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## **A Review of Chronic Pain Education for UK Undergraduate Nurses**

### **Abstract**

Chronic pain is a common complaint within healthcare and staff can face difficulties in caring for patients with chronic pain. It has been recommended that training in chronic pain should be within healthcare professional's educational curriculum. Despite this recommendation and a free pain curriculum being available, undergraduate nursing courses still have a low number of hours dedicated to pain education. Factors that affect undergraduate nurses are: disparity about whether this should be taught by theoretical content in the University or by healthcare professionals in clinical placements, the strive for interprofessional learning in an already crowded curriculum, and the lack of clarity on how to assess students on their knowledge. This review recommends that chronic pain needs to be specifically defined as a learning outcome with a recognised assessment on a generic undergraduate nursing module to ensure all students are exposed to it.

### **Key words**

Chronic pain, pain education, IASP, undergraduate nurses, student assessment, clinical placement

### **Key points**

- Chronic pain is a global health issue and without proper management it can have huge consequences on a person's life.
- Treating patients with chronic pain can be difficult and it is recommended that all healthcare professionals have chronic pain within their undergraduate curriculum for their healthcare professional course.

- The IASP (2017) have provided a free pain education curriculum for undergraduate healthcare professional courses. This resource does not provide guidance on how to assess student's knowledge.
- Undergraduate nursing courses have a low number of hours dedicated to pain education.
- There are a variety of factors that affect the provision of pain education, in particular chronic pain, for undergraduate nurses such as: confusion about whether this is taught by the University or by healthcare professionals in a clinical placement; the difficulty about including interprofessional learning into the curriculum; and disparity about how to assess student's knowledge of pain education.
- This review recommends that chronic pain needs to be specifically defined as a learning outcome with a recognised assessment on a generic undergraduate nursing module to ensure all students are exposed to it.

### Reflective Questions

1. What training have you received on chronic pain and how to manage it? This could be pre or post qualifying. Is this training still current?
2. Think about a patient with chronic pain that you have cared for. How did you manage them? Were you prepared for this from your training?
3. When you have worked with students how do you educate them? Is it based on training that you have attended? Is this still current? Or do you base the education on your own clinical experience?

### Introduction

Pain is defined as “An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage” (IASP, 2020). Pain is chronic when it has lasted more than 3 months (NICE, 2021). The term ‘chronic pain’ can refer to wide range of painful conditions such as fibromyalgia and is useful terminology for research studies. However, the term ‘chronic pain’ can cause confusion amongst patients and friction between healthcare professional and patient, who fear their daily pain is due to a misdiagnosed condition (Raffaelli et al, 2021).

In 2020 it was found that 38% of UK adults have chronic pain, and the prevalence for it increases with age (Formulate Health, 2020). Despite chronic pain being a common complaint within healthcare, patients are still poorly managed which can have major consequences on their quality of life including depression and loss of employment (BPS, 2018). Byrna and Wheeler (2021) reported that nurses treated patients with chronic pain more suspiciously compared to acute pain. Lack of appropriate support and services for chronic pain patients is a significant burden to the National Health Service (NHS) (Betteridge and Johnson, 2019). Pain, particularly when chronic, has been identified as a global health issue (Carr et al, 2016).

The Chief Medical Officer highlighted the difficulties facing healthcare staff in caring for patients with chronic pain and recommended that training in chronic pain should be within the curriculum of all healthcare professional education (DoH, 2009). UK Universities determine how much pain education to include in their curriculum (BPS, 2018). A survey into hours dedicated to pain education within undergraduate nursing found on average there was 10.2 hours per programme, compared to 37.5 hours on physiotherapy education (Briggs et al, 2011).

The IASP has produced a free pain curriculum for healthcare disciplines to develop undergraduate knowledge and skills to manage pain as part of an interprofessional team

(updated 2017). However, despite this resource pain education receives a low number of hours in undergraduate healthcare professional courses (BPS, 2018).

A literature review was conducted using Medline and the University internal library catalogue database (see Figure 1).

*Figure 1: Literature review search terms*

Chronic pain education
Chronic pain/ persistent pain/ long term pain
Newly qualified nurses/ new nurses/ novice nurses/ newly graduated nurses
Nursing students/ student nurse/ undergraduate student nurses
Undergraduate
2009-2022

#### Undergraduate nursing pain education

Utilisation of the IASP undergraduate pain curriculum (originally 2010, updated 2017) can increase healthcare professional students' knowledge into the assessment and management of patients with chronic pain (Briggs et al, 2011). However the uptake of the curriculum within the UK is unclear (Briggs et al, 2011). According to Briggs et al (2011), UK undergraduate adult nursing courses spend on average 13 hours on pain education resulting in less than 1% of the total programme hours. An international review including UK participants concluded that undergraduate nursing pain education remained inadequate and students themselves were concerned about the lack of undergraduate pain education they received (Chow and Chan, 2015). Pain education programmes when used were found to be effective at improving nursing student's pain knowledge and attitudes (Chow and Chan, 2015). A systematic review into student nurses' knowledge and attitudes towards pain management over the last 20 years highlighted that student's pain knowledge was lacking and that they lacked appropriate

attitude towards pain (Cousins et al, 2022). The review highlighted the need for pain curriculum to be based upon the IASP curriculum (2017) (Cousins et al, 2022).

Mackintosh-Franklin (2017) found that pain is not a specific aim or learning outcome of the taught modules of undergraduate nursing curriculum. Similar to other healthcare disciplines pain education is largely integrated throughout the programme rather than offered as standalone content (Briggs et al, 2011). This fragmented approach to pain education could lead to gaps in students' knowledge as they have to integrate learning from across different modules (Ung et al, 2016). The IASP pain curriculum (2017) covers both acute and chronic pain. Undergraduate nurses may not have a particular interest or understanding of chronic pain when commencing their education. If not exposed to chronic pain education during their course they will qualify as nurses lacking knowledge that could affect patient's treatment (Mackintosh–Franklin, 2017). Cousins et al (2022) review found that student nurses still did not recognise that a patient who was not grimacing as being in pain, despite the patient reporting pain.

Carr's et al (2016) UK survey into the factors affecting inclusion of pain education in undergraduate curricula found that some challenges of inclusion are linked to the drive for more interprofessional education, which can be time-consuming and difficult to coordinate between different courses. An already overcrowded curriculum and confusion over whether students were taught this in their clinical placements were also challenges (Carr et al, 2016). A limitation of this study is that only 19 UK universities were examined and in some cases it was difficult to extract the particular pain content of curricula as universities felt they had successfully integrated it into their programme, potentially biasing the results of the survey (Carr et al, 2016).

The IASP (2017) has provided a pain curriculum for interprofessional learning. However this could be difficult to translate into undergraduate courses as it does not describe the content

or level of competency required at undergraduate level (Lankveld et al, 2020). Pain curriculum at undergraduate level is often discipline specific. The IASP (2017) do provide discipline specific pain curriculum. For interprofessional collaboration to be successful competencies for all disciplines need to be clearly defined (Lankveld et al, 2020). The BPS (2018) have provided a UK guidance curriculum that compliments the IASP (2017) interprofessional learning curriculum and has core curriculum outcomes that all undergraduate health care professional disciplines should achieve before registration. However, uptake on this guidance is unclear.

#### International variances in pain education

Similar to the UK, in Canada pain education in undergraduate nursing studies is incorporated throughout the programme with a strong reliance on clinical placements (Carr et al, 2019). Clinical placements can expose students to multiple pain perspectives and attitudes. However these can be dependent upon the placement, how much exposure their clinical supervisor has had to chronic pain, and the clinical supervisors' own attitudes and knowledge which could be outdated (Carr et al, 2019).

Student nurses in New Zealand were found to have misconceptions about patients' experiences of chronic non-malignant pain. From their undergraduate education there was deemed to be a lack of pain, in particular chronic pain content (Shaw and Lee, 2010). New Zealand's undergraduate curricula for students studying to be a registered nurse require focus on the Nursing Council's competencies for the registered nurses scope of practice (NCNZ, 2022). The competencies are broadly defined and similar to the NMC (2018b) proficiencies; none of them are specific to chronic pain. Whereas curricula for students studying to be an enrolled nurse specifies pain management as theoretical topic to be studied (NCNZ, 2017).

Similar to the UK (Mackintosh-Franklin (2017), Campbell's (2020) US participants study found that pain education within undergraduate nursing tended to be integrated through programmes rather than taught as standalone content. Participants felt that only basic pain education was

covered but struggled to see how it could be developed further in an already overcrowded curriculum (Campbell, 2020).

Nursing students in Canada, New Zealand and the US all have to pass a national exam assessing their competencies as a newly registered nurse (NCSBN, 2022; NCNZ, 2017; NCSBN, 2019). Some of the questions on the New Zealand and US exams can directly relate to pain assessment and management (NCNZ, n.d; NCSBN, 2019). The Canadian School of Nursing exam requires candidates to prove their competency in pain assessment, intervention and prevention (NCSBN, 2022). In comparison in the UK, the NMC (2018b) have produced standards of proficiencies that are applicable to all registered nurses. These proficiencies do discuss pain but there is no mention of chronic pain specifically and there is no final regulatory body exam that students need to pass before being admitted onto the nursing register.

### Teaching interventions

Pain education can be taught in many formats including pain neurophysiotherapy education (PNE), which addresses some of IASP (2017) learning outcomes (Colleary et al, 2017). PNE can improve patients' and clinicians' knowledge of chronic pain by using neurophysiological information to teach people that the pain they feel can be an overprotective message from the brain as the original injury is healed. A 70 minute PNE session increased UK and Ireland physiotherapy students' knowledge of chronic pain by 34% and caused a large positive change in attitudes towards patients with chronic pain (Colleary et al, 2017). However as there was a lack of follow up to assess retention of knowledge and attitudes, PNE would need to be further investigated.

A US study into newly registered nurses experiences of managing patient's pain (Byma and Wheeler, 2021) reported that participants felt there was a practice theory gap between what was taught to them at University versus the reality in clinical practice, particularly in relation chronic pain management. Shaw and Lee (2010) found that students and nurses were often



unaware of their own limited knowledge of chronic pain, and were often influenced by their colleagues' attitude around them. Byrna and Wheeler (2021) also found that other registered nurses influenced how newly registered nurses managed patients' pain as the registered nurses had previous clinical experience to provide context for their pain management plan which newly registered nurses lack.

Byrna and Wheeler (2021) also report on the importance of the relationship between the nurse and the multi-disciplinary team (MDT) to provide effective pain management. Chronic pain management should be in a holistic, multi professional approach (Briggs et al, 2011). However newly registered nurses can sometimes feel reluctant to raise their concerns about the pain management plan to the other members of the MDT (Byrna and Wheeler, 2021). Wilson et al (2021) found that interprofessional education (IPE) activity on opioid use between pharmacy, medical, nursing, addiction study and social work undergraduate students reported that students found IPE to be valuable and it helps to prepare them for working collaboratively with the MDT. IPE promotes good communication and team collaboration which is essential for providing patients with high quality pain care (BPS, 2018).

The BPS (2018) guidance on how to incorporate pain education into pre-registration curricula for healthcare professionals in the UK recommends a variety of teaching methods that have been used by their collaborators including inviting chronic pain patients into the teaching environment to discuss their experience with the students. Involving service users in undergraduate healthcare professional training has been found to be helpful in students developing their communication skills and professional attitude, in particular empathy (BPS, 2018). Providing students with an opportunity to appreciate the chronic pain patient's perspective has also been linked to a positive impact on their learning and future practice (Shaw and Lee, 2010).

### Student Assessment

Although the IASP (2017) has provided a curriculum for pain education it does not provide guidance on how undergraduates should be assessed on their knowledge and skills. There is disparity over the best way to evaluate students' knowledge of pain education (Ung et al, 2016). Ung et al (2016) conducted a literature review of 26 articles assessing nursing and medical student's knowledge and attitude of pain, the 'Knowledge and Attitudes Survey Regarding Pain' (KASRP) (Ferrell and MacCaffery, 1987 cited in Ung et al, 2016 p.10) was found to be the most popular assessment tool. But although useful for assessing knowledge following pain education programmes, its original purpose is to measure the attitude and knowledge of professional care givers on the subject of pain (Ferrell and McCaffery, 2014). Despite the different evaluation tools used a common finding was students' poor knowledge of pain. For the KASRP (Ferrell and MacCaffery, 1987 cited in Ung et al, 2016 p.10) assessment the minimum acceptable score is 80% which none of the students achieved (Ung et al, 2016). A lack of formal pain curriculum within undergraduate education inhibits the ability to comprehensively assess students' knowledge with summative assessment strategies (Briggs et al, 2011).

Within clinical placements students are assessed by their practice assessors and supervisors with a practice assessment document (PAD). The way the PADs are split into sections that cover aspects such as professional values and essential skills, could encourage student nurses to think about the care that they provide for chronic patients in a minimalistic way rather than a holistic approach (Young et al, 2018).

### Clinical Placements

Nurses work regularly with patients who experience pain and are frequently responsible for coordinating and caring for patients with chronic conditions (Shaw and Lee, 2010). Exposure to patients with chronic pain gives students the opportunity to apply their theoretical knowledge to clinical situations (Briggs et al, 2015). However students' clinical placements can vary from

a hospital setting to the community, and there is a chance that a student will not be exposed to patients with chronic pain in their placement setting (Carr et al, 2016).

To complete a pre-registration nursing programme the student must complete 4,600 hours of training of which 2,300 hours must be in a clinical setting (NMC, 2018a). Undergraduate nursing students are exposed to a wide set of clinicians' and individuals' views on pain from their clinical placement and there is no certainty that the information provided to the students is the most current evidence-based practice. Nurses are required by The Code (NMC, 2018c) and Revalidation (NMC, 2016) to continue post-registration to professionally update their knowledge and treat patients with the latest evidence based practice. The EFIC (2019) do provide pain curriculum for a diploma in pain nursing for registered nurses, but it is reported that there is lack of financial support and time for nurses to complete mandatory training let alone developmental training, often through University courses, for knowledge and career development (RCN, 2018). The impact of Covid-19 has also contributed to a reduction in nurses continuing with their professional development (Dean, 2020).

### Recommendations

From this review I would recommend that chronic pain needs to be a specific learning outcome outlined within the nursing undergraduate module directory to be taught as a generic module using the IASP pain curriculum (2017) to ensure all undergraduate nursing students are exposed to it.

Theoretical knowledge could be assessed using the KASRP tool (Ferrell and MacCaffery, 1987 cited in Ung et al, 2016 p.10). Depending on the format this assessment could be embedded online to the student's virtual learning environment (VLE) therefore also providing a way to monitor student understanding and engagement with the topic. The use of online assessments has been linked to improvements in registered nurses pain management skills (Phillips et al, 2014).

The PAD should contain an essential skill specifically aimed at chronic pain. As noted earlier learning exposure can vary depending on the clinical environment the student is placed in. This skill could be achieved by the student discussing chronic pain with chronic pain patients or seeking outreach exposure with chronic pain nurses within a clinical placement (Liljedahl et al, 2015; Shaw and Lee, 2010).

The literature suggests chronic pain education should have an interprofessional approach (IASP, 2017; Carr et al, 2016). In order to achieve this undergraduate healthcare programmes should have a member of staff designated to lead upon interprofessional learning within their University. The IASP pain curriculum (2017) is a free resource that can be used to guide the curriculum. Service users should be invited to share their experience with students (BPS, 2018).

Further research into how chronic pain education is incorporated into undergraduate nursing programmes and the factors that affect its delivery within UK universities is required.

### Limitations

As Carr et al (2016) discuss a limitation to this review could be that chronic pain is integrated sufficiently within the undergraduate nursing curriculum that it is hard for lecturers to extract the amount of teaching time that specifically discusses it.

A further limitation similar to Ung et al (2016) is that the literature reviewed either discussed pain in general or a subset of pain such as chronic lower back pain rather than chronic pain as a topic. Due to the difficulty in finding literature that discusses chronic pain education some of the literature used is dated and may not reflect current practice (see figure 1).

### Conclusion

Despite chronic pain being an issue that effects patients globally, it still remains a topic that is insufficiently covered in healthcare professionals' undergraduate education. There is disparity

present about whether chronic pain education is covered theoretically within the University setting, or whether students are expected to be educated upon this within their clinical placements. Some students may not be exposed to chronic pain clinically as placements and clinicians own knowledge on the subject can vary.

The IASP (2017) have produced guidelines for a curriculum on chronic pain but there are variances within the UK with how much these guidelines have been utilised and how chronic pain education could be taught. The guidance does not suggest an assessment method and currently undergraduate nursing students are assessed by their University lecturers and by healthcare professionals in the clinical setting.

This review recommends that chronic pain needs to be specifically defined as a learning outcome for a generic undergraduate nursing module to ensure all students are exposed to it. Theoretical assessment of knowledge could be assessed with the KASRP tool (Ferrell and MacCaffery, 1987 cited in Ung et al, 2016 p.10). The PAD should specify an essential skill that demonstrates students' clinical skills towards patients with chronic pain. Chronic pain education should have an interprofessional approach, and there should be a designated leader on interprofessional education within universities

This review does have some limitations such as the use of dated literature. It is possible that chronic pain education is integrated sufficiently into the undergraduate nursing programmes that it is difficult to extract the exact teaching time of the content. More research is required into what factors are affecting undergraduate nursing chronic pain education and how to overcome them within UK universities.

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