

Paramedic Critically Appraised Topic (CAT)

Title: Burnout levels in EMS

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Introduction: Professionals who work in Emergency Medicine can encounter stressful situations in their day to day job. Burnout levels are high in these populations. Burnout is defined as “a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment” (Cenk, 2019). Feelings of burnout can lead to reduced care to patients as well as a worker using more sick days and potentially leaving the job altogether (Crowe et al, 2018).

Research Question: In EMS personnel, are there predicative factors that contribute to burnout?

Search Strategy:

PubMed: 128 results: (Paramedic OR EMS OR medic OR EMT OR prehospital OR “Emergency medical technician” OR ambulance) AND (“compassion fatigue” OR burnout) Filters: Published in the last 5 years

CINAHL: 62 results: (paramedic or ems or emergency medical service or prehospital or pre-hospital or ambulance or emergency medical technician or EMT) AND (compassion fatigue or burnout) Filters: Published in the last 5 years

Relevant Papers: 4 papers were chosen as relevant for this CAT

Author, Date	Population; Sample Characteristics	Study Design	Outcomes	Results	Strength/Weaknesses
Baier, Roth, Felgner & Henschke (2018)	EMS workers actively working in Germany -86.2% were male and 73.2% were younger than 40 years old -average work experience was 12	-cross sectional design -filled out a set of questionnaires	-safety compromising behavior -errors and adverse events -injury	-burnout was significantly associated with injury, error and adverse events as well as safety compromising behaviors	Strength -used multiple recruitment methods Weakness -a large percentage of respondents were male (may not have the same responses for female EMS workers)

	years -1101 questionnaires were filled out in entirety				-only presented mean number of years working (burnout rate may be affected by number of years worked)
Cenk (2019)	143 ambulance workers (nurses, paramedics, others) from Mugla, Turkey who had been working for at least one year. (58.7% female)	-cross sectional design -an email was sent to ambulance workers with a link to complete study questionnaires	Burnout -Depersonalization -Emotional Exhaustion -Personal Accomplishment -Exposure to violence in the workplace	-25% reported that their job security measures were insufficient -86.5% of respondents had been exposed to verbal abuse, 35% to physical violence -only 3.4% of participants received psychological support -exposure to verbal violence is a significant predictor of burnout	Strengths -Divided participants into age, gender, occupation to analyze burnout variables Weaknesses -does not list the number of participants in each occupation -could be other factors that lead to burnout other than workplace violence that were not accounted for -low sample size
Crowe, Bower, Cash, Panchal, Rodriguez & Olivo-Marston (2018)	Paramedics and EMT's registered in the United States National EMS Certification database -779 EMT's (11%) and 1482	-Cross sectional design -10,620 EMT's/10,540 Paramedics were randomly selected to receive a set of electronic	Burnout predictors -Personal burnout (physical and psychological fatigue) -Work-Related burnout (10 or more sick days or intention to leave EMS job within the	-those with 5-15 years of experience had higher odds of work related burnout -Higher call volumes (>20 per week were	Strengths -had access to a wide range of medics from all across the US -split medics into certification level to account for differences in the job

	paramedics (14.1%) completed the questionnaires	questionnaires	next 12 months) -Patient related burnout (fatigue perceived by the person as related to work with patients)	associated with higher odds of burnout) -burnout was associated with more sick calls (>10 per year) and more likely to plan to leave the job	Weaknesses - low response rate -cross sectional design so no cause and effect
Setti, Lourel & Argentero (2016)	782 Italian rescuers (70.3% were ambulance operators; 65.9% were volunteers)	-Cross sectional design -participants filled out a set of questionnaire at the end of a work shift.	-Vicarious Traumatization (VT) (Intrusion, Avoidance, Hyper-arousal) -Burnout (Exhaustion, Depersonalization, Inefficacy) -Job Support (colleagues, supervisors, family, affective commitment)	-perceived organization support has the most significant influence on burnout and vicarious traumatization dimensions (family support has weakest)	Strengths -A large sample size was used -A response rate of 78.2% was achieved Weaknesses -Over half of respondents were volunteers which may not apply to services without volunteers. -The cross sectional design does not allow for causation

Comments: It seems that burnout levels are high in the EMS population. This is seen across countries as these studies were done on German, Turkish, American and Italian EMS personnel. There may be many reasons why burnout occurs with different stressors affecting each gender more than others. Burnout predictors may include exposure to workplace violence, years of experience, number of calls as well as perceived organizational support.

Consider: All of these studies used a cross-sectional design which does not allow for the assumption of causation. Further prospective studies will need to be investigated to determine specific causes of burnout.

Clinical Bottom Line: Services who employ medics should focus on providing support for their medics to reduce feelings of burnout, which can affect both the medic and the care they are providing for their patients. Further research is needed to determine which specific supports would be the most beneficial.

References:

- Baier, N., Roth, K., Felgner, S., & Henschke, C. (2018). Burnout and safety outcomes - a cross-sectional nationwide survey of EMS-worker in Germany. *BMC Emergency Medicine*, 18(24). doi:<https://doi.org/10.1186/s12873-018-0177-2>
- Cenk, S. C. (2019). An analysis of the exposure to violence and burnout levels of ambulance staff. *Turkish Journal of Emergency Medicine*, 19, 21-25. doi:<https://doi.org/10.1016/j.tjem.2018.09.002>
- Crowe, R. P., Bower, J. K., Cash, R. E., Panchal, A. R., Rodriguez, S. A., & Olivo-Marston, S. E. (2018). Association of burnout with workforce -reducing factors among EMS professionals. *Prehospital Emergency Care*, 22(2), 229-236. doi:[10.1080/10903127.2017.1356411](https://doi.org/10.1080/10903127.2017.1356411)
- Setti, I., Lourel, M., & Argentero, P. (2016). The role of affective commitment and perceived social support in protecting emergency workers against burnout and vicarious traumatization. *Traumatology*, 22(4), 261-270. doi:<http://dx.doi.org/10.1037/trm0000072>