OPEN ACCESS Freely available online

Journal of Psychology and Psychotherapy

Research Article

Occupational Stress and Its Associated Factors among Health Care Professionals Working At a Setting of a Specialized Mental Hospital, Addis Ababa, Ethiopia, 2017: A Hospital-Based Cross-Sectional Study

Simiret Tekeletsadik[1*], Haregewoin Mulat[2], Mogesie Necho[3], Tsegereda Waja[4]

[1]Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia; [2]University of Gondar, College of Medicine and Health Sciences, Department of Public Health, Gondar, Ethiopia; [3]Wollo University, College of Medicine and Health Sciences, Department of Psychiatry, Dessie, Ethiopia; [4]Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia

ABSTRACT

Background: Stress at workplace among health professionals predisposes to an inefficient organization, absenteeism from work, job dissatisfaction, and various physical, psychological as well as behavioral health problems. Despite this, little has been done into this health issue. So, this study assessed occupational stress and its determinants among health care professionals.

Methods: Hospital-based cross-sectional study was implemented among 398 participants from May 1 to June 1, 2017, at Amanuel hospital, Addis Ababa, Ethiopia. A pretested and self-administered questionnaire was used to collect data. Nursing stress scale was used to assess occupational stress. Data was entered to Epi-info-version-7 and analyzed with SPSS-20. Descriptive statistics were also utilized. Binary logistic regressions with odds ratios and 95% confidence interval were used. P-value < 0.05 in final model was significant.

Results: Among 398 participants included in the study, 393 provided complete information which gives a response rate of 98.7%. This study showed that 46.8% (95%CI: 41.7, 51.7) of health professional were having occupational stress. Multivariable binary logistic regression analysis showed that working in emergency department (AOR=3.48; 95% CI: 2.12, 12.08), forensic psychiatry unit (AOR=3.48; 95% CI: 1.25, 35.06) and job dissatisfaction (AOR=2.606; 95% CI: 1.563, 4.345) were risk factors for occupational stress.

Conclusion Occupational stress among health professionals was high. Work-related variables (working in the emergency department and dissatisfaction with the job) were its risk factors. Attention has to be given for such an important public health issue.

Keywords: Health workers; Occupational stress; Mental hospital; Ethiopia

Abbreviations: Amanuel Mental Specialized Hospital (AMSH); Adjusted Odd Ratio (AOR); Confidence Interval (CI); Crude Odds Ratio (COR); Ethiopian Birr (ETB); General Health Questionnaire (GHQ); Not Applicable (NA); Out Patient Department (OPD); Odds Ratio (OR); Statistical Package for Social (SPSS); University of Gondar; USA-United State of America (UOG).

INTRODUCTION

Occupational tress could be defined as the psychological or physiological response of workers when challenged with much workloads and duties which are not proportional to their capacities and knowledge which results in an inability to cope with their work demand [1]. Healthcare settings are particular risks for occupational stress, burnout and job dissatisfaction because of the increased patient load and the high patient to

Correspondence to: Simiret Tekeletsadik, Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia, Tel: 0944239487; E-mail: simret.y2011@gmail.com

Received date: October 26, 2019; **Accepted date:** December 30, 2019; **Published date:** January 7, 2020

Citation: Tekeletsadik S, Mulat H, Necho M, Waja T (2020) Occupational Stress and Its Associated Factors among Health Care Professionals Working At a Setting of a Specialized Mental Hospital, Addis Ababa, Ethiopia, 2017: A Hospital-Based Cross-Sectional Study J Psychol Psychother. 10:368. doi: 10.35248/2161-0487.20.10.368

health professional ratios [2]. In general, an imbalance between work demands and the capacity to cope with such demands will cause stress [3-5]. Impacts of stress in work were estimated to be approximately $5.4 billion every year worldwide [6]. Half a million employee in Britanie was facing stress at an ill-health causing level [7].

A study from Jordan revealed stress among general physicians, dentists, pharmacists, and physician assistants was 33%, 32%, 25%) and 19% respectively [8]. A study in Ireland showed that occupational stress was 57.5% among pharmacist [9]. A Study in Pakistan found that 52% of the participants had job stress [10]. A study in Taiwan showed that 66% of nurses, 61.8% of physician assistants, 38.6% of physicians had job-related stress [11]. Another study in Taiwan revealed 17.2% of nurses were stressed [12]. A South African study among medical doctors showed 51% were stressed [13]. Studies from Ethiopia showed occupational stress in health professionals were 36.7% [14] and 38% [15].

A study in Jordan revealed that the risk factors for occupational stress among health professionals were dealing with difficult patients and Heavy workloads [16]. Similar earlier researches also showed that risk factors for occupational stress were age, sex, education, marital status, having children, hours worked per week, poor social support in USA [17], poor interaction with superiors, not finding the suitable job, feeling anxious about the future and financial difficulties in turkey [18],workplace violence in Italy [19], type A behavior pattern [20], job strain and over commitment [11], widowed/divorced, low workplace support [12], Job insecurity [21],uncertainty regarding patient treatment, conflict with supervisor and workload in Ethiopia [22].

Occupational stress leads to various transient and long-term complications which can be physical like hypertension and heart diseases, behavioral like substance abuse and emotional such anxiety as well as depressive symptoms [23]. Besides stress, at workplace decrease, the efficiency of organizational, contribute to increased staff turnover, frequent absence from work due to sickness, and decreased satisfaction in one's job [21]. Behavioral irritability, concentration difficulty at the workplace, somatic complains like gastrointestinal problems, common cold, chronic back pain, and headaches are also frequent impacts of work-related stress [8,24,25].

Although literature showed that several studies had been documented in developed countries regarding work-related stress in health professionals, still there is limited information supported by research in developing countries including Ethiopia. So, this study identified the magnitude and associated factors of stress in health professionals in the study area.

RESEARCH METHODOLOGY

Study setting and design

A hospital-based analytic cross-sectional survey study was implemented at Amanuel Mental Specialized Hospital, May 2017, Addis Ababa, Ethiopia. Amanuel mental specialized hospital is the oldest and only mental health specialized hospital in Ethiopia. The hospital was established in 1931 E.C. during the regime of Hailesilase. It is located in western part of Addis Ababa in Adiss Ketema sub-city kebele 08. The hospital established on area of 15,660 m^2 with two G+1 building &15 blocks. There are around 960 staffs. The hospital is working on increasing the efficiency &effectiveness of the serves to make itself the center of mental health care Excellency by giving core mental clinical services, conducting research and training and other administrative services.

Study population

The survey population comprised of health workers at Amanuel Specialized Hospital in the study period and who were incorporated in the sample. Health staffs seriously ill during at the time of questionnaire distribution and those who had not worked for a minimum of six months were not included.

Sampling procedures

Single population formula had been utilized to predict the study ' s appropriate sample. Considerations during the calculation of the magnitude of the sample were a 95% CI, 5% margin of error, the magnitude of occupational stress 38% from an earlier Ethiopia study [15] and 10% non-response rate. The predicted final sample was 398. Then proportional allocation for each profession was done and 208 nurses, 50 MSc psychiatry practitioners, 18 BSc prescribers, 9 psychiatrists, 30 general physicians, 56 pharmacy professionals, 22 laboratory technologists, and 5 clinical psychologists were included. A profession-specific simple random sampling was implemented to collect data.

Operational definitions

Occupational stress: A score greater than or equal to 43 which is the median score of nursing stress scale in the current study was considered as stressed (26).

Current substance use: Use of Khat, alcohol, and cigarette ninety days before the collection of data.

Type A personality: score greater or equal to 17 on Maeda's questionnaire for Type A Behavior (15).

Staff job satisfaction: Participants who scored 50 and larger from 100 with the Minnesota job Satisfaction Questionnaire were categorized as satisfied with the job (27).

Health professionals: In this study health professional includes psychiatrists, general physician, MSc and BSc psychiatry nurses, nurses, pharmacy, laboratory professionals, a clinical psychologist, and public health professionals.

Data collection instruments and procedures

A pretested self-administered questionnaire had been utilized. The questionnaire had a section concerning socio-demographic variables, working condition variables, substance-related variables, questionnaire for type A personality, job satisfaction, and occupational stress. The questions used to access socio-demographic data and other relevant information is prepared by

the principal investigator by reviewing previously done works of literature.

Nursing stress scale was used to measure occupational stress. It has seven subscales and identifies seven major stress sources. The workload subscale include question number 24 to 29, Death and dying subscale includes questions 1 to 7, inadequate preparation to deal with the emotional needs of patients as well as their families which include questions 13 to 15; lack of staff support which includes questions 16 to 18 and uncertainly concerning treatment subscale include questions 30 to 34, the social environment subscale consist of conflict with health professional include questions 8 to 12 and conflict with other professionals and supervisors includes questions 19 to 23 on nursing stress scale. The total sum score is equivalent to the simple sum of the individual elements in each subscale divided by the number of individual items. Any median greater or equals to 43 was considered as occupational stress [26].

Type A personality behavior was assessed by 12 questions and a score greater or equal to 17 out of 32 is considered as having type A personality [15]. Job satisfaction was assessed using the Minnesota Satisfaction Questionnaire [27,28].

Data management and quality control issues

The questionnaire had been translated to the Amharic language to make it understandable by all participants. Short term training was provided for supervisors as well as data collectors. A pre-test was implemented on 5% [20] of sample size two days before the start of real data collection among St. Paul millennium medical college hospital staffs, a hospital located 6 kilometers far from the study area and the results were not included in the final study. Incomplete questionnaires were not included in the analysis.

Data processing and analysis

Epi-info version-7 had been utilized as a data entry tool and analysis was conducted with version-20 of SPSS. Bivariate regression was implemented by running each factor variables and occupational stress. Explanatory variables having p-value<0.2 in bivariate regression were together entered to a multivariate logistic regression model to identify the factors of occupational stress. Association of factor variables and the outcome was investigated by the odds ratio with 95% CI and a p-value <0.05 in the last model was used as a declaration point to identify the factors associated with occupational stress.

RESULTS

Background characteristics of the respondents

From a total of 398 questionnaires, 393 returned making the response rate 98.7%. Among 393 Participants, 215 (54.7%) were males. The mean age for participants was 29.76 years with a standard deviation of 7.27 years and ranges from 20 to 60 years. Of respondents 281 (71.5%), 216 (55.0%), 128 (32.6%) and 132 (33.6%) were orthodox, Amhara, diploma holder and married respectively. From total respondents 107 (27.2%) have children. Concerning monthly income 197 (50.1%) of them were between 2000 – 3500 ETB (Table 1).

Table 1: Distribution of health care professionals by their background characteristics at AMSH, Addis Ababa (n=393), Ethiopia, June, 2017.

Explanatory variables		Frequency	Percentage/%
Sex	Male	218	54.7
	Female	178	45.3
Age in years	20-35	337	85.8
	36-51	39	9.9
	≥ 52	17	4.3
Marital status	Single	253	64.4
	Married	132	33.6
	Divorced /widowed	8	2
Ethnicity	Amhara	216	55
	Oromo	88	22.3
	Tigra	20	5.1

	Guraga	34	8.7
	Others	35	8.9
	Diploma	129	32.9
Educational status	BSc degree	195	49.6
	Masters and above	69	17.5
Profession	Nurse	205	52.2
	Non physician prescribers	68	17.3
	General physicians	53	13.5
	pharmacy	28	7.1
	psychiatrist	7	1.8
	Laboratory professionals and office administrators		
		32	8.1
Monthly income (ETB)	2000- 3500	197	50.1
	3501- 4500	40	10.2
	4501-5500	144	36.6
	≥ 5501	12	3.1
Religion	Orthodox	281	71.5
	Muslim	37	9.4
	Protestant	66	16.8
	Others*	9	2.3

Others*: Catholic, Jobha, Wakifata

Work-related and behavioral characteristics of respondents

Work experience of respondent's ranges from 1 to 34 years and 129 (32.8%) of them have less than 7 years' experience. About 161 (41%), 252 (64.1%) and 213 (54.2%) of respondents were from psychiatry ward, have rotating work shift and works for 39 up to 54 hours per week respectively. One hundred sixteen (29.5%) of participants were not satisfied with their job whereas one hundred forty (35.6%) of respondents were found to have type A personality. About 63 (16%) of study subjects used substances in the past 3 months before data collection. Only 12 (3%) and 4 (1%) of health professional were found to have medical and mental illness respectively (Table 2).

Table 2: Distribution of health care professionals by their work related and behavioral characteristics at AMSH, Addis Ababa (n=393), Ethiopia, June, 2017.

Explanatory variables		Frequency	Percentage /%
Work shift	Fixed day	141	35.9
	Rotating shift	252	64.1
Work experience in years	1-8	129	32.8
	8-14	127	32.4
	15-21	39	9.9
	≥ 22	98	24.9
	39-54	217	54.2
	55-70	65	16.5

Work hour in a week	71-86	36	9.2
	≥ 86	79	20.1
Work site	Regular OPD	63	16
	Emergency OPD	39	9.9
	Emergency ward	24	6.1
	Psychiatry ward	161	41
	Forensic	7	1.8
	Medical	11	2.8
	Laboratory/pharmacy/ office	88	22.4
	Dissatisfied	116	29.5
Job satisfaction	Satisfied	277	70.5
	Yes	140	35.6
Type A personality	No	253	64.4
Current substance use	Yes	63	16
	No	330	84
Medical illness	Yes	12	3
	No	381	97
	Yes	4	1
Mental illness	No	389	99

Prevalence of occupational stress among health care professionals

A score greater than or equal to the median score of nursing stress scale was considered as occupational stress. The median score of a nursing stress scale for participants in this study was 43. Score 43 and above was considered as occupational stress. From a total 393 health care professionals, 184 of scored 43 and above on health professionals stress scale. The prevalence of occupational stress was found to be 46.8% with 95% CI (41.7, 51.7) (Figure 1).

The most frequently reported source of stress in the workplace was found to be a conflict with other health professionals 222 (56.5%) followed by conflict with supervisor 221 (56.2%). One hundred ninety-five (49.6%) health professionals reported that death and dying issue were the source of stress for them (Figure 2).

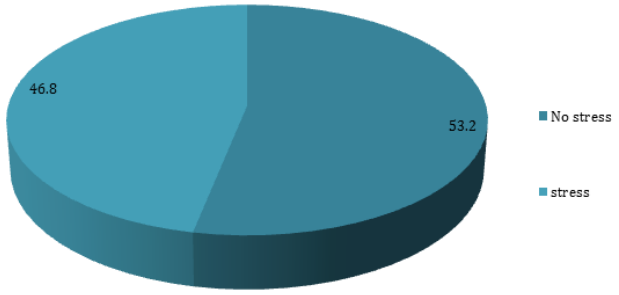

Figure 1: Prevalence of occupational stress among health professional working at AMSH Addis Ababa, Ethiopia, 2017.

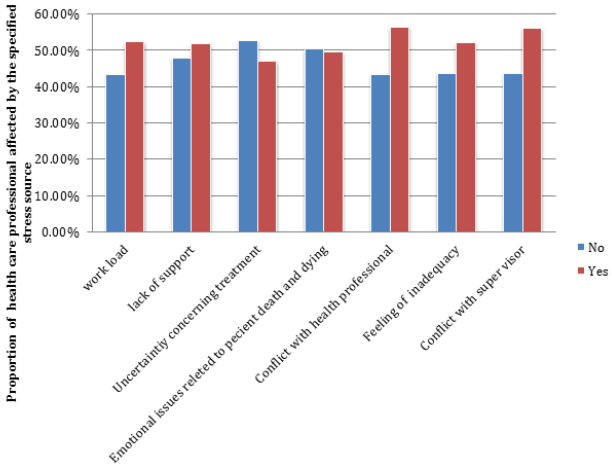

Figure 2: Sources of occupational stress health care professional working at AMSH.

Factors associated with Occupational Stress among respondents.

On bivariate analysis the independent variables with P-value < 0.2 were sex, marital status, having children, educational status, monthly income, work experience, working hours/week, worksite, work shift, current substance use, job dissatisfaction and type a personality behavior. These variables were entered into a multivariable logistic regression to identify the risk factors for occupational stress. However, only worksite and job dissatisfaction were identified to be determinants of outcome variable after multivariable logistic regression.

The risk of developing occupational stress among health participants working in emergency OPD and forensic psychiatric unit were 3.5 (AOR=3.48; 95% CI: 2.12, 12.08) and 9 (AOR=8.99 95% CI: 1.25, 35.06) times higher as compared to participants working in Pharmacy/laboratory/office respectively. Dissatisfaction by one's job was identified to be a predisposing factor for stress at work among health care staffs. Those professionals dissatisfied by their job were 2.6 times more likely

to develop occupational stress than those professionals satisfied by their job (AOR=2.61; 95% CI: 1.563, 4.345) (Table 3).

Table 3: Binary and Multivariate logistic regression analysis of occupational stress and associated factors among health professionals working in AMSH, Addis Ababa, Ethiopia, 2017 (n=393).

Explanatory variables		Occupational Stress		COR (95CI)	AOR (95CI)
		Yes	No		
Sex	Male	94	121	1	1
	Female	90	88	1.316 (.884,1.961)	1.351 (0.827,2.205)
Marital status	Single	127	126	1	1
	Married	53	79	0.666 (.435,1.020)	0.906 (.439,1.870)
	others	4	4	.992 (.243,4.054)	2.737 (.420,17.848)
Work Experience	1_7 years	66	63	1.727 (1.012,2.948)	1.304 (.634,2.685)
	8_14 years	55	69	1.386 (.810,2.372)	1.150 (.575,2.301)
	15_21 years	23	16	2.370 (1.111,5.055)	1.312 (.508,3.390)
	≥ 22 years	37	61	1	1
Work Site	Regular OPD	25	38	1.658 (0.836,3.289)	1.202 (.427,3.385)
	Emergency OPD	26	13	5.040 (2.240,11.342)	3.485 (2.12, 12.079)**
	Emergency Ward	12	12	2.520 (1.000,6.353)	1.416 (.371,5.414)
	Psychiatry Ward	86	75	2.890 (1.655,5.045)	1.589 (0.563,4.487)
	Forensic	5	2	6.300 (1.46, 24.624)	8.986 (1.25, 35.06)*
	Medical	5	6	2.100 (.582,7.508)	1.588 (0.305,8.272)
	Lab/pharmacy/office	25	63	1	1
Job Satisfaction	Dissatisfied	73	43	2.539 (1.624,3.969)	2.606 (1.563, 4.345)***
	Satisfied	111	166	1	1
Type A personality	Yes	102	153	0.478 (.314,.727)	0.408 (.253,.658)
	No	82	58	1	1

*p value<0.05, **p value<0.01, ***p value<0.001, 1.00=References category

DISCUSSION

Stress to a normal extent increases workers performance and life quality since people have to face and enjoy challenges in day to day life but if excessive and beyond the beneficial aspect, it imposes harm on an individual as well as organizations [28]. It will lead to complications which can be physiological (such as hypertension, heart diseases), behavioral such as substance abuse and emotional like depression [23]. Besides, it affects the efficiency of organizations, the stability of staff at the workplace as well as the worker's satisfaction in the job [10,21].

The prevalence of occupational stress in this study was 46.8%. This is in agreement with a study in South Africa 51% [13] but higher than from Taiwan 17.5% [12], Malaysia 33.3%, and Ethiopia 38% [15]. A study from Jordan revealed occupational

stress among general physicians, dentists, pharmacists, and physician assistants was 33%, 32%, 25%) and 19% respectively [8] which is also lower as compared to the present study. Possible reasons may be measurement tools used, study population and setting. GHQ was used in Jordan, Taiwan, and Malaysia but nursing stress scale in the current study. Study subjects were general physicians, dentists and physician assistants for Jordan, laboratory technicians for Malaysia and nurses for Taiwan and Earlier Ethiopian study but in the current study almost all health professions were considered. Besides, the setting in the current study is a psychiatric hospital but non-psychiatric units in previous studies.

On the contrary, it is relatively lower than published studies in different countries like Northern Ireland 57.5% [29], Ayub Medical College in Pakistan, 52% [30], India, 73.5% [21] and Ethiopia, 58% [31]. A study in Taiwan showed that 66% of nurses, 61.8% of physician assistants, 38.6% of physicians had occupational stress [11]. This was also higher than the result of the current study. The sample size variation, difference in methods and organization culture, as well as social and cultural issues, might contribute to this. Besides this, the difference in risk factors between current and previous studies may cause this variation.

The most common source of stress in the workplace among study respondents were found to be a conflict with other staffs 222 (56.5%) followed by conflict with supervisor 221 (56.2%). This was in contrast to another study result in Ethiopia in which death & dying subscale, uncertainty about patient treatment and workload were most identified sources of stress with a mean score of 62.94%, 57.72% and 57.6% respectively [31].

The working unit was a risk condition for occupational stress as justified by professionals working in emergency OPD were at 3.5 time's higher risk as compared to health care staffs who work in Pharmacy/laboratory/office. This was supported by a study done in emergency department Nurses in Taiwan [32] and a study in Ethiopia which showed that working in emergency units and medical wards were associated with occupational stress [15]. A possible reason for this might be an emergency unit is mostly dealing with critical patients and professionals are uncertain of diagnosis and treatment of patients. Working in a forensic psychiatric unit was also 9 times at higher risk as compared to health care staffs working in Pharmacy/laboratory/office.

Findings of the current study showed that there was an opposite relationship between satisfaction in job and risk of occupational stress. A health care worker who was dissatisfied in their job was at 2.6 times higher risk of occupational stress as compared to professional satisfied with their job. This finding was supported by a study from southwest Ethiopia which concludes as there was a reciprocal relationship among occupational stress and job satisfaction [31]. Besides, a study done in Sao Paulo is also in line with this idea [33]. The possible reason might be dissatisfaction in the job may cause low self-esteem, hopelessness, poor interpersonal relationships and poor skill of coping from stress and will stigmatize them.

Socio-demographic variables such as age, sex, education, marital status, having children were not risk factors for occupational stress in this study. This is against the findings of studies in the USA [17] and the difference might be due to socio-cultural differences between professionals in the USA and Ethiopia.

However, using nursing stress scale for assessment of occupational stress in health professionals is a limitation of this study since no validated tool to asses stress for the health professional in Ethiopia. Additionally, it is difficult to explore the causal relationship between occupational stress and its risk factors since the study is cross-sectional. Moreover, the shortage of studies in Ethiopia makes it difficult to compare this result with other studies in Ethiopia.

CONCLUSION

Occupational stress among health care professionals in this study was high (46.8%). This implies that it is a great public health concern. Working in the emergency department as well as the forensic psychiatry unit from work-related variables and dissatisfaction with one's job were risk factors significantly associated with occupational stress. Early screening of health professional for occupational stress and its risk factors has to be given attention. Especially those working in emergency departments and forensic units should be given consideration.

AUTHORS' CONTRIBUTIONS

ST involved in designing, conducting and analysis of the research. HM and TW were advisors in the research. MN prepared the manuscript and involved in the analysis. All authors ratified the manuscript.

ACKNOWLEDGMENTS

We deeply acknowledge Gondar University College of Medicine and Health Science and Amanuel Mental Specialized Hospital for all their valuable contribution provided. We also thank Haregewoine Mulate and Tsigereda Waja for their critical comment in the research process. Furthermore, study participants are recognized for their active engagement in the study process.

REFERENCES

1. What is Stress? The American Institute of Stress.
2. Xie Z, Wang A, Chen B. Nurse burnout and its association with occupational stress in a crosssectional study in Shanghai. J Adv Nurs. 2011: 67 (7);1537-46.
3. Payne R, Firth-Cozens J. Stress in health professionals: Psychological and organizational causes and interventions. Stress at work: A conceptual framework. 1999:3-16.
4. Tsai Y-C, Liu C-H. Factors and symptoms associated with work stress and health-promoting lifestyles among hospital staff: a pilot study in Taiwan. BMC Health Services Research. 2012:12 (1);199.
5. Workplace stress in nursing: a literature review. J Adv Nurs. 2003:44 (6);633-42.
6. Reclaiming health and safety for all: An independent review of health and safety legislation: The Stationery Office; 2011.

7. Gyllensten K, Palmer S. Can coaching reduce workplace stress? The Coaching Psychologist. 2005;1 (1):15-7.
8. Boran A, Shawaheen M, Khader Y, Amarin Z, Rice VH. Work-related stress among health professionals in northern Jordan. Occupational Medicine. 2011;kqr180.
9. Laura McCann, Hughes CM, Adair CG, Cardwell C. Assessing job satisfaction and stress among pharmacists. Pharm World Sci. 2009;31:188-94.
10. Kazmi R, Amjad S, Khan D. Occupational stress and its effect on job performance. A case study of medical house officers of district Abbottabad. J Ayub Med Coll Abbottabad. 2008;20 (3):135-9.
11. Chou L-P, Li C-Y, Hu SC. Job stress and burnout in hospital employees: Comparisons of different medical professions in a regional hospital in Taiwan. BMJ Open. 2014;4 (2):e004185.
12. Shen H-C, Cheng Y, Tsai P-J, Su-hsing SL, Guo YL. Occupational stress in nurses in psychiatric institutions in Taiwan. J Occ Health. 2005;47 (3):218-25.
13. Govender I, Mutunzi E, Okonta H. Stress among medical doctors working in public hospitals of the Ngaka Modiri Molema District (Mafikeng health region), North West province, South Africa. South African J Psych. 2012;18 (2):42-6.
14. Biksegn A, Kenfe T, Matiwos S, Eshetu G. Burnout Status at Work among Health Care Professionals in a tertiary Hospital. Ethiopian J Health Sci. 2016;26 (2):101-8.
15. Salilih SZ, Abajobir AA. Work-related stress and associated factors among nurses working in public hospitals of Addis Ababa, Ethiopia: A cross-sectional study. Workplace health & safety. 2014;62 (8):326-32.
16. Boran A, Shawaheen M, Khader Y, Amarin Z, Hill Rice V. Work-related stress among health professionals in northern Jordan. Occupational Med. 2011;62 (2):145-7.
17. Landsbergis PA. Occupational stress among health care workers: a test of the job demand-control model. J Org Behavior. 1988;9 (3): 217-39.
18. İlhan MN, Durukan E, Taner E, Maral I, Bumin MA. Burnout and its correlates among nursing staff: A questionnaire survey. Journal of Advanced Nursing. 2008;61 (1):100-6.
19. Magnavita N. Workplace Violence and Occupational Stress in Healthcare Workers: A chicken-and-egg Situation—Results of a 6Year Followup Study. J Nurs Scholarship. 2014;46 (5):366-76.
20. Motowidlo SJ, Packard JS, Manning MR. Occupational stress: its causes and consequences for job performance. J app psychol. 1986;71 (4):618
21. AbuAlRub RF. Job stress, job performance, and social support among hospital nurses. J Nurs Scholarship. 2004;36 (1):73-8.
22. Nemera A. Assessment of Job Related Stress and Its Predictors Among Nurses Working in Government Hospitals of West Shoa Zone, Oromia Region, Ethiopia, 2018: Addis Ababa University, Ethiopia, 2018.
23. Grobler C, Hiemstra L. Stress in the workplace. CME. 1998;16 (1):19-24.
24. Johnson S, Cooper C, Cartwright S, Donald I, Taylor P, et al. The experience of work-related stress across occupations. J Managerial Psychol. 2005;20 (2):178-87.
25. House JS. Occupational stress and coronary heart disease: A review and theoretical integration. J Health Social Behav. 1974;12-27.
26. Gray-Toft P, Anderson JG. The nursing stress scale: development of an instrument. J Behav Assess. 1981;3 (1):11-23.
27. Martins H, Proença T. Minnesota Satisfaction Questionnaire – Psychometric properties and validation in a population of Portuguese hospital workers. FEP Journal – Economics & Management: Working Paper. 2012;471.
28. Cooper C, Cooper R, Eaker L. Living with stress: Penguin Books, UK, 1987.
29. McCann L, Hughes CM, Adair CG, Cardwell C. Assessing job satisfaction and stress among pharmacists in Northern Ireland. Pharm World Sci. 2009;31 (2):188.
30. Kazmi R, Amjad S, Khan D. Individual differences and stress performance relationship. J Ayub Med Col. 2009;21 (3):172-5.
31. Dagget T, Molla A, Belachew T. Job related stress among nurses working in Jimma Zone public hospitals, South West Ethiopia: A cross-sectional study. BMC nursing. 2016;15 (1):39.
32. Liu W-W, Pan F-C, Wen P-C, Chen S-J, Lin S-H. Job Stressors and coping mechanisms among emergency department nurses in the Armed Force hospitals of Taiwan. Int J Human Soc Scis. 2010;5;10.
33. Cavalheiro AM, Moura Junior DF, Lopes AC. Stress in nurses working in intensive care units. Revista Latino-Americana de Enfermagem. 2008;16 (1):29-35.