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What is burn-out?

- The most widely used theory of burnout proposes that burnout is caused by



The current study

Many studies have examined factors associated with burnout in medical trainees, however these are plagued by inconsistent findings and methodological limitations. By pooling quantitative findings from studies, a meta-analysis improves sample size, statistical power and accuracy of estimates compared with a single study, overcoming some of these limitations. Hence, this study used meta-analytic methodologies to:

1. Examine individual and work-related variables associated with burnout in medical trainees
2. Examine differences in burnout correlates between:
 - a. Surgical and non-surgical registrars, and
 - b. Medical interns and residents, and medical registrars

Thirty-three independent studies, comprising a total sample of 7,229 medical trainees, were included in the meta-analysis

What this study found

Burnout Dimension	Protective Factors	Risk Factors	No Significant Correlations
Emotional exhaustion	<ul style="list-style-type: none"> • Good self-reported general health • Good self-reported psychological wellbeing • A sense of support from the workplace community (e.g. relationships with colleagues and supervisors) • A sense of control over one's job (e.g. receiving regular feedback and high job autonomy); and • Finding work to be rewarding (e.g. satisfaction with one's job and specialty) 	<ul style="list-style-type: none"> • Depressive symptoms • Feeling stressed • High levels of work/life conflict • A high workload (e.g. time demands and working hours) 	<ul style="list-style-type: none"> • Demographic factors (i.e. age, gender, marital status and parenthood) • Daily hours of sleep • Emotional intelligence and empathy • Partner support



Burnout Dimension	Protective Factors	Risk Factors	No Significant Correlations
Depersonalisation	<ul style="list-style-type: none"> Satisfaction with one's job 	<ul style="list-style-type: none"> Depressive symptomatology High levels of stress Regret about one's career choice High working hours 	<ul style="list-style-type: none"> Demographic factors (i.e. age, gender, marital status and parenthood) Emotional intelligence and empathy Relationships with colleagues Work/life conflict
Personal Accomplishment	<ul style="list-style-type: none"> Being satisfied with one's job 	<ul style="list-style-type: none"> High levels of stress 	<ul style="list-style-type: none"> Demographic factors (i.e. age, gender, marital status and parenthood) Empathy Workload

Subgroup analyses also identified some variables, including emotional intelligence and income satisfaction, were significantly related to emotional exhaustion for surgical, but not non-surgical registrars. Furthermore, additional analyses suggest that even within the surgical/non-surgical specialty divide, some variables (e.g. partner support) may correlate more strongly with burnout dimensions based on one's specialty.

What recommendations arise from this study?

- The variables identified as significantly related to burnout in medical trainees were modifiable, hence there is room for interventions to reduce and prevent burnout in medical trainees
- Efforts to prevent or reduce burnout should focus on both individual and work-related factors, as both types of variables are related to burnout in medical trainees
- There is a clear strong association between all burnout dimensions and mental health, especially depression and stress. RTOs should continue to provide accessible support to registrars to promote mental wellbeing



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