

ELECTIVE (SSC5b) REPORT (1200 words)

A report that addresses the above four objectives should be written below. Your Elective supervisor will assess this.

Osteoarthritis (OA) is a major global public health concern. It is the 4th leading cause of disability worldwide (Fransen et al. 2011). In the UK around a third of the over 65 age group have clinically relevant OA, and more than 80% of those over 75 years show arthritic changes on x-ray (Arden & Nevitt 2006; Neogi 2013). The prevalence of OA is increasing in the West, likely because of increasing rates of obesity, sedentary lifestyles and an ageing population (Storheim & J-A. 2014). OA, particularly that of large joints has a strong relationship with obesity and thus the numbers of people suffering from the affliction are likely to rise (King et al. 2013). However these factors are not the only ones that affect the prevalence of OA. For example, OA of the knee is particularly common in Chinese women despite low levels of obesity, suggesting that genetic factors are important as well as environmental (Storheim & J-A. 2014). Data on the epidemiology of OA in India and Pakistan are scarce – but recent research suggests that levels are not too dissimilar from the West (Akhter et al. 2011). This again may be because of genetic factors, and also specific mechanical loading patterns in rural workers, but also because obesity and sedentary lifestyles are also becoming more common in these countries.

An audit performed using Emis revealed that out of 3416 patients 205 patients (6%) currently had a diagnosis of OA. OA of the knee was the most common type, with 135 (4%) of patients suffering from this. Females outnumbered males in a ratio of 3:2 and the majority were between 50-79 years. Most of the patients with OA had trialed multiple treatment modalities. The most common were analgesia (including paracetamol, ibuprofen (topical and oral) and codeine) and physiotherapy. Many patients had only been advised to use thermotherapy and had been counseled on appropriate footwear and activities. The minority had been referred for surgery, which included arthroscopy and in some cases joint replacement. Of the 135 patients with OA of the knee 10 of them had undergone a total knee replacement.

As part of this elective I also go the chance to undertake in-depth interviews with patients suffering from long-term pain as a consequence of OA. As well as doing a general medical history, I explored with them in detail how they coped with the pain, how it affected their lives, and what things, if any, helped alleviate their pain. I was particularly interested in what mainstream and alternative treatments patients found helpful in controlling pain, the attitudes they had towards their pain and the degree of control they felt they had over it.

It is interesting to me that there is a poor correlation between pathological findings in OA and the pain experienced by the patient (Finan et al. 2013). We are still not entirely sure why this discrepancy exists. Some researchers have tried to explain this missing link using a 'bio-psycho-social' model; a model that postulates various biological, psychological and social factors will affect a patient's experience of pain (Bartley et al. 2017). Research has found certain psychological characteristics are

associated with better outcomes in chronic pain patients. One such characteristic is 'resilience'; defined as 'the ability to adjust to challenges and sustain successful adaptability to adversity' (Bartley et al 2017 p. 2). Other characteristics frequently mentioned are optimism and self-efficacy.

During my elective I met a range of patients, with very different psychological characteristics, dealing with their pain in very different ways. At one end of the spectrum one patient, who had OA secondary to rheumatoid arthritis, displayed a remarkably positive attitude towards her condition. Her husband had unfortunately passed away a number of years ago and she lived on her own. However, she clearly made excellent use of her social networks to help her get by and described herself as having lots of friends. Throughout the discussion she repeatedly said phrases such as 'I refuse to let me get this down'. She also had many things that she enjoyed in her life – including going out and listening to music and dancing when her joints allowed it.

At the other end of the spectrum research demonstrates that there are psychological factors that are more likely to result in the maintenance of chronic pain (Edwards et al. 2016). Some of the common factors mentioned are depression, anxiety and catastrophizing. In many situations where these attributes and chronic pain co-exist, it is difficult to determine whether these have resulted as a consequence of having to live in pain – or whether they preceded the pain and are in some way maintaining the chronic pain condition. Research indicates that both are situations are common. One mechanism for how anxiety can lead to on-going pain is through activity avoidance. Excessive worry about creating further damage can lead people to become very sedentary. It is well established that for chronic pain, low-impact exercise is a major benefit to keeping pain at bay, and activity avoidance therefore creates a negative pain cycle. A core treatment for OA in the NICE guidelines is exercise that builds muscle and low –impact aerobic exercise. A number of patients who I saw at the surgery appeared to be stuck in these negative cycles. They were scared to go out and did not feel themselves capable of any activity. These patients reported a very low mood and high levels of anxiety.

Many of the patients spoken to were also either over-weight or obese, (according to the BMI scale). At the practice there was a big emphasis on supporting patients to lose weight and encouraging activity. So many of these patients had already been told that weight loss is likely to help their pain. However, there seemed to be a certain reluctance to accept this as true and a stronger belief that external interventions could help.

After speaking with these patients in conjunction with reading the literature, it does appear that psychological variables can make a big difference to how people cope with and experience pain. I think this understanding can lead to improving clinical practice. First so that we can identify patients who may need more help. Although patients who do have psychological tendencies that are more likely to exacerbate the experience of pain are not always the easiest patients to treat, they are actually the ones who are often the most in need of support. We must be compassionate towards the mixture of genetics and life experiences these patients have that has left them vulnerable to pain, and help in whatever way we can. Secondly, a greater appreciation of the interaction between psychological and physical factors can allow us to broaden our treatment horizons. This can begin in the doctor's office. A willingness to listen and encouragement of positivity can actually be part of the treatment. The treatments we offer may also be influenced by this understanding. For example, a

referral to CBT in an attempt to tackle negative thinking, might actually be recommended as a treatment for pain rather than just as a way of coping with the pain. Similarly encouragement of physical activity is vital, and any activity which helps the patient's mood.

The final objective that I got to achieve during my elective was to work towards obtaining my Basic Competency Certification from the British Medical Association on Acupuncture by completing case studies with those suffering from chronic pain. Although NICE currently do not recommend acupuncture for the treatment of OA, they do recommend it for neck pain and headaches. Acupuncture was not recommended in the NICE guidelines for OA because it failed to achieve a standardized mean difference of 0.5 over sham acupuncture, despite both having a statically significant positive effect over no-treatment. It has been argued that few treatments for OA achieve a SMD of >0.5, and its inclusion in the guidelines should be revisited (White & Cummings 2014). I certainly found that it can be of some benefit to some patients, although this may in part have been a placebo affect.

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