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Sonographers’ experiences of work-related musculoskeletal disorder: The everyday consequences of physiological stress and injury in contemporary ultrasound

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**BACKGROUND**
By 2013, the UK government’s Migration Advisory Committee had listed sonography as an official ‘shortage specialty’ (Migration Advisory Committee, 2013; Parker & Harrison, 2015). As a consequence of the working stresses allied to this shortage, British sonographers have increasingly been reducing hours or leaving clinical practice entirely (Society and College of Radiographers, 2014). Moreover, among those who remain, incidences of reported chronic pain and active injury are also on the increase within a profession that was already synonymous with high rates of work-related musculoskeletal disorder (WRSMD) (Harrison & Harris, 2015). While contemporary research has described the rates of WRSMD among ultrasound practitioners (Bolton & Cox, 2015), none has to date extensively explored its personal and professional impacts.

**METHODS**
Using a model of Interpretative Phenomenological Analysis with proven facility in medical imaging research (Miller et al., 2017), extended semi-structured interviews with N=9 experienced sonographers were analysed. This study aimed to seek participants’ individual experiences and understanding of WRSMD and ways to reduce the incidence. The researcher aimed to recruit a reasonably diverse group of participants with a range of different or contradictory views, rather than a ‘representative’ sample of sonographers as such. The study aimed to gather sufficient information in order to make sense of WRSMD by ‘synthesising, abstracting, contextualising, analogising or illuminating meaning’ of the assertions taken from the participant interviews (Loaring et al., 2015).

**FINDINGS**
Participants routinely reported a sensation of guilt and depleted self-efficacy that not only permeated any working absence resultant of their own WRSMD, but also to taking legitimate leave when colleagues were suffering from WRSMD. An upshot of this was to recurrently “take one for the team” and work through excessive pain, even when this would likely result in greater prospective physical damage. While the basic shortage of sonographers was the core attribution for such behaviours, participants also cited (1) increasingly obese patients, (2) increasingly unhelpful (i.e. profiteering) equipment manufacturers, and (3) their own paternalism regarding healthcare.

**CONCLUSIONS**
The present situation in ultrasound mirrors a culture of potentially dangerous pain acceptance that been noted in the psychology of sport for some time (Weinberg et al., 2013) albeit for altruistic, rather than egoistic, reasons. There is a clear body of evidence to suggest that sonographers are in crisis point both in terms of staffing levels and in terms of inter-related issues of WRSMD. The issue of WRSMD remains complex and under-researched and no studies are able to establish a definitive cause of the condition, because the causes are multifactorial. However, the majority of the literature seems to agree that poor posture, repetitive movements and insuﬃcient strength seem to be the main physical causes, but little has been explored in terms of the philosophical underpinning of sonographer behaviour and culture, which is why this study contributes to a new body of knowledge. It is acknowledged that extensive deeper levels of analysis and interpretation need to take place around the data collected for this study in order to draw more comprehensive conclusions.

**REFERENCES**
Miller, P. K., Woods, A. L., Sloane, C. & Booth, L. (2017) 'Obesity, heuristic reasoning and the organisation of communicative behaviour and culture, which is why this study contributes to a new body of knowledge. It is acknowledged that extensive deeper levels of analysis and interpretation need to take place around the data collected for this study in order to draw more comprehensive conclusions.'

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