

# Burnout levels and patterns in postgraduate medical trainees: Summary report

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## Background

Burnout is highly prevalent in the medical profession, especially amongst postgraduate medical trainees.<sup>1</sup> This is concerning, as burnout impairs trainees' health and productivity, and the quality of patient care, leading to immense societal costs.<sup>2-4</sup> Whilst the Maslach Burnout Inventory – Human Services Survey (MBI-HSS),<sup>5</sup> a 22-item psychological scale that measures emotional exhaustion, depersonalisation and personal accomplishment, dominates this literature, it is used inconsistently in research. This impedes comparisons between studies, inhibiting our ability to discern whether burnout levels differ between subgroups (e.g. training level, specialty); a crucial issue to tailor interventions to each subgroups' needs. Furthermore, while theory indicates that burnout lies on a continuum, scores are commonly interpreted using cut-off points to identify 'cases' of burnout, usually relying on either emotional exhaustion or depersonalisation scores.

## Aims

To address these limitations in the literature, we conducted a systematic review and meta-analysis. The two aims were to:

1. Compare postgraduate medical trainees' burnout levels (as measured by the MBI-HSS) with medicine norms; and
2. Explore differences in burnout levels and patterns associated with training level and specialty.

## Methods

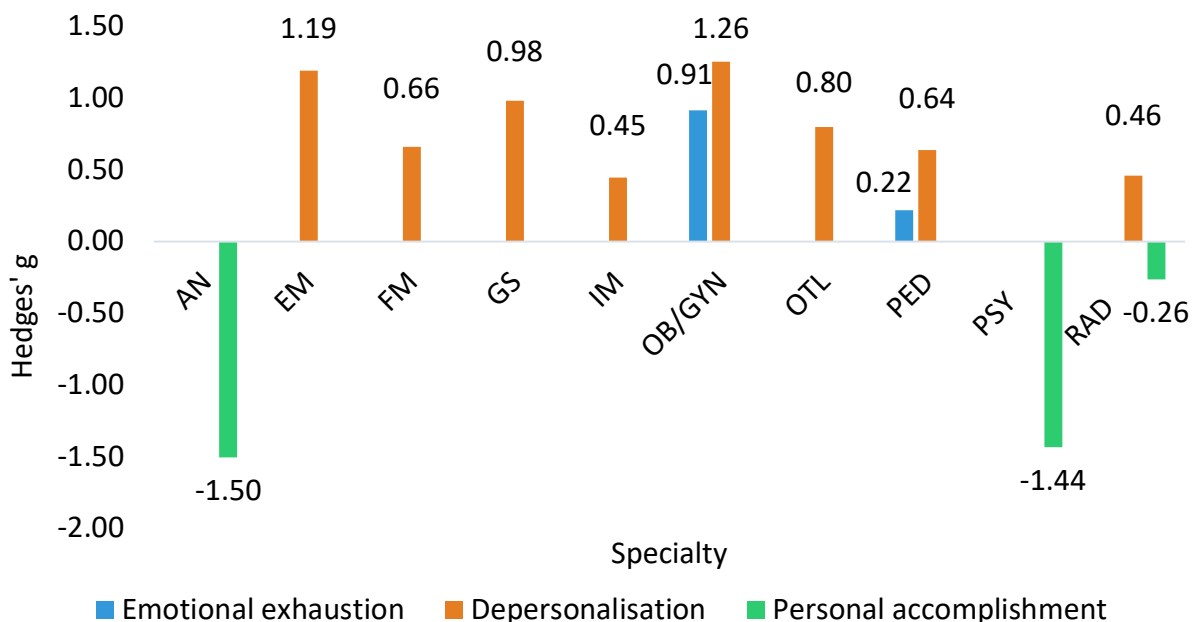
We searched five databases for published articles reporting burnout levels in interns, residents or registrars using the MBI-HSS. Relevant studies' data were pooled and then compared with available normative data for medical professionals. These analyses were repeated with subgroups of different training levels (interns and registrars), specialty groupings (non-surgical and surgical registrars) and individual specialties.

## Results

89 articles, published between 1984 and 2019, were included, comprising 18,509 trainees spanning 27 countries. The majority of the sample comprised registrars, especially non-surgical registrars.

Trainees exhibited higher levels of emotional exhaustion and depersonalisation, and lower levels of personal accomplishment compared to medicine norms. Subgroup analyses indicated that only interns' depersonalisation levels exceeded medicine norms, while registrars exhibited higher emotional exhaustion and depersonalisation levels, and lower personal accomplishment levels compared to norms. There were no statistically-significant differences between interns' and registrars' burnout levels on any subscale.

Non-surgical registrars demonstrated higher levels of depersonalisation and lower levels of personal accomplishment compared to medicine norms, while surgical registrars exhibited higher levels on all three domains compared to norms (including personal accomplishment). Surgical registrars' levels on all three domains were significantly higher than non-surgical registrars'. Individual specialties exhibited unique burnout patterns (see graph, below). Family Medicine/General Practice trainees only showed higher levels of depersonalisation compared to medicine norms.



## Implications

Using a continuous measurement of burnout, consistent with theory, we confirmed that postgraduate medical trainees' burnout levels were higher than medicine norms. However, the higher levels of depersonalisation and, in particular, lower levels of personal accomplishment identified suggest that the magnitude of the problem may be greater than suggested by previous prevalence estimates, which tend to rely on emotional exhaustion only. Additionally, we identified differences in burnout levels and patterns between non-surgical and surgical registrars.

The main concerns for the former group are high depersonalisation and low personal accomplishment, while the main concerns for the latter are high emotional exhaustion and depersonalisation.

Interestingly, high personal accomplishment amongst surgical registrars did not appear to protect against burnout, contrary to previous theory. The different patterns of burnout exhibited by different specialties suggests that there may be experiential and causal differences in burnout between these groups. The findings support a need for interventions to be contextualised to individual specialties.

## References

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