# Practice performance and performance anxiety: Preparing osteopathic students for practice

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## Abstract

***Background:*** During clinical training, osteopathy students are required to develop skills and attitudes that challenge their capabilities and viewpoints. The aim of this project was to inform pedagogical processes that could reduce the stress associated with beginning clinical practice.

***Methods:*** Data were collected from two sources: (1) semi-structured interviews and (2) audiovisual material prepared by students for other purposes but which also shed light on their experiences of clinical placement. With participants' consent, data were thematically analysed using constant comparison.

***Results:*** Osteopathic students entering clinical practice experienced high levels of performance anxiety that caused physical and psychological stress. Despite achieving objectively-measured competencies in clinical assessments, students perceived they were not ready to perform as practitioners (e.g., appear confident, overcome nervousness and manage the consultation time).

***Conclusions:*** To reduce performance anxiety associated with the transition to beginning practitioner, professional education needs to expand to include timely opportunities to learn practice performance skills.

***Keywords:*** performance anxiety; practitioner; clinical training; osteopathy; student; professional education.

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## Introduction

Clinical placement is an integral part of medical and allied health training, where students develop and integrate professional knowledge, practical skills and attributes such as ethical behaviour and critical thinking (Chila & American Osteopathic Association, 2011; Fryer, 2008; Wallace, 2008). Vital professional skills are practised and mastered, and professional identities and demeanours are developed (Roskell, 2009). Self-reflection, agency and self-authorship have been identified as key parts of professional identity development (de Weerdt, Bouwen, Corthouts, & Martens 2006; Magolda, 2004), and higher education institutions can contribute to the process by providing the kinds of learning experiences where such development can occur. Teachers and clinical supervisors are pivotal to all aspects of the professional development of students (Ebrall, Draper, & Repka, 2008; Sommerfeld, 2008; Wallace, 2008). However, a review of the literature on professional identity development found a scarcity of literature on the topic (Trede, Macklin, & Bridges, 2012).

Assessment that demonstrates achievement of clinical competence, including professional identity adoption, marks the transition from theoretical knowledge and practical skills to practitioner capability and responsibility (Abbey, 2008; Degenhardt, 2009). Employers want work-ready graduates (Cavanagh, Burston, Southcombe, & Bartrama, 2015; Orrell, 2011; Walker et al., 2013), and curriculum designers and educators are increasingly called upon to provide rich learning environments that cultivate all components of clinical competence, including whole-of-practice competencies such as time management and work culture sensitivity (Manninen, Henriksson, Scheja, & Silen, 2013; Ramklass, 2013). Established practitioners prefer to employ graduates who are not only technically safe and competent but also efficient, ethical, attuned to workplace cultures and who think deeply and critically about how to translate classwork into meaningful clinical experiences (Patrick et al., 2008). To date, clinical competencies have focused on demonstration of knowledge, skills and attributes for clinical practice, such as taking a case history; developing a working diagnosis; and knowing when to refer a patient. Much attention has been paid to the consultation in the clinic room and the development of clinical reasoning for safe and effective healthcare. However, this attention sometimes comes at the expense of a broader view of the patient encounter that spans the entire patient experience. A more comprehensive examination of skills that may be required to perform well as a healthcare practitioner might include, for example, being confident and demonstrating a focus on the whole patient or on the patient experience of the clinical encounter.

Students from any health discipline can experience high levels of anxiety about starting clinical placement and often feel out of their depth, unprepared and overwhelmed (Hartup, Murphy, Plowman, & Myers, 2010). Fear of being unable to fulfil expectations of clinical supervisors and their own high expectations of clinical performance contribute to their experience of stress in clinic (Ebrall et al., 2008; Palmgren & Chandratilake, 2011). Performance anxiety has been described as "a physiologic *fight-or-flight* reaction that occurs in an anxious person carrying out an activity in the public eye, with clinical findings such as tachycardia, tachypnoea, hypertension and increased muscle tone" (Performance anxiety, n.d.). For students entering clinic, this type of anxiety can take the form of feeling threatened or of potential harm to oneself, or even to someone else who is being observed (Roland, 1997). Several studies have identified osteopathic students' lack



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of confidence of performing well during clinical placement (Balkissoon, Blossfield, Salud, Ford, & Pugh, 2009), and the difficulties they experience in learning complex and subtle palpatory skills (Eberman & Finn, 2010; Zegarra-Parodi, Rickards, & Renard, 2009).

As part of their Master of Osteopathic Medicine programmes in Australia, students are required to attend clinics where they assess and treat members of the public under the supervision of qualified osteopaths. At Southern Cross University (SCU), osteopathic students enter supervised clinical practice after 50 hours of observational placements and 3 years of preparation in their undergraduate degree. Professional codes of conduct, embedded from the time of students' first classes in pre-professional health education, encourage students to make safe and effective patient care their first concern (Australian Health Practitioner Regulation Agency, 2014). In their clinical training, osteopathic students are required to develop many skills that challenge their self-confidence, including the ability to work under pressure and the capacity to ask for help when needed (Hartup et al., 2010; Manninen et al., 2013; Palmgren & Chandratilake, 2011). To date, osteopathic students' experiences of starting clinical placement remain largely unexplored. The aim of this project was to inform pedagogical processes for reducing the stress associated with starting clinical placement.

## Methods

A qualitative research approach was appropriate for understanding students' experiences of clinical practice, the challenges they faced and strategies they used to deal with them. Data were collected using two methods: semi-structured interviews and analysis of student materials.

### *Semi-structured interviews*

The web-based learning platform "Blackboard" was used to send emails to all fourth- and fifth-year students inviting them to participate. Seven fourth- and 12 fifth-year students enrolled in the Master of Osteopathic Medicine programme at Southern Cross University agreed to participate and were interviewed for up to 60 minutes each.

The students in the study were typical of previous cohorts of osteopathy students at SCU and similar cohorts at Victoria University (Vaughan, Carter, Macfarlane, & Morrison, 2014). For example, in the year of data collection, the median age of students was 26.5 years at SCU and 23.4 years at Victoria University; 45.1% of the osteopathy cohort were males at SCU, and 47% were males at Victoria University.

### *Analysis of student materials*

Documentary analysis of audiovisual materials containing reflections of students' experiences of clinical placement was conducted. A purposive sampling strategy was used to collect relevant audiovisual material that had been previously prepared by students from the same fourth- and fifth-year cohort as part of their course work (e.g., students' Powerpoint grand rounds presentations and video clips of students giving advice to other students about to enter clinic). Osteopathic teaching staff were asked to identify a sample of relevant materials. A total of 11 audiovisual items were identified, eight from students



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who had not participated in the semi-structured interviews. Authors of these items were contacted via email for permission to incorporate these items in this study.

With participants' consent, interviews and audiovisual materials were transcribed using a structured template and thematically analysed. The researchers independently coded concepts emerging from the data after repeatedly reading the texts. Next, the research team discussed and compared initial codes. Through a process of constant comparison (Glaser & Strauss, 1967), codes were clustered and refined into higher-order themes until overarching key themes emerged from the data. The study had approval of the Southern Cross University Higher Education Research Committee (ECN: ECN-14 205).

## Results

Two key themes emerged from the data.

### *Starting clinic is stressful*

Students felt stressed about their experiences as beginning practitioners in supervised clinical practice. Many used expressions like "thrown in the deep end", "it was a nasty learning curve", "confusing and embarrassing", "I felt very fragile" and "I felt maximum stress". Many also described feeling "anxious", "vulnerable", "stressed and depressed", "rattled", "quite shaky" and "scared".

Intrinsic and extrinsic causes of stress were identified. Intrinsic stressors arose from unrealistic expectations about their abilities as students entering clinic. For example, students had unrealistic expectations about their own abilities (and of osteopathy itself) to completely resolve all patients' symptoms (e.g., pain or other physical distress) in a short series of treatments, even when patients had chronic diseases that were unlikely to resolve quickly, if at all. Students used patients' responses to treatments as a criterion measure of good performance. If a patient did not return for follow-up treatment, some students assumed that the patient was dissatisfied with the student's clinical performance.

Extrinsic stressors often related to students' personal lives. Their lives could be complicated by being part-time students or by their responsibilities to care for young families or ageing parents. The personal challenges of managing study on top of their other responsibilities contributed to the stress that students experienced in their university lives.

> *I had a small breakdown at the end of last semester. I was going through maximum stress. I was sleep deprived. I've got two small kids, and I was starting clinic.* (Fifth-year student 3)

Other extrinsic stressors arose from clinical requirements outside the students' control, such as patient numbers and attendance hours, along with supervisors' expectations and demands. Stress was also associated with the inherent complexity and unpredictability of clinical practice. Students cannot fully prepare for every clinical encounter beforehand, because the needs of individual patients are essentially unknown until the patient is in front of them in the clinic room. The stress some students experienced in clinic is evident in the following comment.

> *You have to draw on everything—even things that you might not have touched on for a few years. It felt like I had to know everything all the time. That was really hard to come*



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> *to terms with—always just guessing. I had to work out how to deal with not knowing. How can I be a professional and not know?* (Fourth-year student 6)

For osteopathy students, the stress associated with their clinical experiences was aggravated by the use of palpatory findings in diagnosis and treatment.

> *Initially feeling soft tissue and [working out] what pressure to use and then trying to feel bones moving and feel different kind of tissue, I felt like I didn't have enough experience or practice.* (Fifth-year student 5)

> *Palpation is definitely one of the biggest challenges in osteopathy for students. I ask myself what's going on here—I can't feel anything.* (Fifth-year student 1)

Supervisors were a key source of extrinsic stress for students. Some students did not like their supervisor's inconsistency, overly ambitious expectations and communication style. Typical comments included:

> *The scariest thing is presenting the case to the supervisor.* (Fourth-year student 6)

> *I am constantly supervised and constantly critiqued. Supervisors need to accept clinical practice as a learning experience.* (Fifth-year student 6)

> *They are there to make you think, there to test you, but sometimes you'd just like them to be there just to help you. Sometimes just lacking confidence and they knock it down a little lower. It feels like you're being examined all the time.* (Fourth-year student 2)

> *I feel like I'm in an exam all the time. I'm expected to come up with DDs [differential diagnoses] when I'm still struggling to understand the full significance of the case. I'm more worried about the supervisors than the patients.* (Fourth-year student 6)

The toll on students' physical and mental health was high for some students. They talked about losing sleep, having high blood pressure, and feeling anxious, overwhelmed, inadequate and incompetent. A few sought professional counselling. They developed coping strategies such as taking time off, taking more time for self-care and regularly checking their own blood pressure. They also became more strategic about managing their stress, including the way they sought help from supervisors and the way they modified their clinical approach.

> *I go to different supervisors for different advice. I worked out who to ask specific things so that they don't take over my treatments and stop me from doing what I had planned.* (Fourth-year student 4)

But stress was not perceived as a negative experience by all students. Eighteen out of the 27 students in the study reported positive experiences about starting student clinic. Some students felt that stress helped to extend their skills and helped them rise to the challenges of clinical practice.

> *The best thing I got from my supervisors was to recognise that there was so much to think about at the beginning of clinic. Fancy techniques are ideal for certain situations, but you can always fall back on soft tissue techniques. Using soft tissue techniques simplified the way I think about osteopathy a lot.* (Fourth-year student 3)



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Students also valued the positive transformation that they observed in themselves and other students over time.

> *There are moments when I say to myself, "Wow, I really thought osteopathically then." My pattern recognition is getting better. There are moments that have shown I'm on the way [to being on osteopath], but feeling like an osteopath all the time won't happen for a while yet. When I see the third years, I realise how much learning has actually happened.* (Fifth-year student 2)

### *Students feel inadequately prepared for clinical practice*

The second key message that emerged from the data was students' perceived lack of preparation for clinic. Students reported learning theoretical information and practical skills in isolation rather than in a clinical context. They felt that they had not been prepared to integrate their knowledge and skills in a way that they could readily draw on in clinic. One student said:

> *We need to learn how to manage patients. We treat patients for way too long and effectively do nothing because we don't have a base model for treating. We don't know what order to put things in and what techniques to try first.* (Fourth-year student 5)

Students suggested a number of strategies that they would like to see occur or occur more frequently during their clinic sessions to help them reduce the stress associated with the transition to clinical practice. These included:

- Providing more time for students to reflect on their own performance, including their strengths in practice, skills that they need to further develop and ways to achieve this
- Providing more one-on-one time with supervisors. Several students suggested that they'd like to be supervised more closely throughout a whole consultation, which is often not possible with staff-to-student ratios of 1:8
- Providing more tutorials as issues arise in clinic
- Providing more training for supervisors in ways to give students better quality feedback (e.g., provide more information than just satisfactory), to better recognise individual learning needs, to be better able to know when to challenge students and to be mentors not judges
- Starting clinic from first year with appropriate tasks so that students can become familiar with the clinical environment
- Using practical class time to simulate the activities they will be required to perform on clinical placement
- Providing adequate support for students who feel uncomfortable, overwhelmed and anxious about starting clinic. Student comments highlighted the importance of telling students that they are not expected to know and be good at everything when they start clinical placement and that the amount of information that they can retain when thinking about a patient will increase with clinical experience



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- Practising note-taking before starting clinic. Students said that they struggled with the dual tasks of note taking (hard copy and electronic) and interviewing a patient.

  > *It doesn't feel like we practise note taking at all. It is something that we are going to be doing every day for the rest of our lives, but we are not taught how to do it.* (Fourth-year student 7)

- Giving students a consultation protocol road map before they enter clinic (e.g., begin with soft tissue technique)
- Providing challenges for students to extend their knowledge and skills.

Mentors, particularly the senior students (fifth years), had a very important role to play in preparing more junior students for clinic, especially because they had so recently been in exactly the same position as the current fourth-year students who were just beginning clinic. They filled gaps in preparation for clinic during clinical placement sessions and informally when students met outside scheduled clinic times.

> *Working with peers reinforces that I'm on the right track or helps me see new perspectives.* (Fourth-year student 6)

> *The fifth years are awesome. They support you to really understand where you're at. Some of your supervisors have been in practice for so many years they have no idea what it's like to be a beginner.* (Fourth-year student 1)

> *Having fifth years there to mentor us is the best thing about clinic. … It makes more sense of where I'm at.* (Fourth-year student 3)

## Discussion

The stress levels described by students in this study were similar to those described in the literature for other health students starting their clinical training (Shaban, Khateremail, & Akhu-Zaheya, 2012). For example, Greenhill, Fielke, Richards, Walker and Walters (2015) found that the demands of clinic were among the major sources of stress for medical students. This stress was akin to performance anxiety that can be experienced by any performer who is required to learn and practise skills and then perform them in a seamless and confident way before an audience (in this case a patient, supervisor and other students). However, the skills of clinical performance do not usually form part of the health professional curriculum.

Current health education may not provide adequate support for students making the transition into clinical practice. Supervisors and teachers are often required to undertake administrative tasks and to assess and grade students, and these activities can compete with time spent mentoring individual students. Many participants in our study wanted more support, including support from someone who had recently gone through the same or a similar course and who was likely to fully understand their learning needs. Mentoring by senior students and recent graduates is known to benefit both the mentor and the mentee (Halpin et al., 2015; Mann, Protty, Duffy, Mohammed, & Wiskin, 2014; ten Cate, van de Vorst, & van den Broek, 2012).



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Preparation for clinical practice, according to this study, requires more than support from supervisors and senior students. It also requires a whole-of-practice approach, which has largely been overlooked in health curricula. It appears that current curriculum design for osteopathic and other health professional students inadvertently encourages learning theory and practice as separate entities rather than as codependent and intricately interrelated parts of curriculum. Setting an arbitrary either/or divide between theory and practice denies the complex interplay between them. Misconceptions abound, including that theory is more important than practice (Walshe & Rundall, 2001) and that theory needs to be learned first before it can be applied in practice. According to Fish and Cole (2005):

> We use and adapt (even reinterpret and re-create) theoretical knowledge to meet the specific context and needs of individual and particular clients or patients. We do not use our professional factual knowledge as a simple template to impose upon the practice we meet, nor do we use theoretical knowledge as a simple lens through which we observe and understand practice. Rather we are sceptical of how we see and how we interpret that seeing, and we question the relevance of facts to individual cases. (p. 133)

This study highlights some of the challenges of health curriculum design. One is to avoid the fragmentation of curriculum, particularly fragmentation based on a theory/practice divide. Another is to include all aspects of professional practice (e.g., performance skills for clinical practice) in curriculum design. Ultimately, there is no substitute for experiential learning, where students learn clinical practice skills by doing. The importance of engaging students in clinical experiences from early in their training has long been recognised; it was first introduced into medical education in the UK in the 1970s (Fish & Cole, 2005). Immersing students in the clinical environment and exposing junior students to more senior ones helps them orient their learning towards clinical practice. Students can become familiar with expectations of their performance in clinic, understand the incremental nature of their clinical responsibilities and know that they will be in a supportive, supervised environment that is safe for both patients and students.

For osteopathy students, the stress associated with their clinical experience is aggravated by the need to place reliance on their palpatory skills in diagnosis and treatment. Teaching and learning the skill of palpation are known to be challenging (Degenhardt, Snider, Snider, & Johnson, 2005). Evidence from multidisciplinary research shows that palpation has poor inter- and intra-examiner reliability (Love & Broduer, 1987; Mootz, Keating, Kontz, Milus, & Jacobs, 1989; Panzer, 1992; Rajendran & Gallagher, 2011; Sommerfeld, Kaider, & Klein, 2004; Stovall, Bae, & Kumar, 2010; Vivian & Wilk, 2000). Despite this, many manual therapists continue to rely on palpatory findings to inform their assessments of patients, and students of manual therapies are required to develop and use palpation as an important source of clinical information. Students, and indeed early career practitioners, often feel uncertain about what they are palpating and how to communicate their findings. As one participant said, "You need to learn to trust what you feel" (Fifth-year student 11).



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Discrepancies in the language used to describe diagnostic information derived from palpation can cause further misgivings (Chaitow, 2010). It has been difficult to gain consensus on a common language for palpatory findings (Zegarra-Parodi, 2011), and since students and teachers may use divergent language when describing the same findings (Grace, 2011; Streckfuss, 2011), misunderstandings that may limit learning are common.

Participants in this study sometimes experienced high levels of stress related to their perceived lack of preparation for clinic. However, to be eligible to enter clinical placement, students are required to demonstrate their competence in clinical skills in practical classes and to have passed assessments set by their teachers, demonstrating their understanding of theoretical course components. There is clearly a discrepancy between teaching staffs' and students' conception of what is required to adequately prepare students for clinical placement, where they must assess and treat members of the public under supervision. We postulate that the same skills required for practice performance are required for clinical practice yet are not overtly addressed in the curriculum. A greater understanding of the importance of teaching and modelling practice performance is required. Supervisors are experienced practitioners and can be powerful role models for managing patients in a range of unpredictable circumstances (Grace & Trede, 2013). Pedagogical strategies for developing practice performance skills in students could include:

- Starting clinical education early in the course to give students adequate time to become accustomed to the complex nature of clinical practice
- Telling students that they don't have to know everything when they start clinic, that their knowledge and skills will develop over the course of their clinical practicum. Reassure them that they have support and that their patients are safe. This is a strategy to reduce stress and enable students to learn more effectively and enjoyably.
- Developing a consultation protocol for students who are beginning clinical placement. Students would outgrow their reliance on this protocol at appropriate stages of their course, but it would act as a safety net by providing a basic consultation routine for beginning students who may lack confidence. They could revert to the protocol until they had learned how to cope with the volume and complexity of information they are required to process during a consultation. Having it to manage the patient encounter could enable students to incrementally learn to handle increasingly complex clinical tasks.
- Teaching students how to perform practice so that they can create a positive therapeutic encounter for their patients. Apart from mastering the technical skills required to competently assess and treat patients, students also need to master the skills of patient handling, practice management and creating a therapeutic encounter. It seems that students could benefit from some basic performance skills, including, for example, how to overcome nerves, how to mask nervousness and present confidently, and what to say and do to make patients feel comfortable, valued and cared for. Patients who perceive that the practitioner is capable, confident and competent are more likely to have positive treatment outcomes (Cross, Leach,



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Fawkes, & Moore, 2015; O'Keeffe et al., 2015). Performance training could include strategies for calming themselves before the performance and managing stress, having a basic blueprint for practice that is rehearsed and relied on but is adaptable for individual patients, body movement awareness and the use of confident body language (e.g., making eye contact and smiling).

- Developing skills to demonstrate the value they place on patients' experiences of health and illness and to demonstrate respect for patients' worldviews and value systems.

## Limitations

Our research used a qualitative approach to understand the experiences of fourth- and fifth-year osteopathy students starting clinical practice, where they treat members of the public under supervision. As with all qualitative research, the findings are context dependent and not intended to be generalised (Anderson, 2010). Rather, the findings of this study illuminate the experiences of a particular student cohort at a particular time and may have relevance for other student cohorts (both osteopathic and other health students) given the consistency with reported studies in the literature. The students' recommendations for relieving the level of stress that they experienced may be useful for supervisors, teachers and curriculum designers in other programmes.

## Conclusion

Osteopathic students entering clinical placement, where they treat members of the public under supervision, experienced high levels of performance anxiety, which caused them to have both physical and psychological stress. Despite having passed all prerequisite assessments before starting clinical practice, osteopathy students experienced both intrinsic stress (e.g., having unrealistic expectations about their own abilities) and extrinsic stresses (e.g., family responsibilities and supervisors' expectations). They also felt that they were inadequately prepared for assessing and treating members of the public. Relying on palpatory assessments to inform treatment approaches and outcomes particularly troubled inexperienced osteopathy students.

Another concern students expressed was that the theoretical and practical components of the course were taught in isolation from one another, leaving them the complex task of integrating all aspects of their learning when they first entered the student clinic. Students need a whole-of-practice approach, which has largely been overlooked in health curricula. They need to learn how to integrate their theoretical knowledge and practical skills by rehearsing in diverse clinical encounters, which may be facilitated by exposure to the clinical environment early in their course. Students need to understand the incremental nature of their clinical responsibilities and know that they will be in a supportive, supervised environment that is safe for both patients and students.

To reduce the performance anxiety associated with the transition to beginning practitioner, pre-professional health education needs to be expanded to include opportunities for students to learn important, and often neglected, practice performance skills. As for any student who is required to "perform" in public, learning practice



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performance skills, such as presenting confidently and cultivating patient trust, will not only reduce the levels of anxiety experienced by students who are beginning their clinical practice but also promote positive therapeutic encounters for their patients.

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