

## Editorial: Pain management and the undergraduate curriculum – is it a case of ‘could do better’?

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There is an old adage that says a society should be judged by how it treats the most vulnerable. It is interesting to apply this concept to the area of pain management. There is perhaps nothing as distressing as a child in pain; the helpless suffering of children touches us at a deeply human level and, I would argue, represents a profound failure of the healthcare system to address the needs of a very vulnerable group. A recent publication by King et al<sup>1</sup> suggests that chronic persistent or recurrent pain in children is ‘overwhelmingly prevalent’ and represents a major health concern for this population. In their review of epidemiological studies, King et al<sup>1</sup> found that the prevalence of headache in children ranged from 8-83%, abdominal pains from 4-53%; and for conditions that physiotherapists are perhaps more associated with, the prevalence rates were: back pain 14 – 24%, musculoskeletal pain 4 – 40%, multiple pains 4 – 49%, and general pain 5 – 88%. Because of the wide variation in reported prevalence rates it is difficult to make generalisations, however, chronic pain in children increased with age, tended to affect girls more than boys, and was associated with psychosocial variables including anxiety, depression and low self-esteem. Most worryingly, these authors suggested that the prevalence of chronic pain in children had increased in the last number of decades. When pain in children becomes chronic or persistent, it can signal long term future health problems.<sup>2</sup> Children with pain often become adults with pain; it is well recognised that pain during infancy causes long-lasting changes in pain processing that extend well into childhood and adulthood.<sup>3</sup>

Another recent study exploring pain in an extremely vulnerable group, by Maria Walsh and colleagues at the National University of Ireland<sup>4</sup> reported the prevalence and impact of chronic pain in adults with intellectual disability in Ireland (n = 753). These authors found that the overall prevalence of chronic pain in those with intellectual disability was 15.4%, and again the prevalence among females (20.1%) was higher than males (13.4%); Walsh et al<sup>4</sup> cautioned that these figures may even represent an under estimation of the problem. Among the most frequent causes of pain in this population was arthritis and musculoskeletal pain, and with respect to management, massage (29.8%) and physiotherapy (21%), featured among the most common treatments. For those with intellectual disability to have to carry the burden of chronic pain (and almost one third of cases had moderate to severe pain) in addition to the other challenges that their condition brings, is an appalling situation.

When pain management in the elderly is considered, a similar story emerges to that of other vulnerable groups;

pain is present in 25% to 50% of community-dwelling elderly people, for those in long-term care, the prevalence is even higher, with as much as 80% reporting daily pain.<sup>5</sup> Pain assessment and treatment in the elderly is complicated by a number of factors, the reluctance or inability of many older people to report their pain, the high incidence of dementia among those in residential care is a particular problem, and pain management is often complicated by other concomitant medical problems in the older adult.<sup>6</sup>

The literature on the management of pain in vulnerable people does not reflect well on healthcare professionals and indeed the history of poor pain management in children is well recognised. Post-operative pain in children is often undertreated and a large proportion of children experience moderate to severe pain post operatively.<sup>7</sup> Children have been treated with much less analgesia post-operatively than the recommended amounts<sup>7</sup> and it was common to use non-opioid, oral analgesia rather than intravenous morphine even after major surgery in children.<sup>8</sup> It should be noted that inadequately treated pain, particularly in the neonatal period, results in increased morbidity and mortality.<sup>9</sup> For children with chronic musculoskeletal pain there is strong evidence to support psychological and physical interventions, particularly exercise, but recognition, early treatment and access to services remain a major barrier to successful outcomes.<sup>2</sup> Some of the proposed explanations for poor pain management in children have been; that children suffer less pain than adults,<sup>7</sup> neonates do not feel pain due to the under development of the nervous system<sup>10</sup> (in fact, the converse of this is now believed to be the case, the underdevelopment of the nervous system in neonates and very young children results in an inability to localise pain and consequently more widespread pain and more peripheral and central sensitization). The belief that administering opiates to children with severe abdominal will lead to management errors has also been expressed as a reason for withholding appropriate analgesia.<sup>11</sup> All of these explanations have been demonstrated to be erroneous, yet pain management in children remains suboptimal.<sup>12</sup> In the elderly a similar situation exists; pain in older patients is frequently inadequately managed or left untreated, sadly this is even more frequently the case in those with dementia or cognitive impairment and cancer.<sup>13, 14</sup> The consequences of poorly controlled pain in older adults are further cognitive deterioration, depression and mood disturbance, sleeplessness, reduced activities of daily living, and of course decreased quality of life.<sup>6</sup> Indeed poor pain management in elderly populations is seen as a

contributory factor to increased mortality.<sup>15</sup>

One of the reasons cited for poor pain management in vulnerable groups is the difficulty associated with pain assessment in those with cognitive or communication challenges; whilst this undoubtedly does contribute to the problem, factors such as knowledge deficits, inappropriate or outdated beliefs about pain management and a mismatch between knowledge and understanding and clinical practice are also reported in the literature.<sup>12,16</sup> Ineffective pain management skills and inappropriate understanding and beliefs about pain by therapists, nurses and medical staff have been directly linked to inadequate undergraduate education about pain.<sup>17</sup>

Although pain management is seen as a core component of physiotherapy practice, paradoxically, undergraduate education in this area is often unsatisfactory.<sup>18</sup> A recent UK survey of undergraduate pain teaching in 70 undergraduate programmes including: physiotherapy, occupational therapy, nursing, midwifery, medicine, dentistry, pharmacy and veterinary science found that the average pain content in the curriculum was just 12 hours.<sup>18</sup> Physiotherapy undergraduates received the highest input averaging 37.5 hours with nursing (all branches) averaging just 10.2 hours; occupational therapy and medicine had a similar amount of pain education with 14 and 13 hours respectively. Typically where pain featured in the programme the content was fragmented across the curriculum; while it could be argued that this would allow the pain content to be revisited and built upon over the duration of the course; there is also the possibility that students may find it difficult to integrate complex material if it appears sporadically throughout the curriculum. Briggs et al<sup>18</sup> also reported that inter-professional education around pain was rare. Similar problems have been reported for undergraduate healthcare programmes in Canada and have been successfully addressed using an inter-professional curriculum based on that proposed by the International Associations for the Study of Pain.<sup>17</sup> Those physiotherapy programmes that have developed a comprehensive, inter-professional pain education programme should be applauded, but perhaps for the rest of us it's a case of 'could do better'.

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