

JOURNAL OF WELLNESS

ORIGINAL RESEARCH

Burnout Among Emergency Physicians Working at a Large Tertiary Centre in Ontario

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Abstract

Background: Emergency medicine (EM) is a high-stress specialty. Work related stress and burnout have been reported to negatively impact physician-patient interactions, overall physician mental and physical health, and most importantly, patient outcomes. We assessed the rates of burnout among emergency physicians (EPs) at our centre.

Methods: A local cross-sectional study to assess burnout among adult and pediatric EPs, fellows and residents was conducted at three Emergency Departments (EDs) at a single institution in Canada. The anonymous online survey encompassed demographics, the validated MBI (Maslach Burnout Inventory) tool and additional questions aimed at identifying determinants of EP burnout. Each respondent's three MBI scale scores, (emotional exhaustion, depersonalization and personal accomplishment), were calculated as described in the MBI manual. Descriptive statistics were calculated and relationships between risk factors and burnout scores were examined using t-tests, one-way ANOVAs, and/or regression analyses where appropriate.

Results: The survey had a 72% (84/118) response rate. Results indicated a high degree of burnout among EPs with 66.2% of respondents meeting the cutoff for burnout. Physicians who were single, female, trained in the College of Family Physicians with additional training in Emergency Medicine (CCFP-EM) and those having fewer years of practice were identified to have higher burnout scores. We did not identify any factors to be predictive or any associated with personal accomplishment.

Conclusion: Consistent with previous literature, EPs at this institution showed evidence of moderate to severe burnout. Despite this, they showed high feelings of personal accomplishment. This study suggests that opportunities exist for wellness programs targeted at identified high risk groups.

DOI: 10.18297/jwellness/vol1/iss1/10
Received Date: September 11, 2019
Accepted Date: November 26, 2019
Publication Date: December 16, 2019

Website: <https://ir.library.louisville.edu/jwellness/>

Recommended Citation: Perera, Rushika; Van Aarsen, Kristine; Foxcroft, Laura; and Lim, Rodrick (2019) "Burnout among emergency physicians working at a large tertiary centre in Ontario," *Journal of Wellness*: Vol. 1 : Iss. 1 , Article 10.



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INTRODUCTION

Within the last decade, physician burnout, defined as a "syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment among individuals who work with people" [1] has increasingly garnered the interest of Emergency Physicians (EP).

Work related stress and burnout have been theorized to negatively impact physician-patient interactions, collaboration between healthcare professionals, team morale and ultimately overall physician mental and physical health [2-5]. Emergency medicine (EM) is a high-stress specialty. Studies have shown that EPs are three times more likely to experience burnout versus other specialists [6]. A 2012 study of 7288 physicians, 24 specialties and 3500 working US adults found that 65% of EM versus 55% of general internal medicine physicians reported burnout versus 28% of the general population [7]. Updated in 2014 and 2017, EPs remained one of the top specialties for suffering burnout [8,9]. A 2017 systematic review reported significant risk of burnout for American physicians (prevalence exceeding 50%) and noted individual and organizational strategies to combat burnout have only been mildly effective [10]. Although studied extensively in American medical populations, Canadian literature is limited. A 1994 Canadian study of 395 physicians identified 46% of EPs suffered from

emotional exhaustion, 93% from depersonalization and 79% with sense of low range of accomplishment [11]. More recently, The Canadian Medical Association published a national snapshot of physician health identifying 30% of Canadian physicians had overall high scores for burnout with higher rates in female physicians, residents and those with fewer years of practice. Suicidal ideation was high with 19% of physicians having reported suicidal ideation in their lifetime and 8% in the past 12 months [12].

Emergency physicians have been shown to have a greater risk of burnout compared to other specialties [7,13]. Factors such as increasing bureaucratic tasks, increasing number of hours at work, malpractice environment, lengthening wait times, dwindling resources, aging populations with multiple comorbidities, shift work and violence are few among countless factors that may impact EP wellbeing. Our primary objective was to assess burnout rates among EPs at our institution, as measured by the MBI tool. A secondary objective was to identify risk and protective factors associated with burnout. The long-term goal was to provide a cross-sectional measure of EP burnout with the aim of inspiring grassroots initiatives to combat burnout and increase job satisfaction.

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METHODS

Survey Creation and Distribution

An anonymous survey was created based on the validated Maslach Burnout Inventory-Human Services Survey (MBI-HSS) which is considered the gold standard for estimating burnout among physicians. The MBI captures three dimensions of burnout: emotional exhaustion from overwhelming work demands, depersonalization (e.g., impersonal response toward patients or coworkers) and perceived lack of personal accomplishment [1].

The survey also included demographic questions such as age, marital status and type of certification and asked if they have ever contemplated suicide during their EM career. Free text questions were included for participants to share thoughts surrounding burnout at their institution, such as strategies to help manage burnout and adequacy of supports.

Emails including a survey link were distributed via the Department of Emergency Medicine. Three email blasts were done between November 2017 and February 2018. This project was approved by our local research ethics board.

Population

All clinically practicing EPs at our institution (118), encompassing three tertiary care EDs (2 adult and 1 pediatric), were invited to participate. This included a mixture of staff EPs (adult & pediatric), EM residents and fellows.

Statistical Analysis

Burnout dimension scores were tabulated according to the MBI manual [1]. Standard descriptive statistics were calculated for demographics and relationships between risk factors and burnout scores were examined using t-tests, one-way ANOVAs, and/or regression analyses, where appropriate. Physician were considered to suffer from burnout if they had either an emotional exhaustion score of ≥ 27 or a depersonalization score of ≥ 10 .

RESULTS

Response rate and demographics

82/118 (72%) physicians completed the survey. See table 1 for demographics.

Table 1: Descriptive statistics of survey respondents

Variable	n (%)*
Sex	
Male	51 (60.7%)
Female	33 (39.3%)
Marital Status	
Single	14 (16.7%)
Married/Common-Law/Domestic Partnership	69 (82.1%)
Widowed/Divorced/Separated	1 (1.2%)
Credentials	
CCFP(EM)	17 (20.2%)
FRCPC-EM	36 (42.8%)
Paediatric EM	12 (14.3%)
Resident/ Fellow	18 (21.4%)
Other	1 (1.2%)

For staff physicians, *how many years* have you practiced emergency medicine outside of residency?

N=65

median [IQR] 10.0 [4.0-17.0]

CCFP-EM= College of Family Physicians with additional training in Emergency Medicine
FRCPC-EM= Fellow of the Royal College of Physicians of Canada in Emergency Medicine

EM= Emergency Medicine
MBI= Maslach Burnout Inventory
*Unless otherwise specified

Burnout

During their career 12.5% of respondents indicated they had contemplated suicide. Seventy-one respondents (60.2%) completed the MBI. Results indicated a high degree of burnout with 47/71 (66.2%) of respondents meeting the burnout cutoff (39/55 (70.9%) of staff; 8/16 (50%) learners). See table 2 for MBI dimension scores.

Table 2: Maslach scores of survey respondents

MBI Dimension	Mean (SD)		
	Total	Female	Male
Emotional exhaustion	26.46 (11.73)	30.50 (11.28)	23.84 (11.38)
Depersonalization	11.96 (6.50)	13.29 (7.10)	11.09 (6.00)
Personal accomplishment	31.51 (14.99)	35.64 (8.05)	38.35 (5.98)

MBI= Maslach Burnout Inventory

Examination of the relationship between risk factors and negative (depersonalization and emotional exhaustion) and positive (personal accomplishment) MBI scores revealed that physicians who were single (compared to married, $p=0.02$), female (compared to male, $p=0.03$), CCFP-EM trained (compared to FRCPC residents ($p=0.026$) and Paediatric EM staff ($p=0.029$) and those having fewer years of practice ($p=0.007$) had higher burnout scores. We did not identify any factors associated with personal accomplishment.

The most commonly cited strategies for reducing burnout were exercise 51/73 (69.9%), time with family and friends 42/73 (57.5%) and taking vacation 20/73 (27.4%).

Institutional Supports

The majority of respondents believe their institution does not have good supports available to help manage burnout (88.5%, 69/78). Support physicians would like access to included departmental support to ensure a properly equipped ED, psychosocial support, exercise facilities, ability to take breaks and vacation time without having to “bunch” shifts.

DISCUSSION

Previous studies have examined burnout in medical trainees such as the recent study in the New England Journal of Medicine [14] which evaluated burnout in residents in all surgical subspecialties in the US. Burnout in some specific medical specialties has also been examined [15,16] which have shown varying rates of burnout. It should be noted that direct comparison to these studies is difficult due to difference in the scales and cutoffs for burnout used. Although research has been done in these areas, there remains a gap in the understanding of burnout in Canadian Emergency Medicine physicians in particular.

Consistent with existing literature on burnout in US EPs, 66.2% of our EPs met the burnout cutoff [7]. Mean scores for emotional exhaustion and depersonalization in our cohort are comparable to published literature [11]. High risk groups identified in our study included gender (female), fewer years of practice, CCFP-EM trained and single marital status. This is consistent with previous literature identifying younger age, female gender, single marital status, and years of practice as risk factors for burnout [9,12] and suggests opportunities exist for wellness programs targeted at high risk groups.

Although no factors were found to be protective, EPs showed high degrees of feelings of personal accomplishment. It should be noted that when the more liberal criteria for determining burnout that includes the personal accomplishment domain was used (emotional exhaustion score ≥ 27 and/or depersonalization score ≥ 10 and/or personal accomplishment score ≤ 33), the results remained the same as there was no person with a personal accomplishment score of ≤ 33 that did not already meet the criteria for one of the other 2 domains.

Possibly the most concerning result from this study, although consistent with Canadian statistics, is the reported 12.5% of physicians who have contemplated suicide during their career [12]. In 2003 JAMA released a consensus statement encouraging the increase in the priority of physician mental health and removal of barriers for physicians seeking help [17]; however, the vast majority of respondents in our study believed their institution did not have adequate supports to help manage burnout and indicated a number of potential supports they would like access to. ED bed block and poor flow metrics are a multifaceted problem in many Canadian EDs [18] as well as EDs in the United States [19]. The impact on patients is substantial and well documented but impact on ED care providers should not be forgotten [2,3]. Providing additional monetary resources to EDs to combat issues such as overcrowding may be challenging but supports such as breaks, psychosocial support (especially surrounding debriefing of difficult cases) and exercise facility access are straightforward opportunities to address at an organizational level. A recent systematic review by Panagioti et al [20] outlined current interventions to reduce burnout and their effectiveness. The review found that physician-directed interventions (such as mindfulness/self-care workshops, communication skills training and debriefing sessions) resulted in a small significant reduction in burnout; however organization-directed interventions (such as workload balance, increased staffing, protected time and facilitated discussion groups on shared experience and mindfulness) resulted in significantly larger reductions in burnout. A Canadian study from 2015 examined the relationship between physician burnout and coping style [21]. The authors found that physicians with task or problem-focused coping were associated with a decreased risk of burnout compared to those with emotional oriented coping. Results of these studies as well as our own suggest that targeted organizational level interventions to groups particularly at risk (females, single marital status, CCFP-EM trained and fewer years of practice) may be helpful. Protecting mental health of ED physicians must become a priority as they are essential front line healthcare workers providing care for patients in critical moments.

LIMITATIONS

The response rate for this survey was high, however results may not be generalizable to other centres as it was completed at a single institution and type of ED certification may vary in other regions. Although this survey utilized the MBI, with published thresholds for burnout, data was presented as a dichotomous variable indicating presence or absence of burnout which may make direct comparisons to other published literature more challenging.

CONCLUSION

There is no question that physician burnout has reached a crisis level in the United States and Canada. Countless calls for action, commentaries and perspectives have been published outlining the increased prevalence of burnout and the need for better supports. Burnout is both improvable and preventable and it is imperative that organizations spend the time and resources needed to improve the mental health of the many physicians providing care for patients.

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