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Burnout in the internist–intensivist

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Abstract Objectives: Caring for acutely ill patients imposes significant demands on physicians. The environment and stresses of the ICU may lead to the burnout syndrome. The purpose of this study was to evaluate the prevalence of burnout among internal medicine intensivists and the contributing factors present in ICU practice.

Design: Mailed survey utilizing the Maslach Burnout Inventory (MBI). Increasing burnout has been shown to be associated with low levels on personal achievement and high scores on depersonalization and emotional exhaustion.

Subjects: Random sample of members of the Internal Medicine Section of the Society of Critical Care Medicine.

Measurements and main results: 248 people responded: 220 (88.7%) males and 28 females. Mean age of all respondents was 41.6 ± 6.7 years. The majority (58.1%) worked in large hospitals (>400 beds); 55.6%

devoted more than 50% of their time to critical care. The emotional exhaustion subscale of the MBI averaged 22.2 ± 9.5 , with a third of respondents scoring in the high range. The depersonalization score averaged 7.1 ± 5.1 %, with 20.4% of respondents scoring in the high range. Similarly personal achievement subscores were poor, with a mean value of 30.9 ± 6.4 %, with 59% scoring in the low range. High levels of emotional exhaustion were associated with anticipating leaving critical care before retirement.

Conclusions: Burnout as measured by the MBI appears to be common in internal medicine intensivists. High levels of emotional exhaustion and depersonalization are related not only to patient care issues but also to a poor support system.

Key words Burnout · Internist · Emotional exhaustion · Depersonalization · Personal achievement

Introduction

Intensive care units (ICUs), where the sickest patients in the hospital are cared for, are a stressful environment in which to work. Caring for these critically ill patients on a daily basis can cause a significant emotional drain on the health care professional, resulting in the phenomenon of burnout. Burnout has been described and measured as a three-dimensional occupational phenomenon experi-

enced to varying degrees by individuals serving in positions evoking high stress. Emotional exhaustion, depersonalization, and a lack of personal accomplishment in the workplace lead to the burnout syndrome and to potentially egress from the job. While significant literature exists on stress and burnout in housestaff and nurses [1–19], few data is available on burnout in attending physicians, specifically in ICUs. We, therefore, decided to evaluate the extent of burnout in internist/intensivists using a self-administered burnout inventory survey of mem-

bers of the Internal Medicine Section of the Society of Critical Care Medicine.

Materials and methods

A four-page questionnaire was developed following a pilot survey mailed to 100 members of the Internal Medicine Section (appendix). The survey instrument consisted of four parts:

1. The first part gathered general demographic information and other data about the respondent, including practice type, age, sex, years in practice, formal training, and certification in critical care medicine.
2. The second part of the survey elicited information about the respondents' practice and environment. Questions regarding the type, location, size of ICU/hospital, and the presence of housestaff and fellow coverage were asked. Other questions elicited information about the percentage of time spent in critical care practice, specialties, and if the practice was hospital-based.
3. The third part of the survey elicited information about attitude, expectations, and beliefs. Respondents were asked if they anticipated winding down critical care practice, and if so, over what time period, as well as whether they would continue critical care medicine until retirement. The survey asked if the respondents felt that critical care service was more stressful than their other work activities; they then ranked nine items (identified as stressful by the pilot survey), in order of importance as a stress generator. These included telephone calls and pages, ICU procedures, dealing with families, conflict with nurses and physicians, patient triage, bed-finding, conflict resolution, and inadequate support services.
4. The fourth part of the survey was the Maslach Burnout Inventory (MBI), modified for physician respondents.

The MBI is a 22-item questionnaire designed by Maslach and Jackson [20] to assess the three aspects of burnout syndromes, emotional exhaustion, depersonalization, and lack of personal accomplishment. These aspects are measured by separate subscales. Emotional exhaustion encompasses those feelings that result from depletion of emotional resources. Depersonalization measures impersonal and uncaring attitude. The personal accomplishment subscale assesses feelings of competence and successful achievement in one's work with people. Burnout is conceptualized as a continuous variable ranging from low to moderate to high degrees of experienced feeling. It is not viewed as a dichotomous variable which is either present or absent. A high degree of burnout is correlated with high scores on emotional exhaustion and depersonalization while inversely correlated with personal accomplishment. The MBI was validated for a variety of occupations which deal with people, including social workers, police officers, teachers, etc. Normative data for the MBI is presented in Table 1.

The member list of the Section of Internal Medicine of the Society of Critical Care Medicine was the sample frame for this survey. Questionnaires were mailed to 1000 randomly selected members. No follow-up mailing or other contacts were made, although notice of the survey was included in the *Internal Medicine Section News*. A letter accompanying the questionnaire informed the recipient that the section was attempting to gather information about practice patterns and attitudes of internists/intensivists. According to the MBI methodology, the word burnout or similar phrases were not mentioned. A anonymous machine readable answer sheet was also sent. Responses were mailed to the Society of Critical Care Medicine corporate office. Individual responses were tabulated using a Scantron device. Data were analyzed using an 80486-based personal computer running CSS: Statistica (Stat Soft, Tulsa, Okla., USA) and Stat Graphics Plus version 6.0 (Manugistics, Rockville,

Table 1 Maslach Burnout Inventory^a

MBI subscale	Range of experienced burnout		
	Low	Moderate	High
Emotional exhaustion	≤ 17	18 – 29	≥ 30
Depersonalization	< 6	6 – 11	≥ 12
Personal accomplishment	≥ 40	39 – 34	≤ 33

^a Modified from Maslach Burnout Inventory [20]. Occupations represented in this MBI normative sample include the following: 845 Social Security Administration public contact employees, 142 police officers, 231 nurses, 125 agency administrators, 222 teachers, 97 counselors, 91 social workers, 68 probation officers, 86 physicians, 40 psychologists and psychiatrists, 31 attorneys, and 77 others

Md., USA). Data are presented as frequency counts and means ± standard deviation, unless otherwise noted.

Categorical data were compared using Fisher's exact or chi-square analysis. The relationship between continuous variables was explored with correlation coefficients. Ninety-five percent confidence intervals about the means was also reported. A *p* value of ≤ 0.05 was accepted as significant.

Results

A total of 253 responses were received from the survey, and these constitute the basis of this report. Not all respondents completed every question. Surveys lacking responses required for a particular analysis were excluded.

Participants

There were 220 (88.7%) male respondents and 28 (11.3%) female respondents. Mean age of respondents was 41.6 ± 6.7 years. Most respondents were formally trained in critical care medicine (137; 56.1%) and 177 (72.2%) held certification of added qualifications in critical care medicine. Full-time practice of critical care was unusual, with only 68 (27.8%) respondents indicating that 75–100% of their practice was critical care, less than 25% of practice was indicated by 32 (13%) respondents, 25–50% by 75 (30.6%) respondents, and 50–75% by 70 (28.6%) respondents.

The other specialties and subspecialties practiced by the study population are noted in Table 2.

Table 2 Other specialties

Specialty	Respondents (%)
Pulmonary	129 (55.4)
Cardiology	20 (8.6)
Nephrology	13 (5.6)
Emergency medicine	7 (3)
Other or none	64 (27.5)

Approximately 50% of respondents came from cities with a population larger than 500 000, with 50% describing their facility as being located in an inner-city setting. The majority (143; 58.1%) of respondents worked in a large hospital, defined as more than 400 beds. Most respondents worked in ICUs with more than 15 beds (148; 61.1%) or 6–15 beds (92; 38.0%). Housestaff were common in the ICUs of respondents, with 151 (61.6%) indicating resident coverage in the ICU, but only 78 (31.7%) indicated that critical care fellows were present. The period of time respondents indicated they were “on service” varied. Thirty-three (13.7%) indicated 1-week assignments, 101 (42.1%) indicated 1-week to 1-month assignments, and 106 (44.2%) indicated greater on-service periods. Sharing of call responsibilities was nearly universal (200; 97%), and most respondents also shared rounding responsibilities (180; 87.8%). Although many of the practitioners surveyed practice other aspects of medicine than critical care, 154 (67%) reported being most happy while on service for critical care. This is despite the fact that most (140; 61.1%) indicated critical care was more stressful.

Most respondents anticipated practicing critical care until they retired (183; 74.4%); but nearly half (116; 47.3%) indicated they would wind down their critical care component in an average of 9.9 ± 4.7 years.

Burnout

The MBI revealed high levels on each of the subscales for a large proportion of the respondents. The emotional exhaustion subscale produced a mean response of 22.2 ± 9.5 , with 29% of respondents scoring in the high range. Mean “depersonalization” score was 7.1 ± 5.1 , with 20.4% of respondents scoring at the “high” level. “Personal achievement” was similarly poor, with a mean value of 30.9 ± 6.4 , with 59% scoring in the “low” range (increasing burnout is associated with low levels on this subscale). The frequency distributions of the MBI subscale are shown in Fig. 1–3.

Levels of emotional exhaustion, depersonalization, and personal achievement were not related to the age or sex of the respondent, size of the hospital, or number of ICU beds. Depersonalization and emotional exhaustion were significantly correlated ($r = 0.5796$, $p < 0.0001$). Personal achievement and both emotional exhaustion and depersonalization were inversely related ($p < 0.001$).

The personal achievement subscore was numerically higher for those with critical care fellows, although this was of borderline statistical significance ($p = 0.06$). High levels of emotional exhaustion were associated with anticipating leaving critical care practice before retirement, with 43% of those indicating they would curtail critical care before retirement scoring in the high segment of the

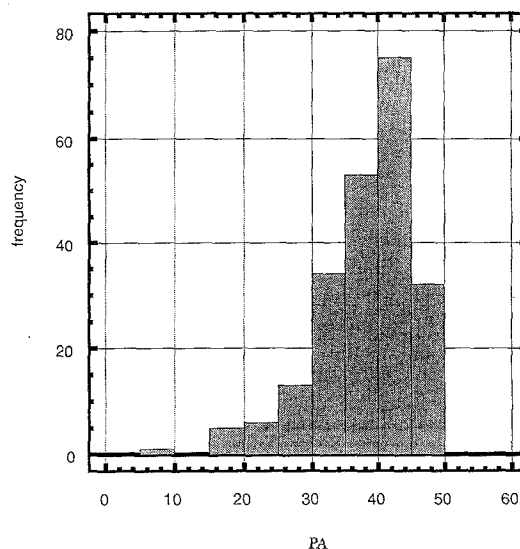


Fig. 1 Frequency histogram of personal achievement *PA* subscale of the Maslach Burnout Inventory among internal medicine intensivist survey respondents. Normal mean = 38.7 ± 0.47 ; high > 39 ; moderate = 32–38; low = 0–31; $n = 253$

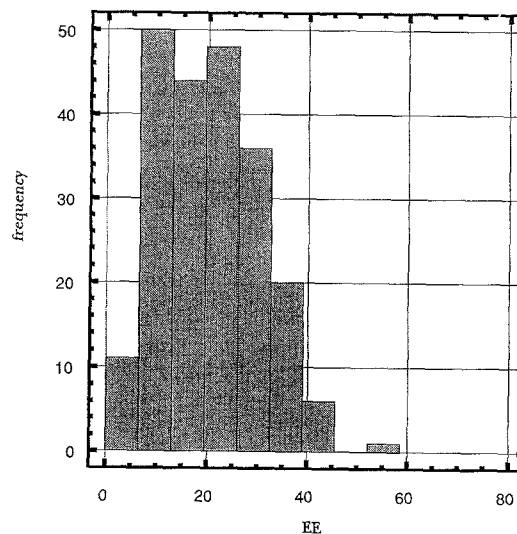


Fig. 2 Frequency histogram of the emotional exhaustion *EE* subscale of the Maslach Burnout Inventory among internal medicine intensivist survey respondents. Normal mean = 20.0 ± 0.66 ; low = 0–16; moderate = 17–28; high = 7 or > 27 ; $n = 253$

emotional exhaustion scale ($p = 0.003$). Time to winding down critical care practice was also related to the level of emotional exhaustion ($p = 0.02$), with 61% of those respondents who anticipated winding down with 5 years scoring in the high range.

Higher levels of depersonalization and emotional exhaustion occurred in individuals who indicated they were

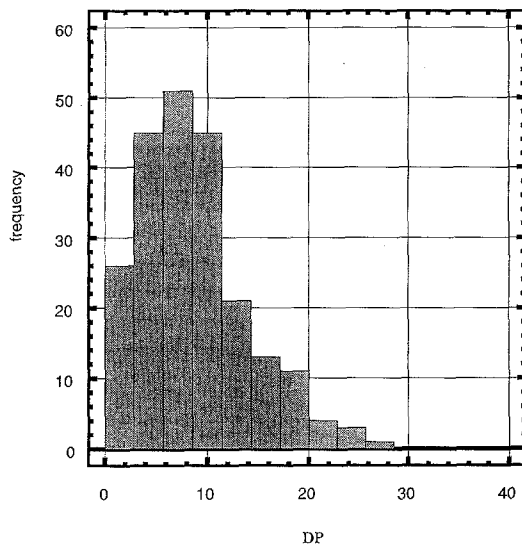


Fig. 3 Frequency histogram of the depersonalization *DP* subscale of the Maslach Burnout Inventory among internal medicine intensivist survey respondents. Normal mean = 8.38 ± 0.36 ; low < 6; moderate = 7–12; low > 13; $n = 253$

most happy when off service for critical care ($p = 0.003$ and $p < 0.001$), respectively). Not surprisingly, those who were less happy while on critical care service tended to work shorter blocks of time on critical care ($p = 0.003$).

Discussion

It has been shown that people involved in human services and educational institutions spend a great amount of time with intense involvement with other people, which can result in chronic stress and feelings of being emotionally drained. Burnout has been described as “a state of fatigue or frustration brought about by devotion to a cause, way of life, or relationship that failed to produce the expected reward.” Burnout can result in an amotivational, ineffective, and unproductive phase at work, along with an intensely depressed and devalued state of mind. Generally, chronic internal pressure and stress are believed to contribute to the evolution of the burnout phenomenon. The syndrome of burnout encompasses emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do “people work” of some kind [20]. A very important aspect of burnout is emotional exhaustion, resulting from depletion of emotional resources. This dimension of the burnout phenomenon measures psychological fatigue. Depersonalization manifests itself as a negative, cynical attitude toward one’s clients – in this case, patients. This callous and dehumanized perception may lead to perceiv-

ing the client as deserving of the problems they have [20]. The consequences of burnout may result in lower quality of care, low morale, and increased job turnover.

Besides providing demanding specialized care to critically ill patients, a number of stress-involving factors exist in the ICU milieu. The demoralizing situation of patients not getting better despite the practitioner’s best efforts, unrealistic expectations of families, lack of beds and necessity to make triage decisions, conflict resolution, poor support services, ethical dilemmas, and death and dying are among the many.

Because of the nature of the work involved in caring for the sickest patients in an ICU, we surmized that intensivists would be quite vulnerable to the burnout phenomenon. It was, therefore, not surprising that about a third of respondents in this survey were experiencing high values for emotional exhaustion, and 20% demonstrated high values for depersonalization. Since this is the first study of an internist–intensivist group, a follow-up evaluation in a few years should give outcomes for the group with high emotional exhaustion and depersonalization. It has been shown in other groups, such as police officers, social workers, etc., that a higher burnout was associated with increased divorce rate, job dissatisfaction, and lack of retention in the job. Close to 40% of the respondents fit into the category of low personal achievement. A higher personal achievement showed a trend to correlate with having fellows in the program but was not statistically significant. Interestingly, despite high emotional exhaustion and depersonalization scores, more than two-thirds of respondents anticipated practicing critical care until retirement. Although a majority found being on ICU service more stressful, the group also enjoyed, and were most happy, while on ICU service.

A high degree of emotional exhaustion correlated with wanting to wind down (usually within the next 10 years), high stress while on ICU service, and high levels of depersonalization. High emotional exhaustion, surprisingly, did not correlate with age of respondent, size of hospital, or having housestaff in the ICU.

The most taxing issues about the critical care setting were not patient related at all, but were the administrative hassles. In order, they were, conflict resolution, bed-finding, and lack of support services. Other problems were frequent telephone calls and paging.

Studies of other medical and paramedical personnel indicate a similar degree of burnout. A moderate degree of burnout was noted in neonatal ICU nurses using the MBI [12]. Good supervisory support was viewed as reducing the burnout in this study [12]. Similarly, an estimated 40% of emergency medicine technicians experience high levels of burnout. Data are available on emergency medicine physician trainees from different countries who experienced similar degrees of burnout or depression. Women and unmarried physicians in training had more stress in this study.

An increased incidence of burnout was reported in women physicians and physician trainees [19]. In our survey, a majority of the respondents were male, only 28 of 253 women intensivists responding. It is unclear whether this reflects the sex distribution of physicians in general or if women choose critical care as a subspecialty less frequently than men.

We conclude from this survey that a high degree of burnout is prevalent in internist-intensivists and that several contributing factors unique to the critical care setting seem to be playing an important role.

Appendix: Survey questionnaire

Instructions: For each question below, select one answer which is most appropriate and fill in the corresponding rectangle on the enclosed Scantron answer sheet

- (1) Your age is:
 1. 25–30 3. 36–40 5. 46–50
 2. 31–35 4. 41–45 6. 51–55
 - (2) Your sex is:
 1. Male 2. Female
 - (3) Do you practice critical care in a group? (i.e., share calls and rounding)
 1. Yes 2. No
- Answer questions 4 and 5 only if you answered "yes" to question 3:*
- (4) Share call
 1. Yes 2. No
 - (5) Share rounding
 1. Yes 2. No
 - (6) Size of community
 1. <25000 3. 100000–250000 5. >500000
 2. 25000–100000 4. 250000–500000
 - (7) How would you classify your hospital's location?
 1. Rural 2. Inner city 3. Suburban
 - (8) Number of beds in hospital?
 1. <100 2. 100–400 3. >400
 - (9) Number of beds in ICU?
 1. <6 2. 6–15 3. >15
 - (10) Do you have housestaff in the ICU 24 h a day?
 1. Yes 2. No
 - (11) Do you have critical care fellows available 24 h a day?
 1. Yes 2. No
 - (12) Number of years in practice:
 1. 1–5 3. 11–15 5. 21–25 7.31+
 2. 6–10 4. 16–20 6. 26–30
 - (13) Are you formally trained in critical care?
 1. Yes 2. No

- (14) Are you board certified in critical care?
 1. Yes 2. No
- (15) What percentage of your practice constitutes critical care:
 1. <25% 3. 50–75%
 2. 25–50% 4. 75–100%
- (16) Do you practice internal medicine?
 1. Yes 2. No
- (17) Do you practice subspecialties?
 1. Pulmonary 3. Nephrology 5. Internal medicine
 2. Cardiology 4. Emergency medicine 6. None
- (18) Is your practice hospital-based?
 1. Yes 2. No

Attitudes

- (19) Do you anticipate "winding down," in primary critical care practice over time?
 1. Yes 2. No
 - (20) If yes to "winding down," in what time span do you anticipate this?
 1. 5 years 3. 10–15 years
 2. 5–10 years 4. 15–20 years
 - (21) Will you continue to practice critical care until retirement?
 1. Yes 2. No
 - (22) Which do you find more stressful?
 1. Critical care 2. Other specialty
 - (23) I am most happy when I am:
 1. On service for critical care
 2. Off service for critical care
 - (24) How do you practice critical care:
 1. 1 week at a time 3. On service all the time
 2. 1 week to 1 month at a time
- Rate questions 25 through 33 in terms of what is most taxing about critical care (1 = least taxing; 7 = most taxing):*
- (25) Telephone calls and pages
 - (26) Procedures
 - (27) Dealing with families of sick patients
 - (28) Conflicts with nurses
 - (29) Conflicts with physicians
 - (30) Conflicts with prioritization of multiple critically ill patients in different areas of the hospital or different hospital
 - (31) Bed-finding
 - (32) Conflict resolution (between housestaff, nurses, respiratory therapists, and other physicians, etc.)
 - (33) Support services (e.g., difficulty in getting special tests at odd times, mobilizing specialized teams such as angiogram teams, etc.)

How do you prioritize questions 34 through 42, in terms of provoking aggravation? (1 = least aggravating; 9 = most aggravating)

- (34) Telephone calls and pages
- (35) Procedures
- (36) Dealing with families of sick patients
- (37) Conflicts with nurses
- (38) Conflicts with physicians
- (39) Conflicts with prioritization of multiple critically ill patients in different areas

- (40) Bed-finding
- (41) Conflict resolution (between staff, nurses, etc.)
- (42) Support services (e.g., difficulty in getting special tests at odd times, etc.)

Please rate questions 43 through 64 on frequency of occurrence (Maslach Burnout Inventory)

- Legend:
- | | |
|--------------------------------|------------------------|
| 1 = never | 5 = once a week |
| 2 = a few times a year or less | 6 = a few times a week |
| 3 = once a month or less | 7 = every day |
| 4 = a few times a month | |

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