

Original Research Article

Prevalence and factors affecting burnout among medical professionals – A cross sectional study from a tertiary care teaching hospital

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Abstract

Background: Increasingly many studies across the globe in the recent past have documented increase in prevalence of burnout among various cadres of health care professionals at very young age. Even though the burden, influencing factors and adverse consequences of burnout on professional and personal life have been documented by many studies from the west, there are very few studies conducted on the subject in Indian health care providers. The current study has been undertaken to assess the prevalence of burn out and factors influencing it among clinicians in an urban tertiary care hospital in a state of Tamil Nadu.

Materials and methods: The current study was a cross sectional of 73 clinicians working in a single tertiary care teaching hospital, who were selected by convenient sampling. Burn out was assessed by Maslach Burnout Inventory scale.

Results: The proportion of overall burnout reported in the study was 34.2%. Among the all the potential factors, which were assessed for their association with burnout in the study population, the

factors which have shown statistically significant association were experience less than 4 years (Odds ratio 3.24, 95% CI 1.16 to 8.99), Hours of sleep < 6 hours (OR 7.45, 95% CI 4.98 to 9.92) and regular night duties (OR=3.25, 95% CI 1.17 to 9.02).

Conclusion: The prevalence of burnouts in south India is around 34.2% is slightly lower compared to the prevalence reported in western studies. Limited experience, regular night duties and sleep duration less than 6 hours were associated with burnout.

Key words

Prevalence, Factors, Burnout, Medical professionals.

Introduction

Burn out was described by Delbrouck in as early as the 1970's [1]. Recently many Studies across the globe have documented increase in prevalence of burnout among various cadres of health care professionals at very young age [2-5]. The reported prevalence ranges from 25 to 60 % burn out among practicing physicians in various studies [6-8].

The resulting emotional exhaustion, depersonalization and low personal accomplishment among health care professionals is quite alarming [9-11]. With advancements in the field of medical science and technology the practicing clinicians have to deal with complex and demanding situations on a daily basis. Especially those physicians dealing in the intensive care units and in areas which require dealing with patients on ventilators and life support have an early burn out phase due to stress, death of the treating patient or situations where life support is withdrawn [12]. There are very few studies conducted on the subject in Indian health care providers.

Aim

- To identify the prevalence of burn out among clinicians in an urban tertiary care hospital in a state of Tamil Nadu.
- To identify factors associated with burn out

Materials and methods

The study was a cross sectional study conducted in a tertiary care teaching hospital in south India.

The study population included, clinicians belonging to various departments, including emergency medicine, general medicine, general surgery, department of orthopedicians, anaesthesia and the intensive care unit. The data collection for the study was done between April to June 2016. A total of 73 clinicians in the study setting, who have provided consent to participate in the study were included in the study. All the participants were sample into the study by convenient sampling.

A structured, self-administered questionnaire exclusively prepared and validated for the purpose of the study was used for data collection. The questionnaire has collected information regarding, socio demographic variables, academic qualification, experience, life style factors and job satisfaction.

Burn out was assessed by Maslach Burnout Inventory scale, which is a well-established list of 22 questions that has been validated for measuring burnout in health professionals, including physicians [13-15]. The three dimensions of burnout measured were emotional exhaustion, depersonalization, and perceived lack of personal accomplishment.

Ethical approval of institutional human ethics committee was obtained for the study. Informed written consent was obtained from all the participants. Confidentiality of the personal details of the participants was maintained throughout the study.

Sociodemographic, academic, work related and life style related parameters were considered as primary explanatory variables. The proportion of burnout was considered as primary outcome variable. Initially descriptive analysis of all the explanatory and outcome parameters was done using frequency and percentages for all the categorical variables, mean and standard deviation for all quantitative variables. The odds of burnout in each of the exposure category were assessed by calculating odds ratio and its 95% Confidence intervals. Statistical significance of the association was assessed by Chi square test. P value < 0.05 was considered statistically significant. IBM SPSS version 21 was used for statistical analysis.

Results

A total of 73 participants were included in the analysis. The age distribution of the participants showed 40 (54.8%) subjects below 35 years of age and the remaining 33 (45.2%) were above 35 years of age. The proportion of male participants was 71.2% and females were 28.8% in the study population. The proportion of unmarried participants was 79.5% and married were 20.5% in the study population (**Table – 1**).

Table - 1: Descriptive Analysis of Socio demographic Parameters in study group (N=73).

Parameter	Frequency	Percent
Age		
Below 35 Years	40	54.8
35 Years & above	33	45.2
Gender		
Male	52	71.2
Female	21	28.8
Married		
Unmarried	58	79.5
Married	15	20.5

Among 73 subjects, 36 (49.3%) had work experience of 2 to 4 years and the remaining 37 (50.75%) had work experience more than 4 years. Fifty five (75.3%) participants had only

completed under graduation and 14 (19.2%) had completed their post-graduation. Work relationship was graded as good by 80.8% of the participants and the remaining 19.2% had labelled it as moderate or poor. Work hours were below 60 hours per week in 75.3% of participants and 24.7% participants had work hours more than 60 hours per week. Working in regular night duties was reported by 65.8% of the participants (**Table - 2**).

Table - 2: Descriptive Analysis of work related parameters in study group (N=73).

Parameter	Frequency	Percent
Years of experience		
2 to 4 years	36	49.3
>4 Years	37	50.7
Graduation New		
PG	55	75.3
UG	18	24.7
Work relation ship		
Good	59	80.8
Moderate or poor	14	19.2
Hours of work per week		
Less than 60	55	75.3
60 to 80	18	24.7
Night duties		
Regular	48	65.8
Occasional/ No	25	34.2

Among 73 subjects, 95.9% had reported the duration of sleep as less than 7 hours. The proportion of subjects, who reported alcoholism, was 24.7% and none of the participants reported smoking. The proportion of subjects who are eating out regularly was 35.62%. The proportion of participants, who reported regular exercise, was only 56.2% (**Table - 3**).

Out of 73, 63 participants were categorized as low burn out, 8 (11.0%) were categorized as moderate and the remaining 1 (1.4%) subjects were labelled as high burnout in study population. Low grades of loss of empathy were

reported by 46 (63%) participants. The proportion of participants reporting moderate and high grades of depersonalization was 14 (19.2%) and 13 (17.8%) respectively. The proportion of overall burnout reported in the study is 34.2% (Table - 4).

Table - 3: Descriptive Analysis of life style related parameters in study group (N=73).

Parameter	Frequency	Percent
Hours of sleep		
<6hours	70	95.9
6 hours or more	3	4.1
Alcohol New		
Yes	18	24.7
No	55	75.3
Eat out		
Regular	26	35.62
Irregular	47	64.38
Exercise		
Everyday	41	56.2
Irregular /No	32	43.8

Table - 4: Prevalence of burnout in study population (N=73).

Parameter	Frequency	Percent
Burnout (Depressive anxiety syndrome)		
Low	63	86.3
Moderate	8	11.0
High	1	1.4
Depersonalization (Loss of empathy)		
Low	46	63.0
Moderate	14	19.2
High	13	17.8
Personal Achievement		
Low	8	11.0
Moderate	16	21.9
High	49	67.1
Overall Burnout		
Yes	25	34.2
No	48	65.8

Among the all the potential factors, which were assessed for their association with burnout in the study population, the factors which have shown statistically significant association were experience less than 4 years (Odds ratio 3.24, 95% CI 1.16 to 8.99), Hours of sleep < 6 hours (OR 7.45, 95% CI 4.98 to 9.92) and regular night duties (OR=3.25, 95% CI 1.17 to 9.02) as per Table – 5.

Discussion

Stress is usually defined as an “undue inappropriate or exaggerated response to a situation while burn out is an experience of physical, emotional , and mental exhaustion caused by long term involvement in situations that are emotionally demanding” [16]. It may manifest as depersonalisation, low productivity and feeling of low achievement. This is primarily different from depression where burnout syndrome occurs only in the working environment. The medical profession is not aware of this problem and this has led to decreased effectiveness at work, affects one’s interpersonal relationships at work, unjustified absenteeism and decreased quality of care [17]. These effects can at times get spilled over to the personal life also [18].

The incidence of burnout in the current study was 34.2%, which was on par with the prevalence reported globally. The incidence of burn out reported in various western studies ranged from 20 -60% [6, 19]. In a study by Lee F. J., et al. in 2008, 42.5% of participants reported high stress levels. The proportion of people who had high levels of emotional exhaustion and depersonalization was 47.9% and 46.3%, respectively [19]. Current study has also reported slightly lower rates of emotional exertion (12.4%) and depersonalization (36%), compared to this study. Hutchinson TA, et al. have reported 53.3% as highly stressed and stress strongly correlating with emotional exhaustion and depersonalization components of burnout [8].

Table - 5: Factors affecting burnout in study group (N=73).

Parameter	Odds ratio	P-value	95% CI	
			Lower	Upper
Age groups (baseline=>35 years)				
35 to 40 years	1.778	0.25	0.65	4.80
Gender (Baseline= Female)				
Male	2.87	0.09	0.84	9.77
Married (Baseline=Unmarried)				
Married	1.36	0.59	0.42	4.40
Years after (Baseline=>4 Years)				
2 to 4 years	3.24	0.02	1.16	8.99
Graduation (Baseline=UG)				
Post-graduation	1.05	0.92	0.34	3.25
Work relationship (Baseline=good)				
Moderate or poor	1.57	0.45	0.48	5.19
Hours of work (baseline=< 60)				
60 to 80	0.55	0.29	0.18	1.66
Hours of sleep (Baseline=>8 hours)				
<6 hours	7.45	0.018	4.98	9.92
Alcohol (Baseline=No)				
Yes	1.78	0.29	0.60	5.32
Regular Night duties (Baseline=no)				
yes	3.25	0.023	1.17	9.02
Exercise (Baseline=Everyday)				
No	1.65	0.31	0.62	4.38
Eat out (Baseline=occasional)				
Regular	1.68	0.32	0.59	4.80

Among the all the potential factors, which were assessed for their association with burnout in the study population, the factors which have shown statistically significant association were experience less than 4 years, hours of sleep < 6 hours and regular night duties. None of the sociodemographic factors have shown any association. Lee F. J., et al also has also reported similar findings, where none of the socio demographic variables were associated with burnout. But this study has demonstrated that interventions at work place to reduce the stress levels had positive impact on reducing burnout levels [19]. Another study by Rajan P et al

among resident doctors had identified inadequate hostel/quarter facilities; need to perform extra duties, non-conducive environment as strong risk factors for burnout and regular physical exercise as strong protective factor for burnout [7].

Previous studies have also shown no association between demographic characteristics and burnout or work satisfaction [10, 20]. But this study showed that burn outs are statistically significantly associated with age group 30-34yrs and in the early years after completion of their course [21]. There was no gender difference in

this study unlike other studies which showed more incidences among female physicians [22].

Though routine physical exercise is reduced due to time constraints, they seem to follow healthy food habits and are devoid of addictions, in contrary to the studies done in other parts of the world [23-25]. The leisure time and the time spent out of their work schedule is very less among doctors in the early years after their completion of the graduation. This is similar to the studies conducted by Surman, et al. in 2016 [26].

Similarly, the job satisfaction was unrelated to the burnout incidence. There is high level of job satisfaction in the early years [26, 27]. The incidence of burnouts are more among the personnel's who have problems in interpersonal relationships among the fellow mates ($p=0.001$) [28].

Stress factors

Among the stress factors analysed, work related fatigue and an anxiety over their future career seems to be the important factors. This work related fatigue leads to performance degradation [29]. The negative impact of burnout on patient care includes risk of medical errors, patient safety risks, and potential compromise of quality of care. The anxiety about the professional future is more common among the young doctors as evidenced in other studies [11]. There is also negative correlation for other factors like unskillness, fear of malpractice.

Interventions

Majority of studies came to the conclusion that the effective prevention of health troubles is the balanced life-style and the possibility to discuss with colleagues both the professional difficulties and possible conflicts with patients as well as personal worries [30, 31]. In the resilient physician newsletter, a new term was coined Effective Emotional Management (EEM) by Solite, et al. in 2003 [9]. EEM is crucial for maintaining career passion and it helps in maintaining better relationships with others both

at work and in personal ways. EEM is a multimode process which includes recognise to maintain good relationships, to stay in periodic adjustments of life style, to recognise the opportunities, to manage the attitude that stress is inevitable, to engage in adequate healthy pleasures, to learn to cope for flexibility, to recognise early symptoms of burn out and not deny and to take adequate early steps like counselling.

Limitations

- Study was done in a single tertiary care hospital in the state of Tamil Nadu, hence generalizability of the study findings is limited.
- Smaller sample size of the study could be the reason for not attaining statistical significance and wider confidence intervals, even though many factors have shown positive association with burn out.

Conclusion

The prevalence of burnouts in south India is around 34.2% is slightly lower compared to the prevalence reported in western studies. Limited experience, regular night duties and sleep duration less than 6 hours were associated with burnout. A multi-centre study around the country with higher sample size with a more representative sample of physicians from all clinical departments would help us in generalizing results to entire medical fraternity.

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