Implications of IASP core curriculum for pre-registration physiotherapy education

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SUMMARY POINTS

- There are concerns about the effectiveness of health professionals when they are working with people who have pain.
- Health professionals have reported a lack of confidence when working with people with complex pain conditions.
- Review of pain education in health professional training may improve clinical practice.
- The International Association for the Study of Pain curricula can be useful in developing pain education initiatives.
- The up-dated IASP core curriculum appears to be a useful resource for curriculum designers of pre-registration physiotherapy programmes, while the IASP discipline-specific curriculum is in need of revision.

Introduction

It is common for health professionals to work with people who are suffering painful conditions and indeed pain, may be the primary reason for a person to seek healthcare. Investigations of clinical practice have continually raised the concern that health professionals, including physiotherapists, have an inadequate understanding of pain, and risk being ineffective when assessing, treating and managing people with pain^{1,13}. There are also reports that health professionals are not confident in helping people with complex pain problems^{2,5,7,9,14}.

It has been inferred that pre-registration education, amongst other factors, may not be preparing physiotherapists adequately^{7,10,15}. Physiotherapy students' attitudes and beliefs about pain¹⁶, their self evaluation of knowledge of pain topics¹⁷ and the resources devoted to pain education, including time and expertise¹⁸, have been identified as areas that could be improved. This may be due to the predominance of a traditional tissue-based approach to pain in teaching and learning activities.

Any inadequacy in pain education is of particular concern for physiotherapists as they are expected to assist people with a range of conditions, many for which pain is a feature. In some clinical settings, they will also be the primary contact practitioner and so require comprehensive and autonomous skills in pain assessment.

The International Association for the Study of Pain (IASP)

The IASP have sought to improve professional training about pain by producing both core and discipline-specific curricula¹⁹. The value of these was reinforced when an interprofessional group reported that IASP curricula were essential for the successful development of their pain education initiative²⁰. The first edition of the core curriculum was published in 1991²¹ and a document outlining a curriculum specifically for physiotherapy and occupational therapy was published in 1994²². Due to more than a decade of developing knowledge in pain and related concepts since their publication, these documents should be considered out of date.

In 2005, the IASP revised the core curriculum for professional education in pain, creating a 3rd edition. This revision was overseen by a large multi-disciplinary group and made available, electronically, via the IASP website²³. It stands as an important resource given the input from international experts and its easy access. The core curriculum covers a wide range of themes and topics including:

- Relevant anatomy and physiology
- Conditions where pain is commonly a feature
- Pain assessment and treatment strategies
- Consideration of pain in susceptible individuals' e.g. older adults.

It consists of four sections and 45 recommended topics for study²³.

Opportunities and Challenges in Reforming Pain Education

A constant dilemma for curriculum developers of pre-registration education for health professionals, is the burgeoning information that demands inclusion in the syllabus^{18,24}. Clearly a criticism of the value of the core curriculum as a tool to assist curriculum development in physiotherapy training, is the number of topics it proposes. Even in the discipline-specific curriculum the editor recommended that curriculum designers needed to be selective and that some modification may be required²². Despite this limitation, the core curriculum can still be expected to be a valuable resource to improve and enhance the learning and teaching about pain and painful conditions in physiotherapy programmes. There is a need for all health professionals to develop a multi-dimensional understanding of pain, and the multi-disciplinary input into the development of the core curriculum should enhance its coverage of the broad range of pain topics. However, a decision about which topics are essential and which topics are desirable is likely to be necessary within individual programmes.

While those reviewing physiotherapy professional training have to identify what content to include or exclude, they are also encouraged by professional bodies to incorporate learning opportunities that promote life-long learning^{25,26}. In recent years there has been support for problem-based, or enquiry-based learning and interprofessional education^{25,26}, as a prelude to interprofessional working. Blended learning experiences using electronic resources with traditional face-to-face teaching are increasingly available. These educational developments offer both challenges and opportunities to those willing to consider integrating the IASP core curriculum into undergraduate physiotherapy training.

Some opportunities will be highlighted here, including:

- The provision of specific information about pain
- The integration of elements of the core curriculum into existing course delivery
- Focussing on pain during supervised clinical experience
- Exploiting electronic media and resources, and
- The use of pain-related clinical scenarios to highlight interprofessional working.

Provision of specific information about pain

Strong *et al*²⁴ support the inclusion of specific information on pain in an occupational therapy pre-registration programme. First, they argue that pain is a common experience. Second, the complexity of pain, in particular its subjectivity, may provide difficulty for inexperienced health professionals. Third, any health professional may find him or herself working with a person who has pain, so all need a basic understanding. Without at least a basic understanding,

there is a risk of inadequate or inappropriate care being delivered to people who have pain. These reasons, for the delivery of specific pain topics, transfer easily to physiotherapy education. This is especially so because of the independent primary contact role new physiotherapy graduates may choose to adopt.

In the literature, there are examples of pain-specific information that might be delivered in a pre-registration physiotherapy programme.

These include:

- Neuro-anatomy and neuro-physiology of pain processing^{16,18}
- Sensitisation of the peripheral and central nervous systems¹⁸
- Disability associated with persistent pain¹⁶
- The use of cognitive-behavioural principles to manage persistent pain¹⁶
- Topics relating to pain in children and pain in the older people¹⁸

These topics match well with published guidance on curriculum from physiotherapy professional organisations^{25,27}. However, the guidance offered by these professional bodies is of a general nature and does not emphasise pain-specific information.

An example of the successful delivery of specific pain topics has been reported. The attitudes and beliefs of physiotherapy students were assessed using the Health Care Providers' Pain and Impairment Relationship Scale (HC-PAIRS), before and after an educational intervention¹⁶. Students in their penultimate year, who had not participated in the intervention responded with high scores¹⁶. This indicated that their clinical-decision making may not be appropriate, especially when working with patients with persistent and complex pain conditions. If this is reflective of standard physiotherapy training, then it does suggest preparation is inadequate for clinical practice. Students who undertook a 'chronic pain' module, had lower HC-PAIRS scores afterwards. While improvement in scores following the intervention provides some justification for greater consideration of pain topics in the training of physiotherapists, a better outcome would be to see persistent behavioural changes in the clinical setting¹⁶.

This is especially important as the inclusion of pain topics is likely to require some cost. Effective provision of specific information about pain relies on resources, including teaching expertise, access to up-to-date information and learning materials, and dedicated time. There is evidence that these resources are not already available. In a survey of physiotherapy faculties, only 45% reported there being a faculty member with 'an interest in pain'¹⁸. No recent studies have been done to review the qualifications of staff delivering pain content, although there are increasing numbers of discipline-specific and interprofessional post-registration pain education opportunities. With regard to teaching and learning resources, there are a range of

core texts available, and now there is also a wealth of information available on pain from a number of reputable websites, including those managed by the IASP and regional pain associations and societies. Other sources include the Cochrane library, which offers increasing numbers of relevant systematic reviews, the physiotherapy evidence database, PEDro, and guidance for best practice developed by national organisations. These provide quality core, and support material for learning and teaching activities on pain-specific topics. Free access to many of the electronic resources via institution and government registrations reduce some of the cost of including pain topics in the curriculum.

Finding space in a timetable for direct presentation of pain-specific content may be the most difficult resource to provide. In one survey, the common estimation of how much pain-specific time was incorporated into existing courses, was just 4 hours¹⁸. However, Latimer *et al*¹⁶ report on a 16 hour block devoted mainly to 'chronic' pain in an undergraduate physiotherapy curriculum. Another report described 20 hours of content presented to an interprofessional group²⁰. Scudds *et al*¹⁸ conceded that the low number of hours dedicated to pain-specific delivery is reflective of courses reducing the amount of time spent on specialised or 'advanced' topics.

Integrating elements of core curriculum into existing course delivery

Due to the difficulties of finding dedicated time for pain-specific topics, it may be preferable to identify where there may be opportunities for other topics to 'host' elements of the core curriculum. As pain commonly accompanies musculoskeletal injuries it would be useful to emphasise it when presenting content on musculoskeletal conditions. It might also be emphasised in teaching of neurological or cardio-respiratory conditions where pain is a feature. The use of topics covering psychosocial aspects of health is common in physiotherapy programmes and this could be used as a vehicle to understand the psychosocial aspects of pain, including persistent pain. Units or modules dedicated to women's health could ensure that elements of the core curriculum relating to 'Sex and Gender Issues in Pain' are incorporated into learning and teaching activities. Perhaps most obviously, the presentation of pain-relieving electro-physical agents should always reinforce knowledge of pain mechanisms and the multi-dimensional influences on pain.

In addition, enquiry-based or problem-based learning approaches are increasingly popular in delivery of content in physiotherapy programmes. A key advantage of these approaches is that they allow the students to bring their previous experiences into discussion and problem-solving activities. As pain is a common experience and reported as a symptom in association with many health conditions, there are opportunities to promote the investigation of pain-specific content, through innovative writing of cases and scenarios. This would enable students to reflect on their beliefs and behaviour during their past pain experiences, and to examine how these might influence their future professional practice.

Courses may need to evaluate the philosophy of their teaching i.e. an emphasis on getting students to learn techniques or an emphasis on helping them to understand the concepts that the techniques have emerged from.

Enhancing clinical placement experiences

Clinical education is an important part of health professional training and an opportunity for students to focus on specialist elements of practice. Anecdotal reports suggest that there are few opportunities for physiotherapy students to fulfil clinical placement requirements at a pain centre¹⁶. However, pain is such a common experience for patients that no matter what the setting students are likely to be involved in the clinical assessment and treatment of pain at some stage, if not regularly during their training.

This is obviously beneficial and gives the student the opportunity to meet some of the IASP learning objectives. However, the quality of the supervision the student receives will have an impact on the overall outcomes. Experience that is not gained at a specialist facility may not always be demonstrating best practice. As noted earlier there are ongoing concerns about the ability of health professionals to optimally care for patients with pain, which may indicate that health professionals who do not have expertise in the assessment and treatment of pain, may not be able to facilitate the student's learning optimally. An important part of physiotherapy education should be the sharing of information and collaboration between clinical-based staff and staff from the learning institution¹⁶. This enables student learning to be seamless across the two environments and should assist with ensuring a high quality learning experience.

Exploiting innovations in e-technologies

Developments in information and communication technologies provide opportunities for innovative learning approaches. Most commonly this is supported by a learning management system and a huge catalogue of electronic resources available through learning resource centres (sometimes called libraries!). The evaluation of the pedagogy of e-learning strategies continues, but there is evidence that e-learning strategies can be used to promote student engagement with coursework and students who are more active in e-learning activities have been found to be more successful in assessment tasks²⁸.

With reference to the guidance offered by the IASP core curriculum, educators should make full use of relevant websites and peer discussion boards to promote students' understanding of pain. As well, virtual patients and virtual clinical settings can be developed to provide an additional learning experience.

Giving students the skills to search appropriate sources of pain information and assess the information for its quality may be one way of implementing aspects of the core curriculum. Students could use the core curriculum to identify gaps in their knowledge and then search for the information to remedy their deficiency. Importantly,

they should always use appropriate criteria to appraise the quality of information that they find²⁹.

Creating interprofessional education opportunities

Interprofessional working is seen as an essential ingredient of health professional training and is more than simply learning in the same teaching space (for extensive review³⁰). Watt-Watson *et al*²⁰ report on the implementation of an interprofessional pain curriculum. The idea of such a shared learning experience is appropriate as pain requires a multi-dimensional and often an interprofessional approach. This is not without challenge, as professional language can be different, students' prior knowledge of some content may vary from profession to profession and schedules need to be harmonised²⁰. This type of development would therefore ideally take place when courses are simultaneously going through curriculum review or reform.

In any case, this interprofessional pain education activity, of 20 hours across 5 days, was deemed successful. Students' knowledge and beliefs about pain were positively influenced, as measured by the Pain Attitudes and Beliefs Questionnaire (PABQ)²⁰. Within this context of pain education, students appeared to gain insight into the benefits of interprofessional collaboration²⁰. This is significant as there is much support for interprofessional activity, including pre-registration training and pain education which may provide a relevant context. Again, research demonstrating the impact of interprofessional learning experiences on clinical practice would provide greater support to this approach to pain education.

Conclusions

Physiotherapists have a well-established role in assisting people who have painful conditions. Information about pain mechanisms, and clinical guidance for health professionals caring for people with pain, is constantly being updated due to large amounts of published laboratory-based and clinically-based research. The revision of the IASP core curriculum serves as a reminder to all educational designers that, review of pain education needs to be regular and thorough. It may be unrealistic to expect courses to adopt the IASP core curriculum in its entirety, unless there is scope for integrating the information with other key topics. Interprofessional education may be a useful forum for advancing pain knowledge within the health professions.

The implications if physiotherapy programmes do not offer updated education on pain are unclear. However, there is a growing trend for health professionals to extend their scope of practice, and where the market for services is competitive; physiotherapists may find themselves being phased out of their traditional roles, should other professions more effectively grasp the 'pain' mantle.

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