Original Article

Frequency of Burnout Syndrome in an Intensive Care Unit of a Tertiary Care Hospital in Dhaka, Bangladesh

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Abstract:

Background: *Burnout syndrome is a psychological term resulting from prolonged exposure to job stressors. It is a very common problem among health professionals especially intensive care unit (ICU) staffs (physicians, nurses, ward-attendant), as ICUs are characterized by a high level of work related stress. The consequences associated with professional burnout affect both the healthcare professionals and recipients.*

Methods: *This cross-sectional study was done over the period of four months (April to July, 2017) in the department of Critical Care Medicine, of Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorder (BIRDEM) General Hospital, Dhaka. Total 93 ICU staffs were included as study population. After taking informed written consent, the participants were given a structured questionnaire consisting of 2 parts. Part 1 addressed demographic information including gender, age, credentials, employment status, years in practice, work schedule, hours worked per week, smoking and alcohol habit, involvement in teaching and research works. Part 2 of the handout was the Maslach Burnout Inventory - Human Service Survey (MBI-HSS); an inventory consisting of 22 questions to assess three components of burnout.*

Results: *Among the 93 study participants 39.8% were physicians, 47.3% were nurses and 12.9% were ward-attendants) were included in this study. Majority (52.7%) of the responders were found in the age group 20-29 year and 58.1% were married. Majority (58.1%) had a working experience of 1-5 year in ICU, where 61.3% staff had 20-25 working days/month. Regarding duty schedule, 84.9% staff were doing shifting duty, 83.9% had 6-10 working night shifts/month. Most (62.4%) were involved in 1-5 patients' care during their duty time. Among all responders, 17.2% had habit of smoking and 4.3% had alcohol intake habit. 56.7% physicians were involved in research works, and 41.9% of total physicians and nurses were involved in teaching activities. Mostly (97.8% of all staff) followed the ICU guidelines. Regarding burnout scale, 50.5% of the staff had been suffering from moderate emotional exhaustion (EE), 46.2% of high EE. Majority (38.7%) had been suffering from low depersonalization (DP), 32.3% were in high DP and 29.0% were in moderate DP; 81.7% scored high on the personal accomplishment (PA) subscale.*

Conclusion: *This study results suggest that majority of ICU staff are affected by some level of burnout syndrome.*

Key words: *Burnout syndrome, Intensive care unit, Health care providers*

(BIRDEM Med J 2019; 9(1): 30-34)

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Received: September 1, 2018 **Accepted:** October 31, 2018

Introduction

Burnout is a psychological construct widely explored in the healthcare literature. No standard definition exists for burnout, yet researchers refer to burnout as a syndrome of emotional exhaustion (EE), depersonalization (DP) and reduced personal accomplishment (PA) that occur among individuals who work with people.[1,2] Burnout Syndrome (BOS)[3] was identified in the early 1970s in human service professionals most notably health care workers.[4] The most well studied measurement of burn out in the literature is the Maslach Burnout Inventory (MBI). Maslach and her colleague Jackson[4] first identified the construct 'burnout' in the 1970s and developed a measure that weighs the effects of emotional exhaustion, depersonalization (negative or cynical attitudes toward patients) and reduced sense of personal accomplishment. People who experience all three symptoms have the greatest degree of burnout, although emotional exhaustion has been identified as the hallmark of burnout.[1,5]

Clinical symptoms of BOS are nonspecific and include tiredness, headache, eating problems, insomnia, irritability, emotional instability, and rigid in relationship with other. The consequences associated with professional burnout affect both the healthcare professionals and recipients. Health care recipients can experience a decrease in quality of care provided and poor communication from health care provider as a result of health care professional's burnout. The consequences of BOS among ICU professionals can lead to staff turnover and lost productivity. The work of Brooks and colleagues details the mental health problems facing physicians who are emotionally exhausted including addiction to drugs and alcohol.[6] Suicide is also an outcome of mental health problems tied to EE.[7]

Variations in the prevalence and severity of professional burnout have been reported across specialties by both physicians and nurses. Workplace climate and workload are determinants of BOS.[8] Physicians and nurses who work in intensive care units (ICU) are thought to have higher levels of burnout because of their stressful work demands associated with caring for critically ill patients.[9] While it is impossible to survey every ICU nurse and physician worldwide to obtain an estimate of the percentage of clinicians with burnout syndrome, some cross-sectional surveys have reported 50% of ICU physicians and 33% critical care nurses suffer from severe burnout syndrome. In Bangladesh, burnout syndrome among ICU staffs has not yet been studied. This study aimed to gather information regarding the occurrence of BOS among ICU staffs.

Methods

This cross-sectional study was done over the period of four months (April to July, 2017) in the Department of Critical Care Medicine, BIRDEM General Hospital, Dhaka. Total 93 staff (37 physicians, 44 nurses and 12 ward-attendants) were included. Ethical approval from the ethical approval committee of Bangladesh Diabetes Association (BADAS) was obtained prior to the commencement.

The study consisted of a two-part questionnaire which was given to ICU staff. Part 1 addressed demographic information including gender, age, credentials, employment status, years in practice, work schedule, smoking and alcohol habit, involvement in teaching and research works. Part 2 was the Maslach Burnout Inventory - Human Service Survey (MBI-HSS); an inventory consisting of 22 questions to assess three components of burnout; EE, DP, and lack of PA. These items were written in the form of statement about personal feelings and attitudes and answered on a 7-point scale from 0 as never to 6 as every day.

The 9-item EE subscale assessed feelings resulting from depletion of emotional resources. The 5-item DP subscale assessed personal and caring attitudes and the 8-item PA subscale assessed feelings of competence and successful achievement when working with people. For EE and DP subscales, a higher mean score corresponded to a higher degree of burnout. The higher mean scores on the EE and DP subscales and a lower mean score on the PA subscale were consistent with burnout.[10]

Burnout score classification: Burnout syndrome is leveled as low, moderate and high according to score of each component on the Maslach Burnout Inventory-Human Service Survey (MBI-HSS). The table having the scores and levels is as below.

Burnout	Emotional exhaustion score	Depersonalization score	Personal accomplishment score
High	≥27	≥14	0-13
Moderate	17-26	9-13	31-36
Low	0-16	0-8	≥37

Results

A total 93 staffs were included in this study comprising of physicians, nurses and ward-attendants (Table I). Majority (52.7%) of the responders were found in the age group 20-29 year (Table II). Majority (58.1%) of the responders were married (Table III). Table IV shows the distribution of study population according to educational qualifications. Majority (58.1%) had a working experience of 1-5 year in ICU, only 7.5% had more than 10 years working experience (Table V). Table VI demonstrates the number of working days per month, where 61.3% staff had 20-25 working days/month. Regarding daily or shifting duty, 84.9% staff were doing shifting duty and the remainder had daily duty (Table VII). Most (83.9%) of the staffs had 6-10 working night shifts/month (Table VIII). Majority (62.4%) were usually involved in 1-5 patients' care during their duty time; 7.5% of the staff had to care for more than 10 patients (Table IX). Table X and XI shows the distribution of study population according to their habit of smoking (17.2%) and alcohol intake (4.3%). Only 22.6% of study population were involved in research works (Table XII) and 36.6% in teaching activities (Table XIII). Mostly (97.8%) followed the ICU guidelines (Table XIV).

Regarding burnout scale, 50.5% of the staff had been suffering from moderate EE, 46.2% from high EE (Table XV). Majority (38.7%) had been suffering from low DP, 32.3% were in high DP and 29.0% were in moderate DP (Table XVI); 81.7% scored high on the PA subscale (Table XVII).

Table I Profession of the study subjects (n=93)

Profession	Frequency (n)	Percentage (%)
Doctor	37	39.8
Nurse	44	47.3
Ward-attendant	12	12.9
Total	93	100.0

Table II Distribution of the study subjects according to age (n=93)

Age (years)	Frequency (n)	Percentage (%)
<2020 - 29	049	052.7
30 - 39	39	41.9
≥40	5	5.4
Total	93	100.0

Table III Distribution of the study subjects according to marital status (n=93)

Marital status	Frequency (n)	Percentage (%)
Married	54	58.1
Unmarried	39	41.9
Total	93	100.0

Table IV Distribution of the study subjects according to education (n=93)

Education	Frequency (n)	Percentage (%)
Below SSC	7	7.5
SSC	3	3.2
HSC	4	4.3
Diploma	33	35.5
BSc in Nursing	6	6.5
Masters	3	3.2
MBBS	37	39.8
Total	93	100.0

[SSC- Secondary school certificate, HSC – Higher secondary school certificate,
BSc – Bachelor of Science, MBBS – Bachelor of Medicine and Surgery]

Table V Working experience of the study subjects (n=93)

Working experience in ICU (years)	Frequency (n)	Percentage (%)
1 - 5	54	58.1
6 - 10	32	34.4
>10	7	7.5
Total	93	100.0

Table VI Distribution of the study subjects according working days/month in ICU (n=93)

Working days/ month in ICU	Frequency (n)	Percentage (%)
5 - 10	4	4.3
10 - 15	20	21.5
15 - 20	12	12.9
20 - 25	57	61.3
Total	93	100.0

Table VII Distribution of the study subjects according to duty in ICU (n=93)

Duty in ICU	Frequency (n)	Percentage (%)
Daily	14	15.1
Shifting	79	84.9
Total	93	100.0

Table VIII Distribution of the study subjects according to number of working days at night shift (n=93)

Working at night shift in ICU (days)	Frequency (n)	Percentage (%)
1 - 5	6	6.5
6 - 10	78	83.9
>10	5	5.4
Total	89	100.0

Table IX Distribution of the study subjects according to number of patients taking care per day (n=93)

No. of patients take care	Frequency (n)	Percentage (%)
1 - 5	58	62.4
6 - 10	21	22.6
>10	7	7.5
Total	86	100.0

Table X Distribution of the study subjects according to smoking habit (n=93)

Smoking habit	Frequency (n)	Percentage (%)
Yes	16	17.2
No	77	82.8
Total	93	100.0

Table XI Distribution of the study subjects according to alcoholic (n=93)

Alcoholic	Frequency (n)	Percentage (%)
Yes	4	4.3
No	89	95.7
Total	93	100.0

Table XII Distribution of the study subjects according to involvement in research work (n=93)

Involvement in research work	Frequency (n)	Percentage (%)
Yes	21	22.6
No	72	77.4
Total	93	100.0

Table XIII Distribution of the study subjects according to involvement in teaching (n=93)

Involvement in teaching	Frequency (n)	Percentage (%)
Yes	34	36.6
No	59	63.4
Total	93	100.0

Table XIV Distribution of the study subjects following the ICU guidelines (n=93)

Do you follow guideline	Frequency (n)	Percentage (%)
Yes	91	97.8
No	2	2.2
Total	93	100.0

Table XV Distribution of the study subjects according to EE (n=93)

EE	Frequency (n)	Percentage (%)
High	43	46.2
Moderate	47	50.5
Low	3	3.2

Table XVI Distribution of the study subjects according to DP (n=93)

DP	Frequency (n)	Percentage (%)
High	30	32.3
Moderate	27	29.0
Low	36	38.7

Table XVII Distribution of the study subjects according to PA (n=93)

PA	Frequency (n)	Percentage (%)
High	76	81.7
Moderate	17	18.3

Discussion

The ICU staffs are constantly surrounded by critically ill patients, faced with ethical dilemmas, particularly prone to be affected by BOS[11,12,] as seen in this study. Here, majority of responders were nurse, in the age group 20-29 years and married. Educational qualifications varied according to job status. The demographic profiles varied in different ICUs and some are independent factors of developing BOS. Workload is usually associated with burnout. The workload of ICU staff is physically demanding, allows limited rest and associated with sleep deprivation.[13] Majority of the study population had a working experience in ICU (1-5 year); 21-30 working days/month and shifting duty. 83.9% of staff had usually 6-10 night shifts/month and 62.4% were involved in 1-5 patients' care during duty period. Small portion of this study population had smoking and alcohol intake habit. Majority were not involved in research activities (only physicians involved in research) and teaching (both physicians and nurses involved in teaching). Most of responders (97.8%) were supportive of existing ICU guidelines.

Majority of the staff (96.7%) had been suffering from moderate to high EE and 61.3% had been suffering from moderate to high DP; 81.7% scored high on the PA subscale. These finding are consistent with other studies[3,14] but the incidence rate is much higher than previous two studies. It may be due to inclusion of all ICU staff in this study rather than only physicians or only nurses. Single institute survey may also be the cause of high incidence of BOS.

Limitations of this study includes lack of correlation between the causal factors and BOS, as it was a simple survey to see the demographic profile and burnout frequency. Further studies should be done to identify the relationship between these factors and burnout severity.

Conclusion

BOS may be considered a marker of the health of the caregiver team. Indeed severe BOS is frequent in ICU staff, has an important impact on quality of life. This study results suggest that majority of ICU staff are affected by some level of burnout.

Conflict of interest: Nothing to declare.

References

1. Maslach C, Jackson S, Leiter MP, editors. Consulting Psychologists Press. 1996. Maslach Burnout Inventory Manual.
2. Embriaco N, Azoulay E, Barrau K, Kentish N, Pochard F, Loundou A, et al. High level of burnout in intensivists: Prevalence and associated factors. Am J Respir Crit Care Med 2007;175:686-92.
3. Goldberg R, Boss RW, Chan L, Goldberg J, Mallon WK, Moradzadeh D, et al. Burnout and its correlates in emergency physicians: four years' experience with a wellness booth. Acad Emerg Med 1996; 3:1156-64.
4. Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annu Rev Psychol 2001; 52:397-422.
5. Maslach C, Jackson S, Leiter M. Maslach Burnout Inventory Manual. 2nd ed. Palo Alto: Consulting Psychologists Press 1986.
6. Brooks SK, Gerada C, Chalder T. Review of the literature on the mental health of doctors: Are specialist services needed? J Mental Health 2011;20: 146-56.
7. Zwack J, Schweitzer J. If every fifth physician is affected by burnout, what about the other four? Resilience strategies of experienced physicians. Acad Med 2013; 88:382-9.
8. McManus IC, Keeling A, Paice E. Stress, burnout and doctors' attitudes to work are determined by personality and learning style: a twelve year longitudinal study of UK medical graduates. BMC Med 2004; 2:29
9. Bakker AB, Le Blanc PM, Schaufeli WB. Burnout contagion among intensive care nurses. J Adv Nurs 2005;51:276-87.
10. Guntupalli KK, Wachtel S, Mallampalli A, Surani S. Burnout in the intensive care professionals. Ind J Crit Care Med 2014 18(3): 139-43.
11. Gundersen L. Physician Burnout. Ann Intern Med 2001; 135:145-48.
12. Imaai H, Nakao H, Tsuchiya M, Kuroda Y, Katoh T. Burnout and work environment of public health nurses involved in mental health care. Occup Environ Med 2004; 61:764-68
13. Parshuram C, Dhanani S, Kirsh J, Cox P. Fellowship training, workload, fatigue and physical stress: a prospective observational study. CMAJ 2004;170:965-70
14. Guntupalli KK, Fromm RE. Jr Burnout in the internist-intensivist. Intensive Care Med 1996; 22:625-30.