1. Introduction

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 effects. A wide range of manual techniques described in the Authorized Osteopathic Thesaurus are used for the treatment of somatic dysfunction, a functional disturbance of the tissues of the musculoskeletal system and related vascular and neurological components. 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 system, as distinctive from other physical therapies.

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 CÉESO 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 ±5 years) in our sample. They self-reported a relatively high level of dedication (RA=1.71) both to practical study and work and found 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

Thrusts (HVLAT) are considered by the public as the hallmark of OMT and may convey apprehension due to the rare but dramatic iatrogenic effects. A wide range of manual techniques described in the Authorized Osteopathic Thesaurus are used for the treatment of somatic dysfunction, a functional disturbance of the tissues of the musculoskeletal system and related vascular and neurological components. 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 system, as distinctive from other physical therapies.

3.2 OST’s difficulties by anatomical regions

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

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

Figure 3. Opinion on the difficulties whilst practicing osteopathic structural techniques – Clinical examinations

Figure 4. Opinion on the following difficulties whilst learning osteopathic structural techniques – Clinical examinations

Figure 5. Opinion on the following difficulties whilst learning osteopathic structural techniques – Apprehensions with HVLAT

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

3.3 Clinical examination for OST

3.4 Diagnosis for OST

3.5 Clinical application for OST

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 practice. 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 setting.

At CÉESO (schools of osteopathy in Paris & Lyon, France), 900 hours of teaching are dedicated to OST on a total of 1950 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 described, 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 conflicts.

4.2 Specific challenges from osteopathy 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 analysis. 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 be able 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 concerns, 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 a 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.

References