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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 (WRMSD) (Harrison & Harris, 2015).

While contemporary research has described the rates of WRMSD 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 WRMSD 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 WRMSD by ‘synthesising, abstracting, contextualising, analogising or illuminating meaning’ of the assertions taken from the participant interviews (Loaring et al., 2015).

Participants routinely reported a sensation of guilt and depleted self-efficacy that not only permeated any working absence resultant of their own WRMSD, but also to taking legitimate leave when colleagues were suffering from WRMSD. 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.

**FINDINGS**

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 egotistic, 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 WRMSD. The issue of WRMSD 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 insidious stress 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**


**CONCLUSIONS**

- **BROAD ISSUE**
  - Staffing (Shortages)
  - Sonographer Workload
  - Equipment Manufacturers

- **DEVELOPING EMERGENT THEMES**
  - Extended Working Days
  - Weekend Working
  - Recruitment Issues
  - Increasing Patient Obesity
  - Technical Difficulty of Certain Examinations/Specialisations
  - Work Related Stress/Anxiety
  - Work Absences (Self/Colleagues)
  - Offered Solutions
  - ‘Magic Cure’

- **EMERGENT THEMES**
  - Sonographer Paternalism
  - Emotional Labour
  - Sonographer ‘Culture’ to ‘Take one for the team’
  - Culture of Pain in General
  - Cognitive Dissonance
  - Dangerous ‘Workaround’ Strategies
  - Feelings of Guilt/Resentment
  - Loss of Self Efficacy
  - Scapegoating

- **DEVELOPING SUBORDINATE THEMES**
  - Perception of ‘Self’ in relation to the causes of WRMSD
  - Innate Perceptions of Blame
  - Undesirable Senses
  - Rejection/Acceptance of Change
  - Acceptance of Self/Role
  - Role Conflict
  - Culture of ‘They’ inferring establishment imitating on ‘Them’ Sonographers
  - Power Struggle
  - Behavioural Changes

https://www.cumbria.ac.uk/research/groups/social-issues-in-medical-imaging/
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