

ORIGINAL ARTICLE**Burnout Status at Work among Health Care Professionals in a Tertiary Hospital****Asrat Biksegn¹, Tesfay Kenfe², Soboka Matiwos³, Girma Eshetu⁴****ABSTRACT**

BACKGROUND: Burnout is a physical, physiological and psychological stress reaction syndrome Caused by long-term exposure to intense work-related emotional and interpersonal pressures. There is no evidence on the issue in Ethiopian setting.

METHODS: An institution based cross-sectional study design was conducted on 403 health care providers. Burnout was detected using Copenhagen's burnout inventory tool. Other structured questionnaire on work-related condition and substance use habits was used to collect data. Binary logistic regression was used to identify the associated factors of burnout at work.

RESULT: Of all the study participants, 36.7% scored above the mean level of burnout. Highest prevalence (82.8%) of burnout status was found among nurses. The least prevalence of burnout was observed among laboratory technicians which was 2.8% (n=4). Job insecurity, history of physical illness, low interest in profession, poor relationship status with managers, worry of contracting infection or illness and physical/verbal abuse were found to be predictors of burnout.

CONCLUSION: The prevalence of burnout at work was found to be high. The predictors were job insecurity, history of physical illness, low interest in profession, poor relationship status with managers, worry of contracting infection or illness and physical/verbal abuse.

KEYWORDS: Burnout, Health professionals, Occupational health, Work related factors

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INTRODUCTION

Burnout is a physical, physiological and psychological stress reaction syndrome resulting from long-term exposure to intense work-related emotional and interpersonal pressures (1, 2). Prolonged exposure to extreme levels of stress leads to health consequences. Burnout is the most frequent and imminent health problem with prevalence of 20%-60% among different professionals (3). Although the work of health professionals can be rewarding, factors such as work-life imbalance, long hours of work, perceived workload, concerns over complaints against health professionals and lack of reciprocity in relationships with patients and colleagues may reduce job satisfaction, and consequently can increase the risk of having high burnout (4).

Many studies found out the prevalence and incidence of burnout higher among health professionals. Few of the most predicting factors for burnout were long years of work experience, long hours of work per week- dealing with patients' psychological problems, disturbance of family life pertaining to work and substance use (5). According to different studies, the tendency towards substance abuse and suicide is due to serious consequence of burnout associated with access to pharmaceuticals and self-treatment of pain (4, 6).

A cross-sectional study conducted in Slovenia and Granada on health care workers showed high prevalence of burnout (43%-50%) in three dimensions. According to these studies, high

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burnout was significantly associated with working in emergency unit, night shift work and old age (7, 8). A similar study in Greek on health professionals found statically significant association by medical supply shortages with emotional exhaustion and depersonalization (9). A large scale South African study on health professionals working in Cape Town Metropolitan Municipality Community Healthcare Clinic and District Hospital of the Provincial identified long working hours, workload, work conditions and system related frustrations as the most important contributing factors of burnout syndrome (10).

On the other side, it is crucial to keep the wellbeing of health professionals to achieve quality patient care. Health professionals with burnout have lesser attention to their patients in providing routine care. As a result, they are very important agents in the prevention of nosocomial infections (hospital acquired infections) and in dealing with patient care and safety (11, 12).

A study on health professionals working with psychiatric patients indicated working more hours, having more patients with personality disorders, increased patient case loads, female gender, and being a psychiatrist were predictors of higher burnout scores. Similarly, having secured jobs, more clinical experience and being a psychologist predicted lower burnout scores (13). Another study in Malawi reported that burnout appears to be common among maternal health staff who experienced higher burnout scores than their colleagues working in other medical settings (14).

This study aimed to investigate the prevalence and predictor of burnout which is assumed to bring insight about its burden and severity in low socio-economic settings.

MATERIALS AND METHODS

The study was conducted among health care staff working at Jimma University Teaching Hospital (JUTH), Jimma Zone of the Oromiya Region, located in Southwest Ethiopia. The hospital is serving about 15 million people. Cross-sectional study design was used to assess the prevalence and risk factors of burnout among health care professionals working at JUTH. Self-

administered questionnaire was distributed to all health professionals working at JUTH (N=403) from November 15, 2013 to December 15, 2013 by trained data collectors. Health professionals who were on grief in the last two month of data collection period and those who were providing free services for the hospital were excluded.

Burnout was detected by using Copenhagen's burnout inventory tool which was used and validated in different studies (15, 16, 17, 18, 19). It included 19 items and three dimensions (personal, work and client burnout) about emotional and physical disturbances in terms of severity and frequency. It is found valid tool to assess burnout among professionals working in health care services. In this study, burnout is defined as thd mean and above the mean score of CBI score. The self-reporting questionnaire (SRQ-20) was used to detect mental distress. According to SRQ-20, it was said to be mental distress when total score is 6 and above out of twenty after it was recoded. This instrument was developed by WHO to screen mental distress in primary health care settings and community of low-income countries (20). Alcohol use disorder was assessed by using CAGE tool at score of 2 above "YES" answers through four questions. Collinearity was checked among SRQ-20, Copenhagen's burnout inventory tool, CAGE and the scales were mutually exclusive. It is a valid and reliable screening tool for detection of alcohol use problems and was used in different studies in Ethiopia. It consists of four simple questions focusing on multidimensional issues about alcohol use. Other structured questions were used to assess socio-demographic characteristics, health related conditions and substance use. The data in this study is part of another research done from jimma Specialized Hospital and published in the title of "*Mental Distress and Associated Factors among Health Professionals Working in Tertiary Teaching Hospital, South West Ethiopia*".

Abbreviations CBIS: Copenhagen's Burnout Inventory Scale, ETB: Ethiopian Birr, JUTH: Jimma University Teaching Hospital, SPSS: Statistical Package for Social Sciences, SRQ: Self Reporting Questionnaire.

Health professional: In this study 'health professionals' referes to all trained and certified

professionals who had direct involvement in health care services. It included physicians, nurses, pharmacist/druggist, laboratory technicians/ technologists, physiotherapist, anesthetist, sanitarian, x-ray technician and others.

Data analysis: Data were coded, entered, cleaned and analyzed using SPSS version 16.0. Dependent and independent variables were entered into bivariate logistic regression one by one to detect association of independent variables with outcome variables. All variables associated with burnout at bivariate logistic regression were entered into multivariate logistic regression once to control potential confounders. Variables with p-value less than 0.05 in multivariate regression were considered to be independent predictors of burnout.

Ethical issue: Ethical clearance was obtained from Jimma University Ethical Committee.

Detailed information about the objective of the study was explained to all participants before questionnaire administration. Informed consent was obtained from each participant before the commencement of data collection and confidentiality of each participant was ensured.

RESULTS

Characteristics of participants: Among 403 permanently employed health professionals of JUTH, 83% (n=334) of them were participated in this study. The majority of the participants were males (64.7%, n=213) and the mean age of the participants was 28.6 ± 7.65 years. The mean monthly salary of the study participants was 2119.9 ETHB (1USD~21.0 ETHB) with standard deviation of 772.09. And, the mean service year in the same institution was 4.57 with standard deviation of 6.61.

Table 1: Socio-demographic characteristics of health professionals working in JUTH, December, 2013.

Socio-demographic variables		Number	%
Sex	Male	213	64.7
	Female	116	35.3
Religion	Orthodox	156	46.7
	Protestant	108	32.3
	Islam	63	18.9
	Others ¹	7	2.1
Ethnicity	Oromo	166	49.7
	Amhara	92	27.5
	Tigre/wolayta/Guragie	33	9.9
	Dawuro/keficho	24	7.2
	Others ²	43	5.7
Marital status	Single	167	50.2
	Married	114	34.2
	In relationship	39	11.7
	Divorced/widowed	13	3.9
Monthly salary (ETB)	≤1434	85	25.4
	1435-2190	83	24.9
	2191-2602	102	30.5
	≥2603	64	19.2
Profession	Nurse	237	71.8
	Pharmacist	29	8.8
	Lab. technologist	25	7.6
	Physician	15	4.5
	Others ¹	24	7.3
Academic status	Degree	172	52.0
	Diploma	138	41.7
	General practitioner	11	3.3
	Others ⁴	10	3.0
Have children	No	223	66.8
	Yes	111	33.2

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Table 2: Bivariate logistic regression: Association of work related factors with burnout among health professionals working in JUTH, December, 2013(n=334).

Variables	Burnout		COR(95%CI)	p-value	
	Above mean	Below mean			
	N ₀ (%)	N ₀ (%)			
Pare time work/ Attending school	Yes	46(49.5)	47(50.5)	Ref.	0.274
	No	101(42.8)	135(57.2)	0.76(0.47, 1.24)	
Night shift work	Yes	86(55.5)	69(44.5)	Ref.	0.001
	No	61(35.1)	113(64.9)	0.43(0.28-0.68)	
Interest of one's own profession	Yes	56(32.6)	116(67.4)	Ref.	0.001
	No	91(58.0)	66(42.0)	2.86(1.82, 4.48)*	
Medical faults	Yes	38(70.4)	16(29.6)	Ref.	0.001
	No	108(39.4)	166(60.6)	0.27(0.15,0.52)	
Physical/verbal abuse	Yes	86(59.7)	58(40.3)	Ref.	0.001
	No	60(32.6)	124(67.4)	0.33(0.21,0.51)	
Support regarding work	High	140(44.6)	174(55.4)	0.92(0.33,2.60)	0.874
	Low	8(53.3)	7(46.7)	Ref.	
Perception of management system	Good	41(30.1)	95(69.9)	0.35(0.22,0.56)	0.001
	Not good	105(55.0)	86(45.0)	Ref.	
Mental distress	Yes	81(61.8)	50(38.2)	Ref.	0.001
	No	62(32.5)	129(67.5)	0.25(0.16,0.42)	
Prospect of Promotion	Good	62(39.0)	97(61.0)	0.62(0.40,0.96)	0.031
	Poor	85(50.9)	82(49.1)	Ref.	
Perception of work load	Yes	149(52.7)	134(47.3)	2.28(1.15,4.52)	0.018
	No	13(28.3)	33(71.7)	Ref.	
Perception of working environment	Suitable	43(36.8)	74(63.2)	0.62(0.39,0.98)	0.040
	Notsuitable	108(51.4)	102(48.6)	Ref.	
professional Recognition	Yes	51(33.3)	102(66.7)	0.42(0.27,0.66)	0.001
	No	95(54.3)	80(45.7)	Ref.	
Resource availability	Available	39(31.2)	86(68.8)	2.50(1.57,4.00)	0.001
	Not	109(53.2)	96(46.8)	Ref.	
Fear of contracting an illness during work	Yes	97(55.7)	77(44.3)	2.57(1.64,4.03)	0.001
	No	51(32.9)	104(67.1)	Ref.	
Job insecurity	Yes	53(58.9)	37(41.1)	2.17(1.33,3.56)	0.002
	No	95(39.7)	144(60.3)	Ref.	
Relationship with managers	Good	66(32.2)	139(67.8)	0.26(0.16-0.41)	0.001
	Not good	80(65.0)	43(35.0)	Ref	

Half of the total participants were single in marital status (50.2%) and 3.3% (n=11) were divorced. The majority the participants (52.0%, n=172) of were first degree holders (Table 1).

Prevalence of Burnout: Mean score of burnout was 50.27 with standard deviation of ± 17.1528 . Among all the study participants, 36.7% showed that burnout above the mean. On the other hand, 64.4% (n=94) and 34.9 (n=51) male and female

participants scored above the mean respectively. Mentally distressed individuals had high, 56.6% (n=81), burnout score. Prevalence of burnout score was found to be high, 82.8% (n=120), among nurses and the least prevalence of high burnout was observed among laboratory technicians which was 2.8% (n=4). Prevalence of burnout among participants reported as there is excessive workload, 7.3% (n=134), and 59.3% (n=16) of health professionals with Alcohol Use Disorder scored above the mean.

The mean score of the three dimensions of burnout were: work burnout (mean score =51.37, SD \pm 19.07 with 37.5% prevalence), client burnout (mean score =51.02 SD \pm 22.16 with 37.2% prevalence) and personal burnout (mean score =48.64 SD \pm 19.97 with 35.5%).

Multivariate logistic regression: Variables identified to have statistically significant associations with burnout: After adjusting for potential confounders, using binary logistic regression analysis in which enter method (default) employed; it was found that status of

job insecurity (AOR=0.37, 95% CI=0.15-0.92), physical illness (AOR= 0.39, 95% CI=0.15-0.98), interest to own profession (AOR=2.19, 95%CI=1.02-4.72), relationship with managers (AOR=0.39, 95%CI=0.16-0.98), worry of contracting infection or illness (AOR=3.06, 95%CI=1.30-7.18) and Physical/Verbal abuse (AOR=0.36, 95%CI=0.17-0.77) were significantly independently associated with high burnout.

The odds of developing burnout among participants who were not interested in their own profession was 2.19 times more than that of their counterparts. Additionally, the likelihood of developing high burnout among health professionals with worry of contracting infection or illness was 3.06 times higher than their peers who didn't perceive the worry of being infected. Health professionals who reported that their job was insecure were by 37% more likely to develop burnout. Similarly, participants with history of physical illness were by 39% at risk to have burnout (Table 3).

Table 3: Multivariate logistic regression: Variables identified to have statically significant associations with high burnout among health professionals working in JUTH, December, 2013 (n=334)

Variables		Burnout		Multiple logistic regression	
		Above mean No. (%)	Below mean No. (%)	AOR(95%CI)	p-value
Perception of Job insecurity	Secured	53(58.9)	37(41.1)	0.37(0.15-0.92)	0.031
	Insecured	95(39.7)	144(60.3)	Ref	
Physical illness	Yes	43(63.2)	104(39.8)	0.39(0.15-0.98)	0.045
	No	25(36.8)	157(60.2)	Ref	
Interest to profession	Interested	56(32.6)	116(67.4)	Ref	0.045
	Not interested	91(58.0)	66(42.0)	2.19(1.02-4.72)	
Relationship with managers	Good	66(32.2)	139(67.8)	0.39(0.16-0.98)	0.046
	Not good	80(65.0)	43(35.0)	Ref	
Fear of contracting infection	Yes	97(55.7)	77(44.3)	3.06(1.30-7.18)	0.001
	No	51(32.9)	104(67.1)	Ref	
Physical/Verbal abuse	Yes	86(59.7)	58(40.3)	Ref	0.009
	No	60(32.6)	124(67.4)	0.36(0.17-0.77)	

DISCUSSION

The present study aimed to estimate the prevalence of burnout syndrome at work among health professionals and to analyze some of the work-related risk factors that can trigger burnout. The results showed high prevalence of burnout among health professionals. In general, our results coincide with similar studies conducted in USA, Spain and Brazil although the authors obtained large study participants with different measurement tool for burnout syndrome at work (11, 21, 22). Thus, high burnout in health professionals has negative implications in hospital care services.

However, the finding of this study was relatively higher compared with previous similar studies carried out in different countries from 2010 to 2014 among health professionals (2, 6, 12, 23, 24). It is possible that some of the aftermentioned difference might be due to increase in the level of stress whenever large number of patients allocated to each health professional. Responsibility for fewer patients may reduce the level of duty and stress at the same time. In other studies, presence of chronic stress is found to be positively associated with burnout at work (2, 25). The average age of the nurses in the above studies was above 40 years that underrepresents younger participants. Furthermore, 95% of the participants were females in the previous studies in that biological factors have great role for development of burnout (9, 26). However, too low prevalence of burnout was identified from other professional categories in 2011 in Brazil (27). In Brazilian, teachers indicated 12% prevalence of burnout which is far lower than the 36.7% prevalence in this study. The probable reason for the difference is that authors of the study conducted in Brazilian utilized Spanish burnout inventory, educational version (SBI-Ed) tool to detect level of burnout which is different from our tool.

The 36.7% of burnout in this study prevalence is lower as compared with other findings such as; 51.5% in Greece, 50% in France, 69.2% in Spain and 45 % in Iran among critical care health professionals (9, 26, 28, 29). Working in critical care increases the level of workload and stress. As a result, health personnel would experience burnout. Similarly,

the study in Greece was conducted during economic crises in the state. Financial problems together with workload may also attribute to burnout at work as the study in Greece indicated. Moreover, the shortages medical supply in Greece hospitals affected health care.

The second aim of our study was to determine whether or not there were any work-related factors that were significantly associated with burnout status participants experienced. Factors appeared associated with burnout at final model were job insecurity, physical illness, lack of interest in one's own profession, poor relationship with managers, fear of acquiring an infection and physical/verbal abuse from either staffs or patients.

Poor relationship with managers (AOR=0.39, CI=0.16-0.98, P=0.046) was positively associated with burnout. Health professionals with good relation with their bosses had 61% lesser risk for burnout compared with their counterparts. This result is consistent with the findings of previous studies conducted in Spain (2013) and France (2007) (21, 26). It infers that relationship status of the health care team strongly affects burnout status.

Similarly, history of physical illness (AOR=0.39, CI=0.15-0.98, P=0.045) was found to be a predictor of burnout among health professionals which is consistent with similar studies conducted in Brazil and India (2, 30). Poor general health affects all dimensions of life, and individuals with better general health condition can have good personal accomplishments since they are able to cope with different kinds of stressful conditions. Since our study is cross-sectional, it has limitations to identify causal relationship. In this case, if burnout comes first, then later people may be left susceptible to have physical illness because of poor functioning of immunity.

According to the finding of this study, physical/verbal abuse by patients and team mates (AOR=0.36, CI=0.17-0.77, P=0.009) was one of the risk factors contributing to burnout. This finding was in line with the findings of other similar studies carried out among international humanitarian health professionals in 2012 (25). Trauma had bad physical, psychological and social implications that left

people to hate their work and finally unable to have occupational satisfaction.

Job security is the most important factor for employees especially in 3rd world countries whenever there is no access to life insurance and low opportunities for jobs. Our study proved the above assumption that that staff who perceived as their job is insecure were by 37% at risk of having burnout (AOR=0.37, 95%CI=0.15-0.92, P=0.031). It is consistent with the finding of a similar studies conducted Hong Kong (P=0.002) and in Yemen (P=0.011) on health professionals which identified poor job security as a predictor of burnout (6, 24). In conclusion, mean score of burnout was 50.27 with standard deviation of 17.1528. Among all study participants, 36.7% showed above the mean. The finding of this study was comparable with The findings of different studies. Probably, the most important findings of our study were the observed statically significant association of burnout with physical/verbal abuse, worry of confronting with illness and with lack of interest in one's own profession. Prevalence of high burnout was higher among nurses. Similarly, it was higher among health professionals with alcohol use disorder and mental distress. This study recommends prevention of stressful conditions, setting rules and regulations as well as strengthening staff communications to prevent harassment at work place. Similarly, health professionals need protection from any infectious illness of patients. Furthermore, training need to be given for all health professional who have direct contact with patients. High non-response rate and using different scales for comparison of burnout in discussion are limitations of the study.

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