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DEGREE AND FACTORS OF BURNOUT AMONG EMERGENCY HEALTHCARE WORKERS IN INDIA

Psychiatry

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ABSTRACT

Objective: 'Burnout' among emergency healthcare workers needs focus as they make crucial life changing decisions every day and thus, their state of physical and mental wellbeing is an absolute necessity. We aimed to find the level and factors contributing to burnout among the healthcare workers in the busiest Emergency Department of Northeast India. This is the first study done in this department to assess burnout.

Method: This cross-sectional, questionnaire-based study assessed burnout of the doctors, nurses, and paramedics working in an emergency department of a busy tertiary care teaching institute. Association of demographic variables and factors influencing burnout was explored. Results were analyzed by descriptive and inferential statistics.

Results: Low level in emotional exhaustion, moderate level in depersonalization, and moderate level in the lack of personal accomplishment was reported by participants. Children and partner were found to be protective factors. Working hours, duration and status (permanent/contractual) of service influenced burnout.

Conclusion: Knowing the level of burnout and their determinants can help in formulating measures of improving the work environment. A healthy workforce ensures high quality of healthcare and patient satisfaction.

KEYWORDS

Emotional Exhaustion. Depersonalization. Personal Accomplishment.

INTRODUCTION

Every institution makes different amendments to provide an optimum working environment for their staff in an effort to provide the best possible service. But, still, a lot of professionals report experiencing burnout. The term 'burnout' was first used by the psychologist Herbert Freudenberger (1974) in a publication in which he mentioned job dissatisfaction resulting out of job-related stress. Conceptually, burnout is defined as a state of psychological as well as physical exhaustion in the setting of unrealistic expectations and constant situational stress. It finally leads to depersonalization and cynicism, and a state of reduced personal accomplishment amongst the people suffering from it (Das et al. 2015). If the workers cannot cope with the stress elements well, then that begins to impair the job performance and patient outcomes (Howlett et al. 2015). The incidences of mental depression and suicidal plans and attempts were deceptively high in people suffering from burnout states and tended to decrease with recovery from them. Physical symptoms may take the form of sleep disturbances, anorexia, fatigue, and gastrointestinal symptoms which alone greatly hamper work performance (Martin et al. 1997, Dyrbye et al. 2008, Melamed et al. 2006, Toker et al. 2005, Sherman 1996).

The medical profession has witnessed many changes over the years from advancements in technology and improved hospital settings to increased paperwork and rising demands in quality of patient care. In today's era of modern medicine, the delivery of optimum emergency healthcare to the society is vital. Emergency care professionals are facing an increase in the work burden due to various personal and professional causes. Some of the identifiable ones are: increased ER admissions, fast-paced work life, increasing work-time pressures, high number of patients and with high acuity, erratic and long work schedules in the setting of limited human resources. Moreover, other issues like litigation risk, provider-patient and provider-provider miscommunication or work discrepancy adds to the burden of workload. Amidst all of this stress, performance standards in regards to work quality, patient safety is expected to be high. The most prudent healthcare delivery systems today dealing with emergency healthcare are still reasonably flawed, and that becomes an additional issue for the workers to deal with (Harrison 1993, Keller and Koenig 1989, Doan-Wiggins et al. 1995, Lloyd et al. 1994).

Worldwide, health professionals and the hospital authorities have become concerned about the concept of 'burnout' and have tried to solve this problem. As the reasons vary across countries and even within the nation, each institution should conduct an individual study to identify the contributing factors of burnout and take steps to mitigate them. As a tertiary care centre catering to a huge population of 92,000 emergency admissions/year, the Emergency Department (ED) of this institute of north-east India, needs a highly productive ED workforce. Thus, the present study was undertaken at ED of this institute to identify the factors and the level of burnout amongst the healthcare workers. A pilot study has already been undertaken and published to assess the feasibility of the present study (Das et al. 2016).

METHODS

This is a cross-sectional study. The study was conducted at ED of a tertiary care teaching institute from the period of September 2014 to August 2015.

Purposive sampling was used to recruit participants. The study sample included doctors, nurses, and paramedics employed in ED of the institute. Our study included 68 participants belonging to the three aforementioned categories. The investigators of the study, trainees, and interns at ED and those who were employed for less than six months were excluded from the study.

Demographic variables comprised of age, religion, marital status, years married, general and professional education, children and number of children. Factors affecting the level of burnout consisted of travelling time to work, working hours per week, doctor/doctor conflict or nurse/nurse conflict or nurse/doctor conflict, availability of doctors to work with, lack or inadequate nursing personnel, poor wages, too frequent night duties, inadequate security during night duties, job status, years in current job, and additional work.

Burnout was measured by using the Maslach Burnout Inventory (MBI), which was first described by Maslach et al. (1996). The inventory has three primary components. Each component has a set number of items that add up to a total of 22 items. They are divided as follows-

Section a: Emotional exhaustion- seven items
Section b: Depersonalization- seven items
Section c: Personal accomplishment- eight items
The answers to each item are represented as never, few times per year,

once a month, few times per month, once a week, few times per week, and every day. Each is given a point represented on a scale that ranges from zero to six in a seven-point Likert-type rating scale.

Section a: Emotional exhaustion- Emotional exhaustion is a state of chronic emotional and physical depletion. It is a type of strain particularly related to stress elements at workplaces (Maslach et al. 2001). Its manifestation is caused by a combination of physical fatigue and a sense of psychological un-fulfillment and emotional drainage (Zohar 1997).

Total of 17 or less: low level burnout
Seventeen to inclusive of 29: medium level burnout
More than 29: high level burnout

Section b: Depersonalization- Depersonalization is a state of psychological withdrawal and refers to the development of negative, indifferent and cynical attitudes toward one's patients or colleagues (Hartney 2008). The individual blocks his/her state of empathy towards others (Das et al. 2016). Emotional exhaustion can be a trigger to the development of depersonalization.

Total of five or less: low level burnout
Between six to11: medium level burnout
Twelve or higher: high level burnout

Section c: Personal accomplishment- The lack of personal accomplishment is a tendency to associate one's work with one's patients/colleagues negatively. They believe that their objectives at work are not accomplished. This, in turn, leads to feelings of low self-esteem and insufficiency (Maslach et al. 2001). The person begins to suspect his genuine abilities to accomplish objectives in a competent manner (Das et al. 2016).

Total of 33 or less- high level burnout
Between 34 and including 39- medium level burnout.
More than 39- low level burnout

Thus, it is self-evident that high scores in section a and b and low scores in section c are associated with high burnout.

The inventory was translated from English to the vernacular language by an expert and was again back translated to English by another expert. Both of them were blinded to the study and the later was also blinded of the original translation. Subsequent comparisons were done by a psychiatrist for the purpose of conceptual equivalence (Das et al. 2016).

The reliability of the burnout scale was already established via a pilot study conducted on the same topic by the same investigators (Das et al. 2016).

The participants were informed about the purpose of the study and consent was taken prior to data collection. Ethical approval for the study was taken from the institutional ethics committee.

Data analysis was done using descriptive statistics and inferential statistics. For bivariate analysis, chi-square test was done and for variables with only two categories, Fischer's exact test was done. The alpha value for all the analyses was 0.05. Data analysis was done using InSTAT software and four investigators were involved in the data extraction and analysis process.

RESULTS

The maximum number of participants (44.12%) were from the age group of 30-39 years, only 5.88% were 50 years or older. Hindus (77.94%) outnumbered Muslims and Christians. Singles were less compared to those married or with partners or cohabitating (41.18% vs. 57.36%). Years married were almost equally divided among the three groups of less than five years, five to ten years, and ten to 20 years (17.65%, 14.71%, and 19.12% respectively). General education was mostly of 10+2+ and 10+2+3+ levels (39.71% and 32.35%). Majority has passed the 12th standard (72.06%). Majority of the respondents were nurses (33.82%), doctors constituted 13.24% while the paramedical staff and others constituted the rest. Fifty per cent had children. Majority had one child (48.57%) followed by two (37.14%) and only five respondents had three or more children.

Time to reach workplace was almost equally divided among those needing less than 30 minutes (36.76%) and those needing 30 to 60 minutes (39.71%). Half of the participants worked for 42-48 hours. The majority (54.41%) had role conflict; most of the participants (72.06%) felt that doctors were available to work with; but, the majority (60.29%) felt that nursing personnel were inadequate. Less salary was a concern for most of the participants (77.94%). As far as too frequent night duties were concerned, the participant's views were nearly equally divided (51.47% vs. 47.06%). A slight majority felt that security during night duty was inadequate (54.41%). Permanent job status was found in only 39.71% and years in the current job was mostly of less than five years (42.65%) and five to ten years (44.12%).

Table 1: Burnout (emotional exhaustion, depersonalization, and personal achievement) (N=68)

Burnout	Mean	Median	SD	SE
Emotional exhaustion	14.9706	14	9.866	1.196
Depersonalization	8.3971	6.500	7.107	0.8619
Personal accomplishment	38.6029	39.500	8.774	1.064

The mean emotional exhaustion value was 14.9±9.88 (low-moderate level), depersonalization was 8.39±7.107 (moderate level), while lack of personal accomplishment was 38.60±8.77 (moderate-low level) (table 1 and figure 1).

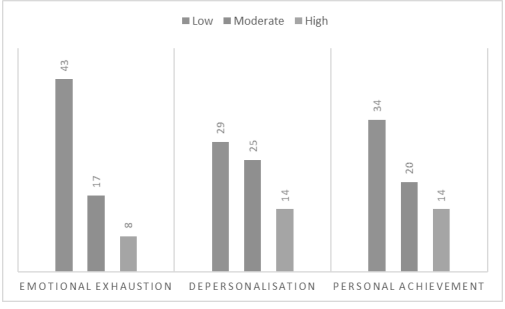

Figure 1: Burnout (emotional exhaustion, depersonalization, and personal achievement)

Table 2: Demographic variables and Emotional Exhaustion and Depersonalization

Sociodemographic data	Emotional exhaustion						Depersonalization					
	Low	Moderate	High	Chi-square	df	p-value	Low	Moderate	High	Chi-square	df	p-value
Age (years)												
20-29	13	9		1.369	2	0.5044	11	11		4.268	2	0.1184
30-39	21	9					9	21				
≥40	8	7					9	6				
Religion												
Hindu	34	19				0.7579*	25	117	11	1.881	2	0.3905
Muslim & Christian	9	6					5	7	3			
Marital status												
Single	18	10					10	10	8	1.993	2	0.369
Married/with partners/co-habitating	24	15					19	14	6			
Years married												
<5	12	10				0.3319*	7	5		4.066	0	0.1310
5-10							2	8				
>10	13	5					10	8				

General education											
10+2+	22	13			0.7795*	17	11	7	1.203	2	0.5479
10+2+3+	15	7				8	10	4			
Others†	3	5				4	2	2			
Professional education											
Doctor	21	11	0.3874	2	0.8239	3	3	6	0.5856	3	0.8997
Nurse						11	11	12			
Para-medical	8	4				5	5	7			
Others	14	10				10	10	14			
Child											
Yes	23	11			0.7568*	16	12	6	0.4108	2	0.8143
No	10	6				7	7	2			
No. of children											
1	11	6				6	13				0.1914
≥2	12	6				10	8				*

*Fisher's exact test
†Others was not taken for statistical calculation
df=degree of freedom

No significant association was found between the demographic variables and emotional exhaustion (table 2). Depersonalization showed no significant association with the demographic variables (table 2). Having children was significantly associated with low level of burnout in lack of personal accomplishment (p=0.0061) (table 3).

Table 3: Demographic variables and personal accomplishment

Sociodemographic data	Lack of personal accomplishment			Chi-square	df	p-value
	High (≤33)	Moderate (34-39)	Low (≥40)			
Age (years)						
20-29	13		9	2.513	2	0.2847
30-39	16		14			
≥40	5		10			
Religion						
Hindu	26		27			1.000*
Muslim & Christian	8		7			
Marital status						
Single	6	12	10	4.970	2	0.0833
Married/with partners/cohabitating	7	8	24			
Years married						
≤10	9		13			1.000*
>10	7		11			
General education						
10+2+	3	10	22	5.065	2	0.795
10+2+3+	7	5	10			
Others†	2	4	2			
Professional education						
Doctor & nurse	17		15	0.4583	2	0.7952
Paramedical	5		7			
Others	12		12			
Child						
Yes	7	6	21	10.816	2	0.0061
No	1	10	5			
No. of children						
1	6		11			1.000*
≥2	7		10			

*Fisher's exact test
†Others was not taken for statistical calculation
df=degree of freedom

Table 4: Factors related to burnout with emotional exhaustion, depersonalization

Factors influencing burnout	Emotional exhaustion						Depersonalization					
	Low	Moderate	High	Chi square	df	p- value	Low	Moderate	High	Chi square	df	P-value
Time to reach workplace												
<30 minutes	14	11		0.3644	2	0.8334	8	17		3.802	2	0.1494
30-60 minutes	17	10					12	15				
>1 hour	9	5					9	5				
Hours per week												
36-42	13	5		7.937	2	0.0189	4	14		4.494	2	0.1005
42-48	16	18					17	17				
>48	13	2					8	7				
Role conflict												
Yes	19	18				0.0725*	13	15	9	2.805	2	0.2460
No	22	7					16	9	4			
Availability of doctors to work with												
Yes	34	15				0.0878*	20	17	12	1.449		0.4846
No	8	10					9	7	1			
Lack of inadequate nursing personnel												
Yes	27	14				0.6062*	21	11	9	3.978	2	0.1368
No	15	11					8	13	5			
Less salary												
Yes	33	20				1.0000*	26	16	11	4.202	2	0.1224
No	9	5					3	8	3			
Too frequent night duties												
Yes	22	13				1.0000*	15	11	9	1.212	2	0.5455
No	20	12					14	13	5			
Inadequate security during night duty												
Yes	23	14				1.0000*	17	14	6	1.095	2	0.5784
No	19	11					12	10	8			

Job status											
Permanent	18	9			0.6164*	14	8	5		2	0.5033
Contractual	24	16				15	16	9			
Years in current job											
0-5	19	10	0.2456	2	0.8844	12	12	5	26.335	4	<0.0001
5-10	18	12				12	12	6			
>10	6	3				5	1	19			

*Fisher's exact test
†Others was not taken for statistical calculation
df=degree of freedom

A significant association was found between working hours and emotional exhaustion (p=0.018). There was a significant association between years in current job and depersonalization (p<0.0001) (table 4). Lack of personal accomplishment did not show significant association with factors related to burnout (table 5).

Table 5: Factors related to burnout and personal accomplishment

Factors influencing burnout	Lack of personal accomplishment			Chi-square	df	p-value
	High (≤33)	Moderate (34-39)	Low (≥40)			
Time to reach workplace						
<30 minutes	16	9		3.775		0.1515
30-60 minutes	10	17				
>1 hour	7	7				
Hours per week						
36-42	11	7		1.169	2	0.5575
42-48	20	20				
>48	12	7				
Role conflict						
Yes	9	11	17	1.201	2	0.5484
No	4	9	16			
Availability of doctors to work with						
Yes	10	14	25	0.1977	2	0.9059
No	3	6	9			
Lack of inadequate nursing personnel						
Yes	7	14	20	1.029	2	0.5978
No	6	6	14			
Less salary						
Yes	26	27				1.0000
No	7	7				*
Too frequent night duties						
Yes	8	10	17	0.5591	2	0.7561
No	5	10	17			
Inadequate security during night duty						
Yes	4	11	22	4..381	2	0.1119
No	9	9	12			
Job status						
Permanent	4	5	18	4.695	2	0.0956
Contractual	9	15	16			
Years in current job						
0-5	7	10	12	1.503	2	0.4716
>5	7	10	22			

*Fisher's exact test
df=degree of freedom

DISCUSSION

Occupation-related burnout is realized as a serious problem affecting several groups of people associated with the healthcare industry where they suffer from the negative potential for self, their job, and life itself (Sørgaard et al. 2007). Keeping this in mind, it is important to clearly identify organizational stressors that are related to job burnout in order to endorse and facilitate strategies directed at its prevention and reduction (Portoghese et al. 2014). In the year 2011, a nationwide study conducted in the United States that included 7288 physicians across various disciplines found emergency physicians suffered the highest rates of burnout as compared to other specialties (Shanafelt et al. 2012). In 1992, 763 emergency medical personnel were interviewed and an annual prevalence of burnout was found to be 12% (Gallery et al. 1992). Lloyd et al. (1994) in a study of Canadian emergency physicians found 46% and 93% of moderate to high level of emotional exhaustion and depersonalization respectively, and 79% of lack of personal accomplishment. Kalemoglu and Keskin (2006) found 44.7% high level of emotional exhaustion, 33.2% depersonalization, and 28% reduced personal accomplishment in their study of burnout in emergency services.

Goldberg et al. (1996) in their landmark study of burnout correlation in emergency physicians over four years found mean values of 25.31, 20.7, and 24.72 for emotional exhaustion, depersonalization, and reduced personal accomplishment respectively. They concluded an attrition rate of 25% in those employees over a period of ten years. Their perception of burnout in the ED physicians was alarmingly high. Schooley et al. (2016) while comparing burnout amongst different professionals working under ED found an overall startling figure of 75.6% high emotional exhaustion, 84.4% high depersonalization, and 56.8% respondents had low personal accomplishment. Researchers (Goldberg et al. 1996, Schooley et al. 2016) show that ED worldwide are surely on the brink of collapse of their human resources if remedial measures are not undertaken to mitigate and address the problems highlighted by these studies.

In our study, although the emotional exhaustion level was characteristically low, the respondents scored an overall moderate level of depersonalization as well as moderate to low personal accomplishment. The cynical and indifference attitude may be reflected by the constant interaction with a high volume of patients as well as dealing with life-threatening conditions most of the time. ED also suffer from considerable negligence from the hospital administrators with respect to infrastructure and work environment setup. With increasing awareness of the public and their growing demands for emergency healthcare, the staff in ED chronically becomes demotivated towards work, leading to a sense of reduced personal accomplishment.

Comparison between demographic variables and burnout was done using the chi-square test and Fisher's exact test. Employees having children had significantly high personal achievement than those who did not (chi-square 10.816, the degree of freedom [df] 2, p-value 0.0061). Hence having offspring seems to be a protective factor in preventing burnout in the present study. Children provide a sense of purpose and direction in one's life that may indirectly spill over to their professional career as well as making it more meaningful. Although not significant, being married/having partner/cohabiting led to lower burnout levels amongst the employees.

Apart from it, other demographic variables failed to show any significant association with the primary components of burnout. In general, the present outcomes are consistent with previous studies (Goldberg et al. 1996, Burbeck et al. 2002), which have reported no association between gender, age, and marital status with the extent of burnout. There was no significant difference in the level of burnout amongst the doctors-nurses compared to paramedical workers and other employees. However, this is in contrast to other studies where the authors' report of highest emotional exhaustion in the nurses as compared to paramedics and higher personal achievement amongst doctors compared to nurses-paramedics (Schooley et al. 2016).

Duty hours per week and emotional exhaustion had one significant association in our study, in that the employees working for 42 to 48 hours had higher levels of emotional exhaustion as compared to those between 36 to 42 hours and more than 48 hours, respectively (chi-square 7.937, df 2, p=0.018). Now, this finding is something interesting. Why workers that labor more than 48 hours did better than 42-48 hours' workers? Why those who worked for more than 48 hours per week did not have the highest level of burnout? Is this group of participants who showed a low level of burnout in emotional exhaustion even after working for more than 48 hours per week constitute what we popularly call “workaholics”! Having said so, we need to interpret this finding with caution as the sample was not equally divided into the three groups. The majority (34 participants) worked for 42-48 hours. Eighteen and 15 participants worked for 36-42 hours and more than 48 hours respectively.

Workers who were in service for more than ten years had significantly elevated depersonalization as compared to those having served for ten years or less (chi-square 26.335, df 4, p<0.0001). A closer look revealed that all the employees with more than ten years in service were also permanently employed, and this enhanced job security factor may have contributed to the cynical or indifferent attitudes conveyed towards others. Howlett et al. (2015) reported a similar figure of employees employed between six to ten and more than ten years had significantly more burnout as compared to those working for five years or less. Another explanation for this finding can be due to the factor that the people who are employed for many years are older leading to higher exhaustion compared to the people who have joined newly, and have more vitality and vigor for work and thus, they have not felt the burnout.

Gökçen et al. (2013) assessed the burnout, job satisfaction, and level of depression amongst healthcare workers employed in emergency healthcare settings in the city of Gaziantep, Turkey. Following are the similarities and contrasts as compared to our study:

1) They found a significantly lower MBI emotional exhaustion scores in 18 to 24 years as compared to 25 to 29 and 30 to 34 years (11.35±7.12 compared to 15.24±7.60 and 16.10±9.22 respectively). However, our study failed to demonstrate the same. India currently faces a huge burden of unemployment and thus quality of work life is still not a priority for many.

2) They found no statistically significant correlation between marital status and levels of burnout, a finding similar to our study.

3) They stated that the paramedics had statistically significant lower emotional exhaustion compared to doctors and nurses. Our study failed to demonstrate the same. They however cautiously noted the fact that their paramedics started working right after class X and further two years in college, hence it was difficult to draw comparisons between them and the doctors and nurses. As there was an obvious age gap between them and the latter two groups. In India, the emergency paramedics have to undergo further three years paramedical training. Hence, any mismatch arising out of age discrepancy did not arise in our study. That probably accounted for the lack of any statistical difference between them.

Finally, although burnout is common in the people engaged in ED, not everyone seemed to be equally susceptible to its adverse outcomes (Leiter et al. 2009). Coping mechanisms may have a great role to play in deciding who manifest burnout symptoms and who does not. Poor coping skills may lead to impairment in work performance and productivity. Relations between emotion-oriented coping styles and elevated levels of stress and exhaustion have been documented in studies conducted amongst nurses and nursing students (Jaracz et al. 2005).

Limitations

It was a single centre study.

Comparison of ED with other departments of the hospital was not done.

Implications and future directions

Pertinent yet unaddressed issues of burnout among emergency healthcare workers in a busy tertiary centre from this part of the globe came to light.

Levels of burnout, demography, and factors at workplace influencing burnout enriched our knowledge.

Comparison with other settings and inclusion of variables not included in the present study can be areas of future work.

CONCLUSIONS

Our study indicates that having a family with a child and being able to maintain a work-life balance with limited work hours reduces burnout. We aim to highlight the areas which can be improved in the working environment and improve the quality of work life thus reducing burnout among the employees.

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