

## Evidence Review – Burnout

Burnout is a state of physical and mental exhaustion. The three main components of burnout are emotional exhaustion, depersonalization, and reduced personal accomplishment.

Exhaustion occurs as a result of emotional demands. Depersonalization refers to a cynical, negative or detached response to patient care. The reduced accomplishment refers to a belief that one can no longer work effectively (Prendergast, Ketteler, & Evans, 2017).

### What prevents burnout?

- Support from facilitators
- Access to support services
- Work engagement
- Being satisfied with one's life outside work
- Regular physical exercise
- Dispositional mindfulness
- Resilience
- Structured mentorship
- Reading for pleasure
- Having at least eight days off a month
- Social support
- Continuing medical education
- Emotional intelligence
- Grit
- Self-development groups
- The Respiratory One method of relaxation
- Pass/fail marking
- Flexible work schedules
- Spending time with one's family
- Task-oriented coping
- Planned social events
- A sense of meaning in one's work

### What causes burnout?

- Not enough holidays
- Pessimism
- Working long shifts
- Being involved in medical malpractice
- Being dissatisfied with the doctor-patient relationship
- Feeling less trusted by patients
- Excessive workload
- Interpersonal conflict
- Work-family conflict
- Lack of autonomy
- Working more than 60 hours a week

- Having more than five drinks a week
- Women are more at risk than men
- Higher psychological job demands
- Dividing time between the private and public sectors
- There is a two-way relationship with depression and insomnia
- Shift work
- Low medical density (working in an area with few doctors per head of population)
- Introversion
- Neuroticism
- Negative life events
- Low self-efficacy
- Experience of a recent reorganisation
- Emotion-oriented coping
- Being in poor health
- Exposure to traumatic events

#### What are the consequences of burnout?

- Struggling to manage alone
- Showing self-sacrifice
- Struggling to achieve unattainable goals
- Becoming distanced and isolated
- Showing signs of 'falling apart'.
- Depression
- Anxiety
- Sleep disturbance
- Memory impairment
- Neck and back pain
- An increased risk of medication errors
- Lower patient ratings of:
  - Physician courtesy
  - Taking the time to listen
  - Keeping informed of treatment
  - Concern for patient comfort.
- Mental-health problems
- Suicidal thoughts
- Reduced resilience
- One study found burnout was contagious and could spread throughout the workplace
- An increased risk of heart disease
- Higher levels of paranoia

Lederer (Lederer, Kinzl, Traweger, Dosch, & Sumann, 2008) studied 33 doctors and 150 nurses in five intensive care units. 34.4% were at risk for burnout and 6% had full-blown burnout. Support from facilitators was an important preventive factor.

Banerjee (Banerjee et al., 2017) studied burnout in European oncologists under 40. 71% of the 595 people who took part in the study showed evidence of burnout including 50% with depersonalization; 45% with emotional exhaustion and 35% with low accomplishment. 22% requested support for burnout during their training but 74% reported no access to hospital support services. Depersonalization scores were higher in men than women and low accomplishment was highest in the 26-30 age group. Work/life balance, access to support services, living alone and inadequate vacation time all predicted burnout.

Pedersen (Pedersen, Andersen, Olesen, & Vedsted, 2013) studied 216 Danish GPs. The seven-year incidence of burnout was 13%. Thoughts about changing medical specialty were an important predictor of burnout but burned-out GPs did not have higher job turnover rates than GPs who were not burned out.

Houkes (Houkes, Winants, Twellaar, & Verdonk, 2011) studied 212 GPs and found that for men burnout was triggered by depersonalization, whereas for women it was triggered by emotional exhaustion.

Rotenstein (Rotenstein et al., 2018) reviewed the evidence and found that because they all used inconsistent ways of defining burnout it was impossible to draw any conclusions about its prevalence.

Eckleberry-Hunt (Eckleberry-Hunt et al., 2009) studied 150 junior doctors and found that pessimism was the only factor linked to all three elements of burnout.

Margiotta (Margiotta, Crudden, Byrne, & Doherty, 2019) studied 477 consultants in Ireland of whom 42% had high levels of burnout. Face-to-face contact with patients; specialty; exercise, remuneration and type of contract all influenced burnout levels.

Ericson-Lidman (Ericson-Lidman & Strandberg, 2007) carried out 15 interviews with the colleagues of nursing and medical staff who had gone on sick leave with burnout. In retrospect the colleagues noticed that people were struggling to manage alone; showing self-sacrifice; struggling to achieve unattainable goals; becoming distanced and isolated; and showing signs of falling apart.

Iacovides (Iacovides, Fountoulakis, Moysidou, & Ierodiakonou, 1999) studied 368 nurses in Greece. For the majority of them burnout had little or no common features with depression and was restricted solely to the nurses' working lives.

Vasconcelos (Vasconcelos & Martino, 2018) studied 91 intensive-care nurses. 14.3% had burnout. Only length of holidays had a significant association with the occurrence of burnout.

AlSayari (AlSayari, 2019) studied 82 junior doctors. The overall frequency of burnout was 41.9% and it was significantly more prevalent among women. The rate of burnout was highest in the last year of training and lowest in the first year.

Chen (Chen et al., 2013) studied doctors in Taiwan. Doctors who worked 13-17 hours continuously had higher levels of emotional exhaustion. Those who had experience of medical malpractice had higher levels of emotional exhaustion, depersonalization and lack of accomplishment while those who were dissatisfied with the physician-patient relationship had more burnout than those who were satisfied.

Marti (Marti et al., 2019) found that work engagement reduced burnout.

Hoffman (Hoffman & Bonney, 2018) carried out a qualitative study of Australian junior doctors. They were aware of burnout prevention strategies but were not always effectively undertaking them. They were most likely to feel stressed when their expectations regarding workplace support were not met, and when they believed they were practising beyond the level of their own abilities.

Kitaoka (Kitaoka & Masuda, 2013) found that 36% of human-service professionals in Japan were suffering from burnout compared to 18% of civil servants and 12% of company employees. Excessive workloads and interpersonal conflict were among the causes. Consequences included medical accidents and errors. "Enhancement of cognitive coping skills for female nurses and problem-solving skills for male nurses could contribute to the prevention of burnout."

Peterson (Peterson et al., 2008) studied 3,719 Swedish council employees. Compared to people who were disengaged or not burnt-out those suffering from burnout were more likely to have depression, anxiety, sleep disturbance, memory impairment and neck and back pain.

Ringrose (Ringrose, Houterman, Koops, & Oei, 2009) studied 47 junior doctors of whom 31% met the criteria for burnout. Work-family conflict, work-related autonomy and level of work-engagement were all significantly associated with burnout.

Roth (Roth et al., 2011) studied burnout among 410 paediatric oncologists. 38% had high levels of burnout. Women and doctors who had been practising for more than 10 years had higher levels of burnout whilst doctors who were satisfied with their lives outside work were less likely to be burnt out. The availability of a forum for debriefing, and services for doctors affected by burnout were both associated with lower levels of burnout.

Benson (Benson, Sammour, Neuhaus, Findlay, & Hill, 2009) found that female surgeons, those working in smaller hospitals (fewer than 50 beds), those working more than 60 hours a week and those with practice division between the private and public sectors were at higher risk of burnout.

Huang (Huang, Pu, Huang, & Chou, 2019) studied 1,016 junior doctors in Taiwan. 44% had personal burnout and 14.8% had client-related burnout. Doctors feeling less trusted by patients had significantly more burnout. Doctors having longer work hours or consecutive work hours and higher psychological job demands experienced more burnout. Residents with self-reported medical errors in the last three months had more client-related, but not personal, burnout.

Stewart (Stewart & Arora, 2019) examined the links between sleep deprivation and burnout.

de Oliveira (de Oliveira et al., 2013) studied 1,508 junior doctors working in anaesthesia. Working more than 70 hours a week; having more than five drinks a week and being a women were all associated with an increased risk of burnout which was found in 41% of the doctors. 33% of the doctors with high burnout and depression risk reported multiple medication errors in the last year compared with only 0.7% of the lower-risk responders.

Eelen (Eelen et al., 2014) studied 550 oncologists in Flanders. 51.2% suffered from emotional exhaustion; 31.8% suffered from depersonalization; and 6.8% from a lack of personal accomplishment. Being a women and combining public and private work both increased the risk of burnout.

Lu (Lu, Dresden, McCloskey, Branzetti, & Gisondi, 2015) found that trainee burnout was significantly associated with lower patient ratings of physician courtesy, taking the time to listen, keeping informed of treatment and concern for patient comfort.

Cañadas-de la Fuente (Cañadas-de la Fuente et al., 2018) studied 337 critical-care and emergency nurses in Andalusia. 38.5% were suffering from burnout. 10.5% were suffering from emotional exhaustion; 16.8% from depersonalization and 63.3% from a low level of personal accomplishment. A high burnout score was significantly associated with personality factors and depression.

Arora (Arora, Asha, Chinnappa, & Diwan, 2013) reviewed the evidence on burnout in emergency doctors and concluded that burnout rates among emergency doctors were around 60% compared to 38% among other doctors.

Bartholomew (Bartholomew et al., 2018) carried out a meta-analysis of research involving 3,581 surgeons. 3% had full-blown burnout. 30% were suffering emotional exhaustion; 34% depersonalization and 25% had a lack of personal accomplishment.

Shenoi (Shenoi, Kalyanaraman, Pillai, Raghava, & Day, 2018) studied 253 doctors working in paediatric critical care. 21% reported severe burnout. The risk of burnout was twice as high in women. "Regular physical exercise appeared to be protective."

Braun (Braun, Auerbach, Rybarczyk, Lee, & Call, 2017) studied 38 junior doctors. 71.1% of them met criteria for burnout during the study. Dispositional mindfulness was a protective factor against burnout. Burnout *improved* performance on "system-base practices," and "professionalism," but reduced them on "patient care."

Torre (Torre, Santos Popper, & Bergesio, 2019) studied intensive care nurses in Argentina. Torre found 84.4% of participants showed moderate or high levels of burnout. A nurse-to-patient ratio of 1:3 or higher was found to be a statistically-significant risk factor for emotional exhaustion and depersonalization.

Marchalik (Marchalik, C Goldman, et al., 2019) studied burnout in urologists in the US and Europe. Overall 40% met the criteria for burnout. Work-life balance dissatisfaction was associated with increased burnout whilst non-medical reading and structured mentorship were associated with decreased burnout risk.

Attenello (Attenello et al., 2018) studied 346 neurosurgeons. The overall burnout rate was 67%. Factors associated with burnout included inadequate operating room exposure; hostile faculty; and social stressors outside work whilst meaningful mentorship was protective.

Chew (Chew, Mulcahy, Porrino, Mulcahy, & Relyea-Chew, 2017) studied 433 radiologists. 61.7% suffered from emotional exhaustion; 53.3% suffered depersonalization and 39.6% suffered from a lack of personal accomplishment.

Elmore (Elmore, Jeffe, Jin, Awad, & Turnbull, 2016) studied 665 junior doctors in the US. 69% met the criteria for burnout on at least one subscale. A greater proportion of women than men reported burnout on emotional exhaustion and lack of personal accomplishment. Higher burnout on emotional exhaustion and depersonalization was associated with greater work hours per week. Having a structured mentoring programme was associated with lower burnout on each subscale.

Wisetborisut (Wisetborisut, Angkurawaranon, Jiraporncharoen, Uaphanthasath, & Wiwatanadate, 2014) studied the effects of shift work among 2,772 health care workers. Burnout was found more frequently among shift workers. Over 10 years of being a shift workers was associated with increasing burnout and having six to eight hours of sleep was associated with less burnout. Nurses who had at least eight days off a month had lower odds of burnout compared with those with fewer than eight days off.

Demirci (Demirci et al., 2010) studied burnout among people working in oncology. Of the 90 participants 23.8% suffered from emotional exhaustion; 5.21% suffered from depersonalization and 36.23% suffered from low personal accomplishment. Factors associated with burnout included: being younger than 35; being unmarried; being childless; working more than 40 hours a week; working on night shifts; and having less than 10 years' experience in medicine/oncology. Employees who didn't want to work in oncology; who wanted to change jobs and whose family and social life had been affected by their work experienced higher levels of burnout.

Cofer (Cofer et al., 2018) found that lower levels of emotional intelligence, particularly self-control, were associated with burnout.

Naeem (Naeem, Shaikh, Hassan, Abid, & Tahir, 2019) studied 64 junior doctors. 14% had early burnout and 12.5% had advanced burnout. Men, those who were married, and those in the early years of their training were more at risk. Common reasons for work-related burnout were long work hours (68.75%), decreased job satisfaction (54.7%) and lack of workplace facilities (45.3%).

Lee (Lee, Yen, Fetzer, & Chien, 2015) studied 1,846 nurses in Taiwan. Predictors of burnout were: age, physical/psychological symptoms, job satisfaction, work engagement, and work environment with the most important being physical/psychological symptoms and work engagement.

Wright (Wright, Khetani, & Stephens, 2011) studied 210 doctors. 22% had personal burnout, 14% had work-related burnout and 8% had patient-related burnout. Quantitative demands, insecurity at work and job satisfaction affected all three components of burnout.

Chernoff (Chernoff, Adedokun, O'Sullivan, McManus, & Payne, 2019) studied 90 emergency-department staff at Cork University Hospital. 63% of administrators, 100% of care assistants, 78% of nurses, 70% of doctors, 67% of porters and 80 of radiographers met the criteria for burnout. Burnout was significantly associated with a history of depression, but not with profession, age, sex, or years working in the emergency department.

Picquendar (Picquendar, Guedon, Moulinet, & Schuers, 2019) studied 487 GPs in Normandy. 43.3% had experienced burnout. 24% had high emotional exhaustion, 27.3% had high depersonalization and 13.3% had low personal accomplishment. Low medical density (working in an area with fewer GPs) and intent to quit were strongly linked to all three dimensions of burnout but burnout was not linked to quantitative workload.

Yao (Yao et al., 2018) studied 860 nurses in China. Nurses with low general self-efficacy (GSE) and either introversion or neurotic personalities seemed to have stronger burnout when they were faced with stress. Yao recommended "reducing stress, increasing GSE, and more social

support may alleviate job-related burnout in nurses. Nurses with introvert unstable personality should be given more social support in reducing stress and enhancing their GSE.”

Dyrbye (Dyrbye et al., 2006) studied 545 medical students. 45% had burnout. The number of negative personal life events in the last year was correlated with the risk of burnout.

Oehler (Oehler & Davidson, 1992) studied 121 paediatric nurses. Oehler found that more acute-care nurses reported high burnout and more non-acute nurses reported low burnout. Job stress was the strongest significant predictor of burnout, followed by state anxiety, co-worker support, trait anxiety and experience on the unit.

Brøndt (Brøndt, Sokolowski, Olesen, & Vedsted, 2008) studied 379 GPs. The prevalence of burnout was about 25% and almost 3% suffered from high burnout. Not being a member of a continuing medical education group was associated with a doubled likelihood of burnout whilst not making use of a practice facilitator had a sevenfold greater likelihood.

Ishak (Ishak et al., 2013) carried out a systematic review of the literature on medical students. Ishak found it was prevalent in medical schools and that studies estimated at least half of all medical students could be affected. Studies also showed that burnout could persist beyond medical school and was associated with psychiatric disorders and suicidal thoughts.

McInerney (McInerney, Rowan, & Lawlor, 2012) studied 45 psychiatric nurses. He found that burnout was *not* linked to a decline in cognitive performance but that trait anxiety was linked to all three domains of burnout.

Ofei-Dodoo (Ofei-Dodoo, Scripter, & Kellerman, 2018) studied 95 non-medical workers at a medical-education centre. 1% reported high burnout and 35% reported medium burnout. Job satisfaction, nature of work and co-workers were all significant predictors of burnout.

Golub (Golub, Johns, Weiss, Ramesh, & Ossoff, 2008) studied burnout in “academic faculty of otolaryngology-head and neck surgery.” High burnout was observed in 4%, moderate burnout in 66% and low burnout in 30% with women experiencing a statistically higher level of emotional exhaustion than men. The strongest predictors of burnout were: dissatisfaction with the balance between personal and professional life; low self-efficacy; inadequate research time; and inadequate administration time.

Calvo (Calvo et al., 2017) studied 167 dentists. 13.2% experienced burnout. There was a statistically significant association between burnout risk and work engagement.

Henriksen (Henriksen & Lukasse, 2016) studied 598 midwives. 20% reported personal or work-related burnout but less than 5% reported client-related burnout. Midwives with sick leave within the last three months reported higher levels of burnout. The prevalence of work-related burnout was higher among younger and single midwives. Working in outpatient care and experience of a recent reorganisation increased the likelihood of personal and work-related burnout.

Carter (Carter, Talwalkar, Weiss, Schwend, & Goldberg, 2019) studied 615 paediatric orthopaedists. 38% reported personal burnout, 46% reported team burnout. Women were more likely to report both personal and team burnout. People between 40 and 59 were more likely to report personal burnout whereas people aged 50-59 were more likely to report team burnout.

Görgens-Ekermans (Görgens-Ekermans & Brand, 2012) studied 122 nurses and found that higher emotional intelligence was significantly related to lower stress and burnout.

Lu (Lu et al., 2015) studied 77 emergency doctors. 57.1% had burnout. Burnout was associated with depression and lower career satisfaction. Doctors with high burnout were significantly more likely to report performing all six acts of suboptimal care.

Guo (Guo et al., 2018) studied 1,061 nurses in China and found that burnout reduced resilience.

Cortez (Cortez et al., 2019) studied 62 medical students who went on to do a clerkship in surgery. Students with burnout had significantly lower [grit](#) scores whereas increasing grit was associated with decreasing emotional exhaustion, decreasing depersonalization and increasing personal achievement. However “burnout was not associated with poorer quality of clerkship experience or decreased clerkship performance.”

Dyrbye (Dyrbye et al., 2008) studied 4,287 medical students. Burnout was reported by 49.6% and suicidal thoughts by 11.2%. Burnout, quality of life and depressive symptoms at the start of the study predicted suicidal ideation over the following year. Of the 370 students who met the criteria for burnout at the start of the study 26.8% recovered. Recovery from burnout was associated with fewer suicidal thoughts.

Arora (Arora, Diwan, & Harris, 2013) reviewed the literature on burnout in orthopaedic surgeons, concluding that rates were higher than among surgeons in general. Caseload, practice setting, a perception that one’s career was unrewarding and a perception of a lack of autonomy all contributed to burnout.

Bakker (Bakker, Le Blanc, & Schaufeli, 2005) compared burnout in different intensive care units and concluded that “burnout is contagious: it may cross over from one nurse to another.”

Jaracz (Jaracz, Górna, & Konieczna, 2005) studied 227 nurses and found that stress was related to the levels of burnout. Task-oriented coping reduced burnout whereas emotion-oriented coping increased it.

Bianchi (Renzo Bianchi, 2018) studied 1,759 people and found that burnout was much more strongly related to neuroticism than effort-reward imbalance or supervisor and co-worker support.

Toker (Toker, Melamed, Berliner, Zeltser, & Shapira, 2012) studied 8,838 people over 3.4 years. She found that burnout was associated with a 41% increase in the risk of heart disease and people with more severe burnout had a 79% greater risk.

Campana (Campana & Hammoud, 2015) studied 75 nurses and found that incivility was related to burnout with interpersonal justice making this relationship stronger. Campana also found that “in organisations with *higher* interpersonal justice, nurses might be more likely to experience symptoms of burnout as a result of incivility from patients and their families.”

Tawfik (Tawfik et al., 2017) studied 1,934 staff from neonatal intensive care units. Overall burnout prevalence was 26.7%. The highest burnout prevalence was found among NICUs with higher average daily admissions, higher average occupancy and those with electronic health records.



Fletcher (Fletcher, Pagedar, & Smith, 2012) studied burnout among otolaryngologists. 3.5% met the criteria for burnout syndrome and 16% were classified as having high levels of burnout. Young age, number of hours worked per week and length of time in practice were found to be statistically-significant predictors of burnout. Length of time married and the presence of children in the home were also significant predictors of burnout.

Chambers (Chambers, Frampton, Barclay, & McKee, 2016) studied burnout among senior doctors in New Zealand. The overall presence of high burnout was 50%. Women under 40 had a 71% prevalence of high personal burnout. Those working in emergency medicine and psychiatry had significantly higher levels of burnout. Being in poor health, working more than 14 hours in a row and being a woman were all associated with high personal and work-related burnout. Personal burnout rates decreased with age. Qualitative data emphasised intense and unrelenting workloads, under-staffing, onerous on-call duties and frustrations with management as factors contributing to burnout.

Shakir (Shakir, McPheeters, Shallwani, Pittari, & Reynolds, 2018) studied 255 junior doctors working in neurosurgery and found that they were less likely to suffer from burnout.

Russell (Russell, 2016) studied 61 nurses working in oncology. The nurses reported that burnout had a negative impact on the care they provided. They believed that they experienced burnout because of increased nurse-patient ratios and skipped or shortened lunch breaks but thought burnout could be prevented when adequate resources, collaboration, teamwork, and the support of family and friends existed.

Williams (Williams, Tricomi, Gupta, & Janise, 2015) reviewed the effectiveness of interventions to reduce burnout in medical students and junior doctors. Interventions included legal restrictions on the hours of junior doctors, moves to a pass/fail exam system and training in mindfulness, communication, and stress management. Self-development groups, the Respiratory One Method [meditation] for relaxation and pass/fail marking all reduced burnout, although data on mindfulness was mixed.

Creedy (Creedy, Sidebotham, Gamble, Pallant, & Fenwick, 2017) surveyed 1,037 Australian midwives. 64.9% reported personal burnout, 43.8% reported work-related burnout and 10.45 reported client-related burnout. All burnout subscales were significantly correlated with depression, anxiety and stress.

Bianchi (R. Bianchi & Janin, 2019) studied 218 Swiss schoolteachers and found that higher levels of burnout and depression “coexisted with higher levels of paranoid ideation.”

Yates (Yates & Samuel, 2019) carried out a meta-analysis of studies into burnout in oncologists covering 5,768 people. 32% experienced emotional exhaustion; 24% depersonalization and 37% low personal accomplishment. Burnout was associated with being single, being younger in age, reduced psychological wellbeing, difficulties outside work, workplace demands and workplace stress.

Reed (Reed et al., 2018) studied junior doctors over three months. Over the course of the study burnout increases and empathy decreased. The most significant relationship was between stress and emotional exhaustion. Resilience was predictive of increased compassionate care and decreased burnout. Mindfulness was predictive of decreased burnout.

Wong (Wong, Kaliya-Perumal, & Oh, 2019) reviewed the literature on orthopaedic trainees finding that 37.2% had a high degree of emotional exhaustion, 48% had a high degree of depersonalization and 33.1% perceived low personal accomplishment.

Lebares (Lebares et al., 2018) studied 566 junior doctors working in surgery. Prevalence of burnout was 69% - equally driven by emotional exhaustion and depersonalization. Higher burnout was associated with high stress, depression and suicidal thoughts. Dispositional mindfulness was associated with a lower risk of burnout, stress, anxiety, suicidal thoughts and depression.

In a study of 240 doctors Vela-Bueno (Vela-Bueno et al., 2008) found a clear relationship between insomnia and burnout.

Gunasingam (Gunasingam, Burns, Edwards, Dinh, & Walton, 2015) studied the effect of debriefing on burnout in a study of FY1 doctors. Although the doctors said they found the sessions were a good source of emotional and social support they were not found to reduce levels of burnout.

Jansson-Fröjmark (Jansson-Fröjmark & Lindblom, 2010) studied the links between insomnia and burnout. He found that burnout was *not* related to future insomnia but that insomnia did increase the risk of persistent emotional exhaustion.

Cull (Cull, Frintner, Starmer, & Leslie, 2019) carried out a long-term study of 1,804 junior doctors working in paediatrics. In any given year between 20-35% of participants reported that they were currently experiencing burnout. Several factors were associated with reduced burnout: increased flexibility in work schedule, decreased work busyness, or a job change.

Adriaenssens (Adriaenssens, De Gucht, & Maes, 2015) reviewed studies into emergency nurses. He found that on average 26% suffered from burnout. Job demands, job control, social support and exposure to traumatic events were all determinants of burnout.

Marchalik (Marchalik, Brems, et al., 2019) studied burnout in urology trainees. Reading for relaxation and spending time with one's family were both associated with reduced burnout. Working more than 80 hours a week increased the risk of burnout. A structured mentorship programme and access to mental-health services were linked to decreased burnout whereas unavailable or difficult-to-access mental health services were associated with increased odds of burnout.

Janko (Janko & Smeds, 2019) studied 177 vascular surgery trainees. Trainees who were most burnt out were more likely to have moderate-to-severe depression, higher perceived stress, lower social support and lower self-efficacy. Trainees without a mentor, who worked more than 80 hours a week more often and those without access to "programmatically social events," had higher levels of burnout. Those with lower levels of burnout reported lower depression, less stress, more social support, higher self-efficacy and fewer 80-hour weeks.

Ben-Itzhak (Ben-Itzhak, Dvash, Maor, Rosenberg, & Halpern, 2015) studied 70 doctors in Israel and found that worry and an existential sense of meaning found in one's work both affected levels of burnout.

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