

<p>To Cite: Hutchinson AG. Junior doctor workforce: A review. JHD. 2022;7(1):483–489. https://doi.org/10.21853/JHD.2022.148</p> <p>Corresponding Author: Adam G. Hutchinson University of Notre Dame Sydney Melbourne Clinical School Melbourne, VIC, Australia adam.hutchinson.89@gmail.com</p> <p>Copyright: ©2022 The Authors. Published by Archetype Health Pty Ltd. This is an open access article under the CC BY-NC-ND 4.0 license.</p>	<p>SUMMARY A growing junior medical workforce is experiencing high rates of distress. The underlying factors of stress, bullying, and harassment, burnout, and uncertainty have been identified within the medical literature. This review evaluates these stressors in Australian and international cohorts, and attempts to address avenues of opportunities for the future.</p> <p>Key Words Junior doctors; satisfaction; burnout; stress; career</p>
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ABSTRACT

Background

Australia has undergone a seismic shift in its junior doctor workforce in the last two decades. With increasing numbers of graduates, decreasing specialty training program places, and the recent COVID-19 pandemic, this group is experiencing a multitude of stressors. Junior medical officers (JMOs) experience sudden and significant stress when they first enter the workforce. Labelled “transition shock”, this initial experience creates feelings of confusion, doubt, failure, and disorientation that permeate a JMO’s day-to-day duties. A dynamic field with high levels of responsibility requires resilient professionals able to perform at the highest level of their abilities. Unfortunately, performance is adversely affected by the prolonged stress, anxiety, depression, and burnout exhibited by JMOs. The underlying causes of these stressors will be examined in the literature.

Aims

The author aimed to conduct a literature review of current junior doctor workplace stressors.

Method

Google Scholar was used to conduct the literature review. Search terms included junior doctors, stress, burnout, and satisfaction, relevant to Australian and international populations. The reviewer applied inclusion and exclusion criteria to isolate the most relevant publications describing workplace stressors in the given population.

Conclusion

Junior doctors are experiencing a wide variety of stressors in the workplace, which may have concerning outcomes for the profession. While these issues have been identified in the current literature, more work is required to identify strategies to address them. In particular, employment uncertainty and career trajectory should be investigated to inform possible ways forward that may alleviate issues of significant concern for JMOs.

BACKGROUND

Australia's medical workforce has undergone widespread changes over the past two decades. For example, the country has experienced a dramatic increase in the number of annual medical graduates, from approximately 1,500 to 3,500 (2000–2013). As a result, there has been a surfeit of interns and junior doctors vying for limited positions throughout the country's health system. This increase was designed to produce an influx of specialists across the spectrum and into all regions and locales throughout the country.¹

International variability exists regarding post-graduate training, including internships. In Australia, an internship comprises various rotations in medical, surgical, and emergency medicine to give broad experience across a 12-month period. In the United Kingdom (UK), graduates enter a two-year Foundation Program, where junior doctors transition to a less supervised environment from medical school in Year 1, and undertake further rotations in Year 2 to develop more specialised skills.² In the United States (US), internship is an outdated term that has been replaced by residency, which typically involves candidates undertaking a specialty training program of two to seven years directly.³

Upon first entering the workforce, junior medical officers (JMOs)—which refers to interns and residents—experience sudden and significant stress.⁴ Labelled “transition shock”, this experience causes feelings of confusion, doubt, failure, and disorientation that permeate a JMO's day-to-day duties.^{4,5} A dynamic field with high levels of responsibility requires resilient professionals able to perform at the highest level of their abilities.⁶ Unfortunately, JMOs' performance is adversely affected by the prolonged stress, anxiety, depression, and burnout.^{4,7} The underlying causes of these stressors will be examined in the literature.

METHOD

The author performed a Google Scholar search in July 2021 using “Junior Doctor” combined with the following terms:

- Stress
- Workforce Stressors
- Workforce Bullying
- Career Impact
- Burnout
- Australian Employment
- Job Satisfaction
- Confidence

Inclusion criteria consisted of publications from 2000 to the date of search, English, full-text and free access, international or Australian cohorts, and including specific references to or assessment of junior doctors. Exclusion criteria consisted of publications referring to medical or surgical specialties, allied health, or dentistry. The reviewer analysed the first 10 pages of search output (100 articles). Searches for “bullying” and “burnout” were specifically included due to the prevalence of these terms in the medical literature.

In total, 877,400 results were available, of which the reviewer examined 800. Inclusion and exclusion criteria were applied to give 33 results. Of these, there was overlap for eight papers, with some articles found in four of the search queries. For this review, the reviewer used 18 papers

across 8 search criteria. These covered studies from Australian, UK, USA, and Iraqi populations (Table 1).

Table 1: Search phrases combined with “Junior Doctor”, showing total results and the final results after inclusion and exclusion criteria were applied

Search Term	Search Result Total	Articles Meeting Criteria
Stress	171,000	6 ^{5,7-11}
Workforce stressors	34,300	2 ^{7,12}
Workplace bullying	25,800	4 ¹³⁻¹⁵
Career impact	182,000	8 ^{7,9,11,16-20}
Burnout	45,200	4 ^{4,7,9,10}
Australian employment	63,100	4 ^{5,11,17,20}
Job satisfaction	133,000	3 ^{10,16,21}
Confidence	223,000	2 ^{9,22}

RESULTS

The 18 articles analysed highlighted four main areas of interest to junior doctor workforce stressors: bullying and harassment, stress, burnout, and uncertainty.

Bullying and Harassment

Multiple publications highlighted the prevalence of bullying within the JMO contingent, both nationally and internationally.^{13,14} The effect of bullying has negative effects on job satisfaction, overall stress and workforce retention.^{12,13} Powell (2011) noted that 33 per cent of medical students and 50 per cent of the medical workforce report being the victim of bullying in the workplace.

Lack of reporting by victims include a perceived “suppression protection”, where JMOs felt that identifying unprofessional behaviours would result in being targeted or excluded from future training or employment opportunities.^{8,13,18} Short rotation duration, changes in sites, and short-term career progression stresses were raised in multiple studies.^{7,11,13,14,16,19,20} Specifically, the nature of rotating JMOs provides only short windows to familiarise, understand role objectives, and raise issues of concern.^{12,14,16}

As Askew et al. (2012) noted, the increased ambiguity of a clinician’s role also increases the likelihood of both bullying and silence from the victim. This ambiguity propagates abuses of power towards individuals caught in the system.¹⁸

Stress

Stress presents in various ways and is prevalent within the medical profession.^{7,15} A primary stress for JMOs can be the financial burden of their chosen career. Degree loans/costs, indemnity, registration, and professional development courses increase financial burdens on JMOs at a time when their career earnings are at the lowest.¹⁵ The financial burden is compounded by high workloads/long hours, lack of induction materials, an expectation of considerable unpaid overtime, and leave entitlements being disregarded.^{7,9,12,15} Additionally, unpreparedness and

uncertainty for the role, particularly for interns, results in a demoralised cohort.⁵ Psychological distress is reported to reduce function and job satisfaction in employees.⁷

Burnout

Burnout is described as emotional exhaustion, reduced personal accomplishment, and depersonalisation⁷. Parr (2016) notes that it also entails loss of motivation and lack of self-care. Burnout is caused by intense workload and irregular deployment, such as rotation changes²¹ and is a direct response to prolonged stress.⁷ Insecurity over career prospects, employment status, and uncertainty regarding responsibilities are reported as contributing factors increasing burnout amongst junior doctors.^{4,10,21}

Varying rates of burnout in JMOs have been reported; Gunasingam et al. (2015) noted 18–82 per cent of JMOs experienced burnout within the literature, with 71 per cent reported being dissatisfied with their current employment. The authors also reported 92 per cent of doctors have self-prescribed medication, and 65 per cent identify insufficient levels of self-care. Cooke, Doust, and Steele (2013) report 31–75 per cent of Australian doctors at some point display signs of burnout. Australian general practice registrars report lower rates at 14 per cent, compared to 23 per cent in the US. When compared to non-medical workforces, Australian junior doctors show a burnout rate 10 times higher.^{7,12} Parr et al. (2016) reported almost 56 per cent of JMOs at risk for burnout.

Uncertainty

Uncertainty relates to any number of elements of a junior doctor's profession, career trajectory, or personal life. Medical students reportedly begin feeling lack of confidence in their knowledge within the clinical years, specifically in relation to their knowledge of anatomy.²² This doubt in the clinical acumen continues as a JMO, especially when role description and responsibility ambiguity is present.^{7,9} Reports of stress, anxiety, and “hopelessness” typify a JMO's experience and are exacerbated by uncertainty around future employment opportunities and career progression.⁷

Significantly, when employment uncertainty arises, JMOs are more likely to suppress bullying and harassment reporting, as well as unpaid overtime and excessive hours, in an attempt to be seen as a more desirable candidate.¹⁵ Ambiguity regarding sufficient training positions in speciality pathways was also a factor.¹²

The Australian Medical Association (AMA) acknowledged the postponement or cancellation of courses, workshops, exams, and fellowship progression would have a ripple effect for all junior doctors and specialties. These delays had a notable effect of raising career uncertainty in all JMO domains; 75 per cent of JMOs surveyed were concerned with ongoing ability to complete training or gain readiness to apply to specialty pathways.¹¹

DISCUSSION

Junior doctors are a vulnerable cohort within the medical community. Despite considerable research investigating causes of stress, anxiety, and burnout of JMOs, this study reveals little evidence of change in the literature examined.

Stress, anxiety, depression, and burnout have been widely reported⁴ with JMOs also at higher risk of suicide and substance abuse as a coping mechanism.^{7,12} A disturbing correlation exists between these factors, sleep deprivation, and the occurrence of motor vehicle accidents.⁷ One high-profile

motor vehicle accident of a plastic surgery trainee was borne out across mainstream Australian news media in 2019.²³

The rapid increase in medical graduates has resulted in a lack of training positions. This bottleneck at the start of careers is of concern to both JMOs and the broader community who expect excellence in health care. Bottlenecking, either due to lack of progression from more senior doctors or lack of specialty training positions, causes careers to stagnate.^{11,24} The mismatch of trainees and trainee places in Australia will continue to rise, and move further up the pipeline, until 2030 when approximately 1,000 doctors will be left unmatched from their specialty training applications.¹

COVID-19 provoked further volatility to an already overwhelmed training pathway, and the destabilising effect of these delays may take years to subside.^{11,20} Junior doctors already demoralised by the ongoing disruption to their training now face increased future uncertainty.¹¹

Parr et al. (2016) highlighted that burnout rises in the earliest years of post-graduate work. Increased burnout amongst doctors has been shown to increase errors and suboptimal care. Peak incidence of burnout in 75 per cent of JMOs occurs at approximately 9 months into internship in Australia.

Although the literature indicates providing JMOs with increased support and positive direct performance feedback is of value to the individual,^{5,8,16,19} the evidence is unclear if these measures provide any discernible impact on burnout rates or satisfaction levels.⁷ Protected training or structured delivery would bring much needed educational support.^{16,19} Increased resilience, via resilience training, has shown some decreased burnout rates, as well as decreasing the impact of uncertainty.¹⁰

Interestingly, Gunasingam et al. (2015) identified that junior doctors experience pressure related to job prospects and uncertain career trajectories which is “unlikely to change”. Yet, Tallentire et al.¹² reported that JMOs acknowledge that uncertainty “permeates every aspect of professional life”.

Dismissing a critical concern of junior doctors guarantees a continuation of a major driver of JMO distress. While this review illustrates an abundance of literature identifying the bullying, harassment, and burnout of junior doctors, none of the literature focussed on employment processes or retention rates. It is important that issues within the post-internship/pre-vocational training period be explored further, for there may be value in exploring potential options. Options may include increased specialty training places, contractual certainty, more rigid training programs for JMOs, and the inclusion of unaccredited registrars in recognised training pathways.

CONCLUSION

Junior doctors are experiencing a wide variety of stressors in the workplace, which have concerning outcomes for the profession. While the current literature highlights these issues, more work is required to identify strategies to address them. In particular, employment uncertainty and career trajectory should be investigated to inform possible ways forward that may alleviate these issues that are of significant concern for JMOs.

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The authors declare that they have no competing interests.

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