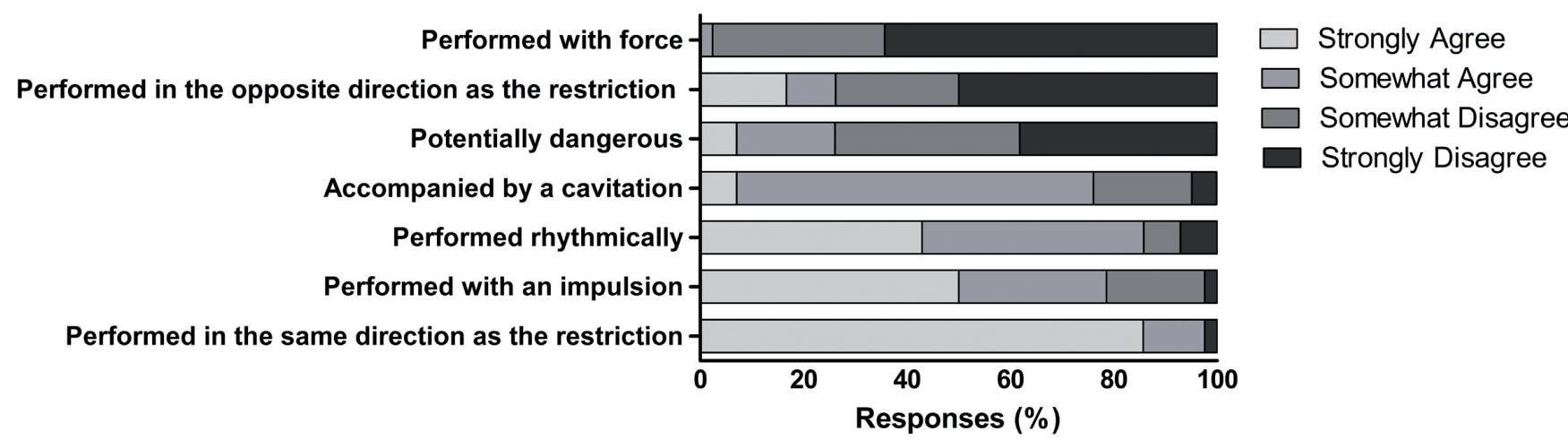


Figure 1. Opinion on the following statements concerning osteopathic structural techniques

3.2. OST's difficulties by anatomical regions

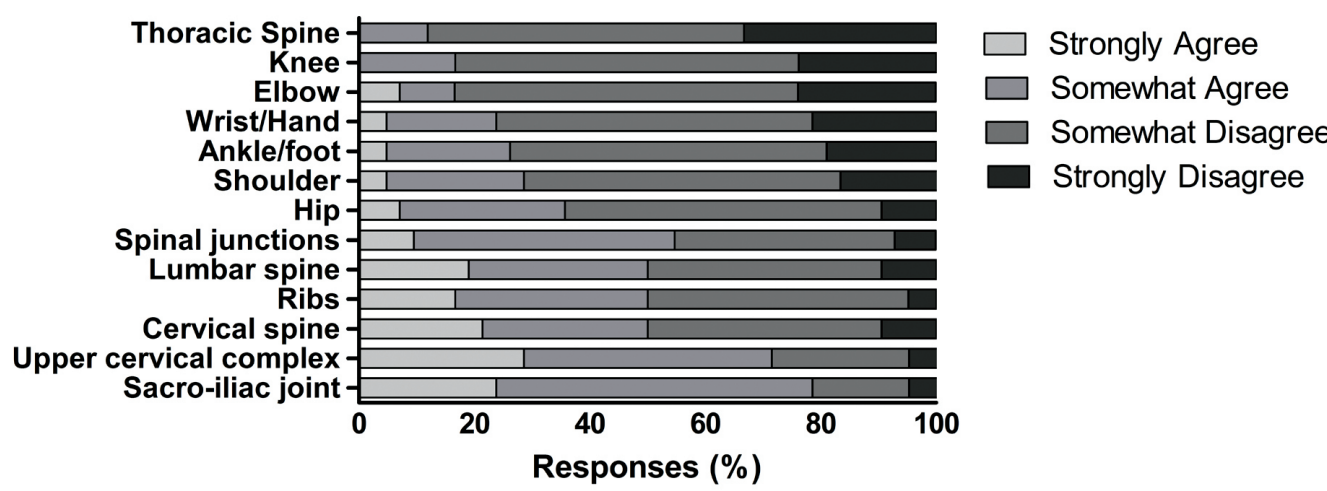


Figure 2. Opinion on the difficulties in the following anatomical zone whilst practicing osteopathic structural techniques

3.3. Clinical examination for OST

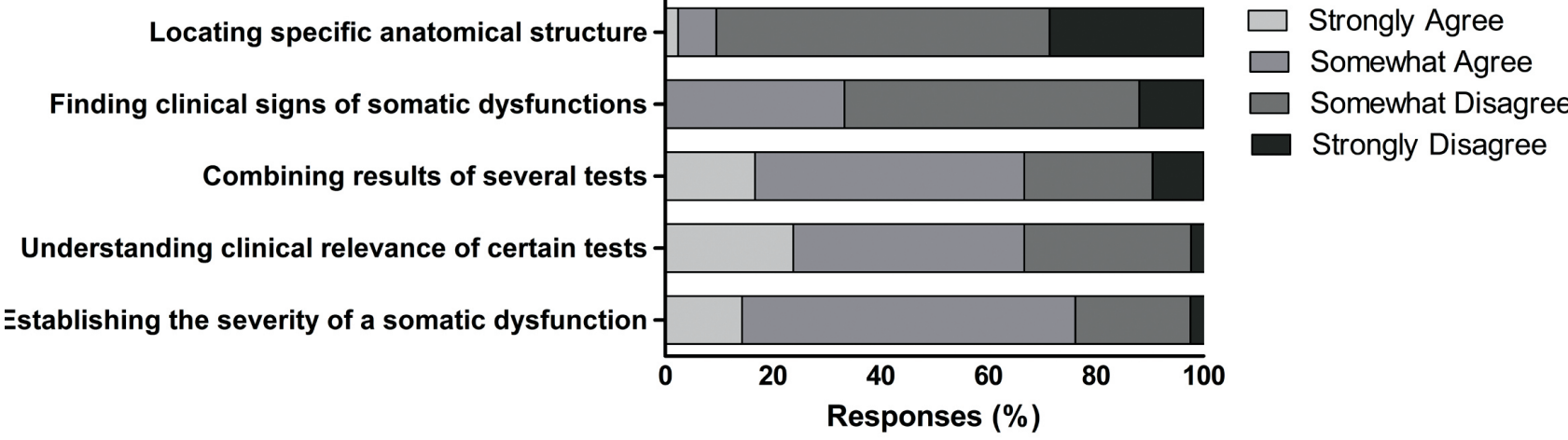


Figure 3. Opinion on the following difficulties whilst learning osteopathic structural techniques – Clinical examination

3.4. Diagnosis for OST

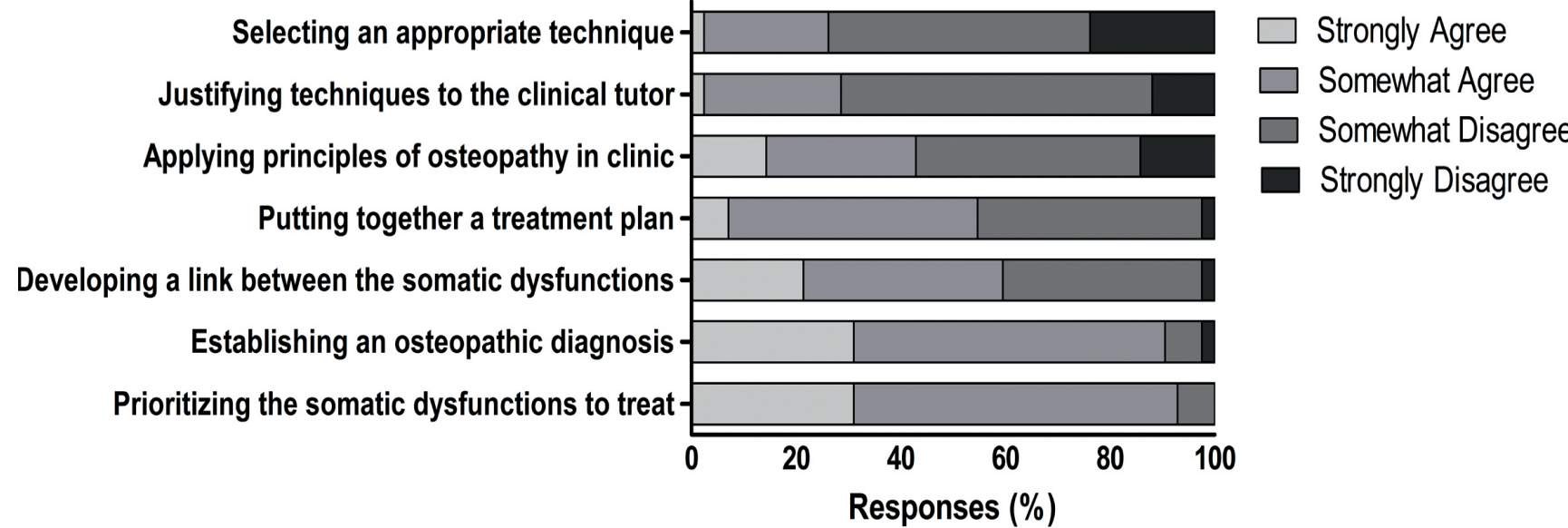


Figure 4. Opinion on the following difficulties whilst learning osteopathic structural techniques – Osteopathic diagnosis

3.5. Clinical application for OST

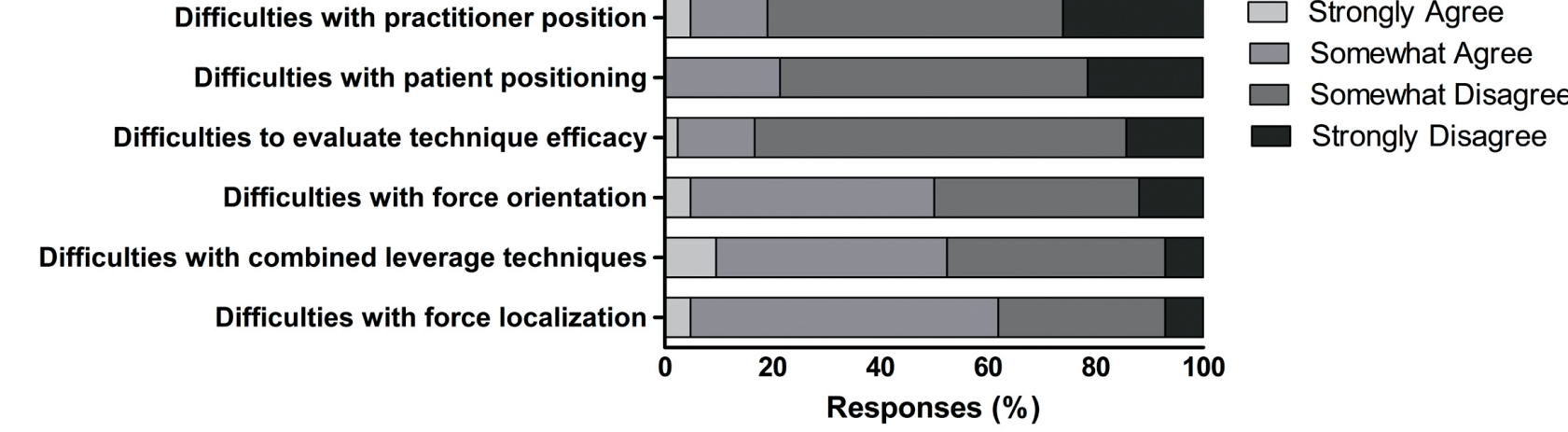


Figure 5. Opinion on the following difficulties whilst learning osteopathic structural techniques – Clinical application

3.6. Apprehensions with HVLAT

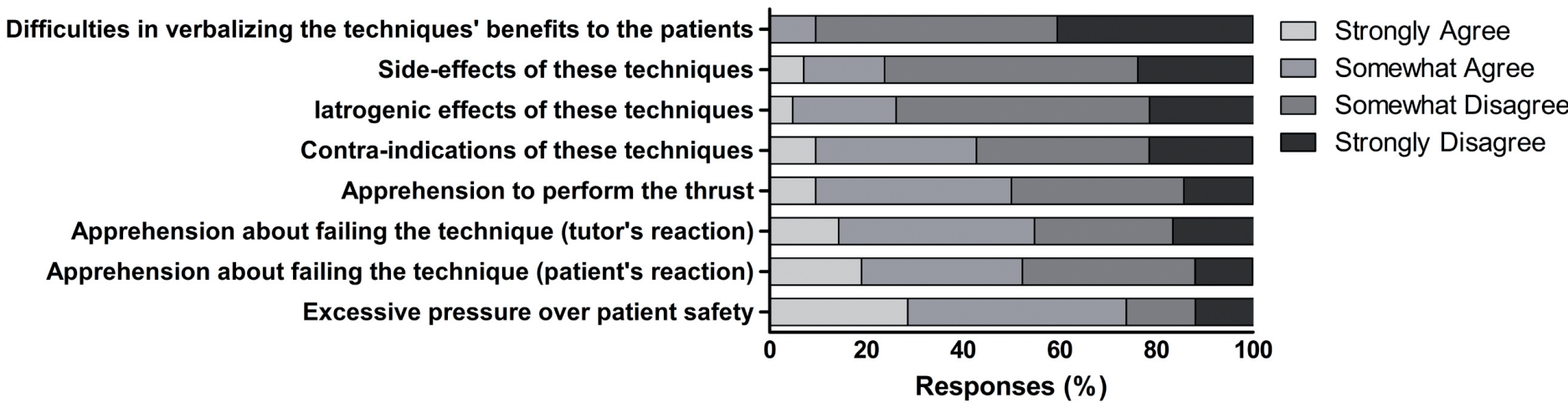


Figure 6. Opinion on the following difficulties whilst learning osteopathic structural techniques – Apprehensions with HVLAT

4. Discussion

4.1. Specific challenges from osteopathy training

Motor skill acquisition comes along with brain plasticity and refers to the process by which movements produced alone, or in a sequence, come to be performed effortlessly through repeated practice⁸. Teaching and contextual application of osteopathic concepts appear however crucial, rather than the techniques as themselves. The challenge of the osteopathic education institutions is to teach the manual techniques and their use according to the principles of osteopathy in a clinical setting⁹.

At CEESO (schools of osteopathy in Paris & Lyon, France), 900 hours of teaching are dedicated to OST on a total of 1500 hours of practical lectures which includes cranial, visceral and functional approaches. Different approaches are taught from the diverse teachers, often with differing terminology. Their theoretical models of action are not precisely determined, currently shifting away from a classical mechanistic view to a systemic view. Different models of practice in osteopathy have been described¹⁰, differing in the application of forces, comprehension of the body's response to mechanical and psychological stresses, signs associated with somatic dysfunctions and this may create cognitive conflicts¹¹.

4.2. Specific challenges from osteopathic teachers

The clinical setting is the first access for students to perform techniques on patients. Experience shows they will prefer using techniques they feel more comfortable with on patients. The techniques not performed in clinic and therefore not practiced on patients may create a fear-avoidance behavior. The tutors need to make sure a wide range of techniques are practiced in clinic to contextualize the techniques taught in class.

In France, the experienced practitioners who currently teach started practicing in a legislative unfavorable context and this may influence the way they teach. Until 2002, HVLAT were reserved to medical practitioners and this may explain the excessive and unnecessary pressure many students perceived from tutors.

Some results may be in conflict with the aim of training safe and effective practitioners. The role of the teacher or tutor is to encourage the development of critical analysis¹². In order to achieve this, the teachers must give their students many accessible tools and methods. Students will be faced with complex and unknown clinical settings, they must have the capacity to analyze the situation and use the tools taught during their training without feeling limited.



4.3. Limitations

In this study, the survey was presented by one teacher to the final year students. Despite being presented orally and described in the online survey as being general and concerning their overall opinions, students could have responded according to that one teacher and their module.

5. Conclusion

The acquisition of the cognitive competences and the clinical diagnosis skills is fundamental to the application of the theoretical and practical lectures. Nevertheless, the transition between the practical classes and the clinical setting is often problematic. There are only few references in osteopathy about qualitative self-evaluation of teaching methods from the students' viewpoint. Qualitative data could be obtained in a cheap and easy way. Further research would be necessary to replicate this type of questionnaire study.

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