



A CROSS-SECTIONAL STUDY OF BURNOUT IN NURSES ACROSS VARIOUS HOSPITAL SETUPS IN INDIA

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ABSTRACT

Background and objectives: Excessive and prolonged work-related stress has always been a cause for burnout among healthcare professionals. This has led to emotional, mental, and physical exhaustion.

This survey was conducted to assess the burnout among medical practitioners using the modified Burnout Clinical Subtype Questionnaire (BCSQ-12).

Materials and methods: A cross-sectional study was conducted as in 1018 (836 female, 180 male, 2 did not specify) nursing professionals across India. A standardized and widely accepted 12-item BCSQ-12 scale with three domains of 'overload', 'lack of development' and 'neglect' was used to assess the burnout in nursing professionals. The distribution of responses for each variable was examined using frequencies and percentages among the sub-groups to find out the burnout levels of various components of the scales.

Results: High scores (>75th percentile) were observed in all domains of the BCSQ-12 scale in 76.6% (780) nursing professionals. The burnout was observed in the three domains of BCSQ-12 i.e., 'overload', 'neglect', and 'lack of development' in 82.7% (842), 82.1% (836), and 73.7% (750) nursing professionals respectively. There was significantly greater burnout observed in nurses in academics ($p < 0.0001$) and those with higher age (>30 years of age) of work experience ($p < 0.0001$). However, there was greater but non-significant burnout observed in males ($p, 0.210$) and lesser experienced (<5 years' experience) nurses ($p, 0.459$).

Conclusion: The results suggest high level of burnout in nursing professionals and warrant immediate actions to address this issue.

KEYWORDS : burnout, nursing, BCSQ-12, chronic stress, mental health, India

INTRODUCTION

Chronic stress in the work environment is one of the leading factors for burnout syndrome and could have a deleterious effect on health [1]. Burnout is defined as a feeling of hopelessness and inability in carrying out one's job effectively [1]. It is a psychological and physical response which may arise when the employees are exposed to a stressful working environment involving high expectations, inadequate resources, and low compensation. This can be seen when an individual fails to control the work-related stress effectively. Professional burnout has three primary components: i) exhaustion (feeling of not being able to give any more of oneself to work); ii) cynicism (distancing behaviour towards work, customers, and co-workers); and iii) inefficiency (feelings of inadequacy and incompetence when performing tasks at work) [2].

Working in healthcare profession especially as a paramedical healthcare professional can be stressful leading to burnout syndrome, which is a problem that can affect all professionals. Burnout can be a serious problem in the healthcare professionals due to its nature and failure to detect it early. Hence, it needs to be addressed promptly, especially in India where the burden of healthcare of the population rests on the shoulders of a small number of healthcare professionals.

Burnout has been studied among healthcare workers in many parts of the world including the USA [3-4], European countries [5-6], and Latin America [7-8], while very few studies are being reported from India [8]. Numerous studies have explored and reported work related stress in healthcare personnel in many countries [9]. Also, a high level of emotional exhaustion, depersonalization, and low personal accomplishments were

reported among the nurses and respiratory therapists working in the intensive care unit (ICU) in the US [3].

This cross-sectional study was conducted to assess the degree of burnout among the medical nurses across India and to compare the pattern of burnout amongst the different sub-groups based on the gender, age, and work experience.

MATERIALS AND METHODS

This was a cross-sectional study to assess the level of burnout among nurses across India. This study was conducted in adherence to good clinical practice (GCP) guidelines and Declaration of Helsinki (DoH). The study documents were reviewed and approved by the Institutional Ethics Committee (IEC) of D Y Patil Medical College, Navi Mumbai, Maharashtra, India.

All participating nurses had to complete a 12-item self-administered Modified Burnout Clinical Subtype Questionnaire (BCSQ-12). The respondents filled the responses on a print (paper) format, an electronic format (.pdf) or through an online link. The participants who consented for participation in person were requested to complete the printed format and submit them to the researchers. The electronic form was designed as a portable document format (.pdf) and was sent to the potential respondents by e-mail. The electronic forms were downloaded and filled by the responders and returned via postal or courier service or emailed back as scanned copies. Additionally, an online link (Microsoft 365 forms) to fill the form was also made available to the respondents who wished to submit their forms online. All the electronic and print forms were checked for completeness, and any deficiency or discrepancies were resolved by the respondents via mail, short message service (SMS), or telephonic communication.

Convenient sampling was used for data collection, and participants from different hospitals, healthcare teaching institutions and clinics from various parts of the country were included in the study. Emails were sent to the potential responders explaining the scope and objective of the study. In addition to an invitation to participate, a link to the survey that contained a description of the study was provided. The participation was purely voluntary. The data was collected from August 2019 to December 2020.

An attempt was made to reach out to a large number of nurses across India; however, there were more responders from the state of Maharashtra. We were able to reach over 2500 nurses of which a total of 1018 responded. The geographical location of responders is presented in figure 1. Nurses of either gender, who had a diploma, bachelor's degree, or master's degree in nursing from any state or union territory of India and had registered with their respective nursing councils were contacted for the survey. Duration of experience was not a criterion for exclusion. Nurses working either in academics, private practice, or both were included for the study. Any respondents who did not meet the above criteria were excluded from the analysis.

The demographic profile, academic qualifications, and the work profile of respondents were captured. Burnout was assessed using the BCSQ-12, which is a validated scale and has been used in earlier studies to assess the burnout among medical practitioners, students, and healthcare workers [10-12].

The BCSQ-12 consists of three main domains of burnout. The overload, neglect, and lack of development. The overload domain (items 1, 4, 7 and 10) measures the overload work feeling by the professionals. The neglect domain (items 2, 5, 8 and 11) assesses the feelings of guilt neglect towards their profession due to professional burnout, whereas the lack of development domain (items 3, 6, 9 and 12) indicates the feeling by professionals about their inability of professional development due to work stress [10-12]. For this study, the participants had to indicate their degree of agreement with each of the statements presented according to a Likert-type scale with the seven response options scored from zero (totally disagree) to six (totally agree).

The completed questionnaires were coded, and the data was tabulated prior to analysis. The distribution of the responses for each variable was examined using frequencies and percentages. Scores for each domain were added to give the individual domain scores, whereas sum of all domain scores were added for calculating the total BCSQ-12 score. For each domain and the total scores, lower cut-off criteria of 75th percentile was used to define high scores [11]. Responders with high scores were considered having significant burnout and are presented as counts. The data was divided into various sub-groups based on age (≤ 30 years and > 30 years), gender (male, female, prefer not to mention), duration of experience (≤ 5 years and > 5 years), and job profile (hospital/practice, academics and both). Descriptive statistics were presented for the domain scores in the different sub-groups. Mean scores were calculated for the individual subscales of aMBI scores.

RESULTS

Profile of responders is presented in table-1. There were more female responders ($n=836$) compared to males ($n=180$), whereas two responders preferred not to specify their gender. About 77.0% responders were into hospital practice as against only 11.2% into academicians, and 11.8% occupied with both academics and practice. About 60.3% responders were below 30 years of age and 63.9% had experience of over 5 years.

Table-2 presents the total BCSQ scores and scores for the three domains. The mean (SD) scores for overload domain were 18.84 (4.97), for neglect domain were 16.52 (6.46), and for lack of development domain were 15.16 (6.88) with a total mean (SDS) score of 50.5 (16.55) (sum of all three domains). Thus, burnout was observed in all three domains of BCSQ-12. Table-3 shows the descriptives for BCSQ-12 scores for the three domains in the different sub-groups based on gender, profession type, age and experience. There were no gender differences observed between males and females for overload domain ($p=0.074$), whereas the scores were higher for females in the neglect domain and lack of development domain ($p<0.05$).

Higher scores ($p<0.0001$) are observed in nurses in hospital practice as compared to those in academics for all three domains. Also, higher scores ($p<0.0001$) are observed in younger as compared to those above 30 years of age for all three domains. No significant differences ($p>0.05$) were observed in those with < 5 years of experiences and > 5 years of experience for any of the domains.

Table-4 shows the number (proportion) of responders with burnout in different sub-groups for the three domains (overload, neglect and lack of development). Overall, burnout was observed in 8.7% ($n=842$), 82.1% ($n=836$), and 73.7% ($n=750$) responders for overload, neglect and lack of development domains respectively.

Significant differences in the prevalence (proportion of responders with high scores) was seen in those in academics ($p<0.0001$), and those above 30 years of age ($p<0.0001$) for all three domains. However, no differences ($p>0.05$) were observed in males and females for prevalence of burnout. Similarly, the prevalence of burnout was similar ($p>0.05$) in those with < 5 years of experience and those with > 5 years of experience for all three domains.

DISCUSSION

Various scales in the past have been used to identify burnout such as Oldenburg Burnout Inventory (OLBI), Copenhagen Burnout Inventory (CBI), aMBI, and the Burnout Clinical Subtype Questionnaire (BCSQ). Out of these inventories, we decided to use the BCSQ-12 for its high validity and the short time needed to complete the questionnaire [11]. The BCSQ-12 scale with different domains helped us to record the different components of burnout providing a wider picture.

This study was conducted to estimate the degree of professional burnout in nurses across Indian setting. The degree of burnout was surprisingly high with high scores for the emotional exhaustion and depersonalization components and low scores on the personal accomplishment and satisfaction components of the aMBI scale. Thus, all the four components of the aMBI scale indicated high levels of burnout across nurses in India.

Although many studies report findings of professional burnout in nurses across the globe, not much data is reported from India. Also, although many of these studies focused on nurses, but the studies were not always clear regarding which types of nursing personnel participated. Registered nurses (RNs) were the dominant focus [13-15]. Other investigations considered licensed practical nurses (LPNs) and nursing aides [16, 17]; licensed nurses (e.g., RNs and LPNs) [18, 19]; RNs, aides, and clerical staff [20]; and generic assessments of nursing staff [21-24]. Only few of these investigations considered the effect of stress and burnout among nurses on patient outcomes [25]. These studies examined burnout in relation to increased mortality, failure to rescue, and patient dissatisfaction. Staff working in long-term care (LTC) [26] and nursing homes were the focus of few studies. Interestingly, it is reported that in nursing homes staff experienced more stress when caring for

patients with dementia. In addition, possible differences among types of nursing personnel were illustrated in various studies.

We observed burnout amongst nurses in all three domains of BCSQ-12 with highest burnout observed in the overload and neglect domains. Also, we observed greater overload in males, those in academics and those with >30 years of age.. Other studies also report similar findings and our results are in agreement with them [13, 24]. Surprisingly, we observed greater lack of development scores in academicians as compared to those nurses in hospital practice.. This could probably be due to greater knowledge and awareness about recent developments in their profession.. Also, the lack of development scores were higher in those with higher age (>30 years). Langade DG et al. reported professional burnout in 482 healthcare professionals (doctors) across India and reported higher levels of burnout recorded with the BCSQ-12 [27]. The BCSQ-12 scale showed the mean values of 15.89, 11.56, and 10.28 on a scale of 28 for overload, lack of development, and neglect subtypes, respectively, whereas, satisfaction with the financial compensation item showed a mean value of 3.79 on a scale of seven. All these values indicate high levels of burnout in healthcare professionals. Our findings are similar to findings of other studies which report a very high prevalence of burnout in nursing professionals.

Our study had some limitations which include: i) skewed data collection since more responders were from western India as compared to other parts; ii) a larger sample with appropriate representation from states Chattisgadh, Jammu, Kashmir and north eastern states could have provided further insights; and iii) more representation from practice setup cold have strengthened the study findings.

CONCLUSIONS

This study found a high prevalence of burnout among nurses. Burnout among nurses can be dealt with support from official bodies and organizations, by maintaining a good work-life balance, and obtaining an understanding from the patients of their problems.

Disclosures

Human subjects: Institutional Ethics Committee of D Y Patil Medical College, Navi Mumbai, Maharashtra, India issued approval dated 08th August 2019 (IEC Ref. 150/2019).

Animal subjects: This study did not involve animal subjects or tissue.

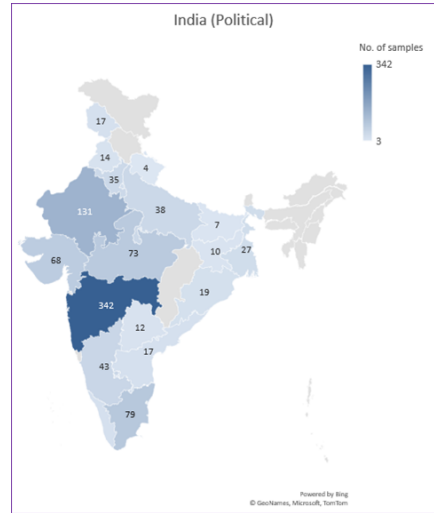


Figure-1: Geographical location of responders

Table-1: Profile of responders (n=1018)

	No.	%
Gender		
• Male	180	17.7%
• Female	836	82.1%
• Prefer not to mention	2	0.2%
Profession		
• Hospital/Practice	784	77.0%
• Academics	114	11.2%
• Both	120	11.8%
Age group		
• <=30 yrs.	614	60.3%
• >30 yrs.	404	39.7%
Experience		
• <=5 yrs.	367	36.1%
• >5 yrs.	651	63.9%

Table-2: BCSQ-12 scores (n= 1018)

BCSQ-12 domain	Mean	Median	SD	Minimum	Maximum
Overload	18.84	20.00	4.97	4	28
Neglect	16.52	17.00	6.46	4	28
Lack of development	15.16	14.50	6.88	4	28
Total score	50.52	51.00	16.65	12	84

Table-3: BCSQ-12 domain scores in different sub-groups

	N	Mean	95% C.I.	p	Mean difference	95% C.I. for difference
OVERLOAD DOMAIN						
Gender						
• Male	180	18.24	(17.48 to 19.01)	0.074	-0.729*	(-1.529 to 0.071)
• Female	836	18.97	(18.64 to 19.31)			
• Prefer not to mention	2	16.50	(-27.97 to 60.97)			
Professional type						
• Hospital/Practice	784	19.29	(18.94 to 19.64)	<0.0001	-	-
• Academics	114	16.94	(16.14 to 17.74)			
• Both	120	17.71	(16.87 to 18.54)			
Age group						
• <=30 yrs.	614	19.31	(18.91 to 19.71)	0.000	1.187	(0.567 to 1.807)
• >30 yrs.	404	18.12	(17.66 to 18.59)			
Experience						
• <=5 yrs.	367	18.35	(17.84 to 18.87)	0.019	-0.759	(-1.394 to -0.125)
• >5 yrs.	651	19.11	(18.73 to 19.49)			
NEGLECT DOMAIN						
Gender		Mean				
• Male	180	15.44	(14.41 to 16.48)	0.014	-1.307*	(-2.346 to -0.267)
• Female	836	16.75	(16.32 to 17.18)			

• Prefer not to mention	2	16.50	(-27.97 to 60.97)			
Professional type						
• Hospital/Practice	784	17.34	(16.89 to 17.79)	<0.0001	-	-
• Academics	114	12.05	(11.09 to 13.02)			
• Both	120	15.38	(14.35 to 16.42)			
Age group						
• ≤30 yrs.	614	17.86	(17.35 to 18.36)	0.000	3.373	(2.588 to 4.159)
• >30 yrs.	404	14.49	(13.89 to 15.08)			
Experience						
• ≤5 yrs.	367	16.57	(15.92 to 17.23)	0.838	0.086	(-0.741 to 0.914)
• >5 yrs.	651	16.49	(15.99 to 16.99)			
LACK OF DEVELOPMENT DOMAIN						
Gender						
• Male	180	13.82	(12.75 to 14.88)	0.004	-1.640*	(-2.746 to -0.535)
• Female	836	15.46	(15.00 to 15.92)			
• Prefer not to mention	2	14.00	(-36.82 to 64.82)			
Professional type						
• Hospital/Practice	784	16.08	(15.59 to 16.56)	<0.0001	-	-
• Academics	114	9.56	(8.82 to 10.30)			
• Both	120	14.52	(13.44 to 15.59)			
Age group						
• ≤30 yrs.	614	16.66	(16.11 to 17.21)	0.000	3.773	(2.939 to 4.606)
• >30 yrs.	404	12.89	(12.29 to 13.49)			
Experience						
• ≤5 yrs.	367	15.25	(14.58 to 15.92)	0.770	0.131	(-0.750 to 1.013)
• >5 yrs.	651	15.12	(14.57 to 15.66)			
* Males versus females						

Table-4: High scores for the BCSQ-12 domains in different sub-groups

	N	Overload			Neglect			Lack of development			Total BCSQ score		
		No.	%	p	No.	%	p	No.	%	p	No.	%	p
Gender													
Male	180	158	87.8%	0.111	153	85.0%	0.427	135	75.0%	0.628	146	81.1%	0.210
Female	836	682	81.6%		681	81.5%		613	73.3%		632	75.6%	
Prefer not to mention	2	2	100.0%		2	100.0%		2	100.0%		2	100.0%	
Professional type													
Hospital/Practice	784	624	79.6%	<0.0001	614	78.3%	<0.0001	538	68.6%	<0.0001	562	71.7%	<0.0001
Academics	114	110	96.5%		114	100.0%		109	95.6%		113	99.1%	
Both	120	108	90.0%		108	90.0%		103	85.8%		105	87.5%	
Age (yrs.)													
≤30 yrs.	614	476	77.5%	<0.0001	464	75.6%	<0.0001	396	64.5%	<0.0001	416	67.8%	<0.0001
>30 yrs.	404	366	90.6%		372	92.1%		354	87.6%		364	90.1%	
Experience (yrs.)													
≤5 yrs.	367	304	82.8%	0.938	308	83.9%	0.260	268	73.0%	0.724	286	77.9%	0.459
>5 yrs.	651	538	82.6%		528	81.1%		482	74.0%		494	75.9%	
All responders													
Total	1018	842	82.7%	-	836	82.1%	-	750	73.7%	-	780	76.6%	-

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