

DOI: 10.7596/taksad.v9i2.2695

Citation: Sayapathi, B. S., Denis, N., & Su Ting, A. (2020). Occupational Stress and Burnout among Staffs in Hospitals: A Systematic Review. *Journal of History Culture and Art Research*, 9(2), 425-431. doi:<http://dx.doi.org/10.7596/taksad.v9i2.2695>

Occupational Stress and Burnout among Staffs in Hospitals: A Systematic Review

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Abstract

Occupational stress and burnout among staff were appraised by carrying out a systematic review. There has been an increased prevalence of work-related stress and burnout worldwide. This occupational disorder brings a total of 19-30% among common working population. The increased prevalence of burnout was seen predominantly among the staff of healthcare. Around 25-75% of burnout was noted particularly among the physicians. Around 10% of occupational diseases constituted burnout. The stress levels are measured among the staff of different groups to battle stress and burnout by executing appropriate strategies and hence, their performances are improved to attain the anticipated results.

The search was carried out from 3 major databases, i.e., PubMed, EBSCOhost: Academic Search Complete and ProQuest: Education Database for studies issued from 1st January 2007 until 1st December 2017 without language limits, but omitted dissertation and thesis, newspapers and magazines. Different research designs were comprised in this review. The studies were recognized and regained by two separate authors.

There were eight papers that satisfied the necessities of this systematic review from 812 titles scanned initially. The healthcare workers in the hospital displayed mild stress in most of the studies. The main sources of stress among the staff were heavy workload and resource scarcity.

Continuous stress exposure at workplace can cause burnout among healthcare workers. Stress and subsequently burnout may lead to various diseases. To alleviate their burnout effectively, the top management should focus on resources needed and to conduct regular assessment among the staff for burnout.

Keywords: Occupational stress, Occupational burnout, Healthcare, Hospitals.

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1. Introduction

Hazards from the work-related have been documented in many countries for several centuries. The devastating state was first documented during the industrial revolution. There has been an increased prevalence of work-related stress and burnout globally. This occupational malady brings a total of 19-30% among common working population. The increased prevalence of burnout was seen predominantly among the staff of healthcare. Around 25-75% of burnout was noted particularly among the physicians. Around 10% of occupational diseases constituted burnout (Portoghese, Galletta, Coppola, Finco, & Campagna, 2014). Stress and burnout have negative effects to health and contribute to various diseases such as ischemic heart disease, stroke, irritable bowel syndrome and peptic ulcer disease. More than 30% of workers in the US were absent from work and at least one hour a day is lost in output due to stress (The Statistics Portal, 2017). There was a quarter of nurses in a hospital in Malaysia were recognized to have occupational stress (Zainiyah, Afiq, Chow, & Sara, 2011).

1.2 Objective

We methodically studied the evidence to recognize occupational stress and burnout with the aim to reduce the prevalence of these conditions.

2. Methods

2.1 Literature search

Researchers reviewed trials, observational studies and any other comparative designs. We used medical subject headings with keywords, *i.e.*, "Occupational stress AND Staffs AND Hospitals" for all the databases searched. The stress scores were the outcome measures.

2.1.1 Search strategy

The search was carried out from 3 major databases, *i.e.*, PubMed, EBSCOhost: Academic Search Complete and ProQuest: Education Database for studies published from 1st January 2007 until 1st December 2017. We adapted no language limits but excluded dissertation and thesis, newspapers and magazines. A few inclusion criteria required to be assembled for the papers to be included in this systematic review. The studies were required to include exposure to workplace stress and outcomes of stress scores. Firstly, the titles of the papers were revised for appropriateness in this review. Later, the abstracts were deliberated to further establish whether the studies fulfilled the necessities of the review. Finally, full texts of the papers were evaluated to approve the contents attained the primary objectives of this review. On the assessment of the full text, once a paper was established for this review, information was collected from it such as the name of the litterateurs, publication year, nation where the study was performed, the background (experimental or industrial), number of contributors or subjects, information on exposure including the sources of stress, duration of exposure and finally, the outcome of the stress scores in the subjects. Nevertheless, not circulated works such as conference proceedings were excluded in this assessment.

3. Results

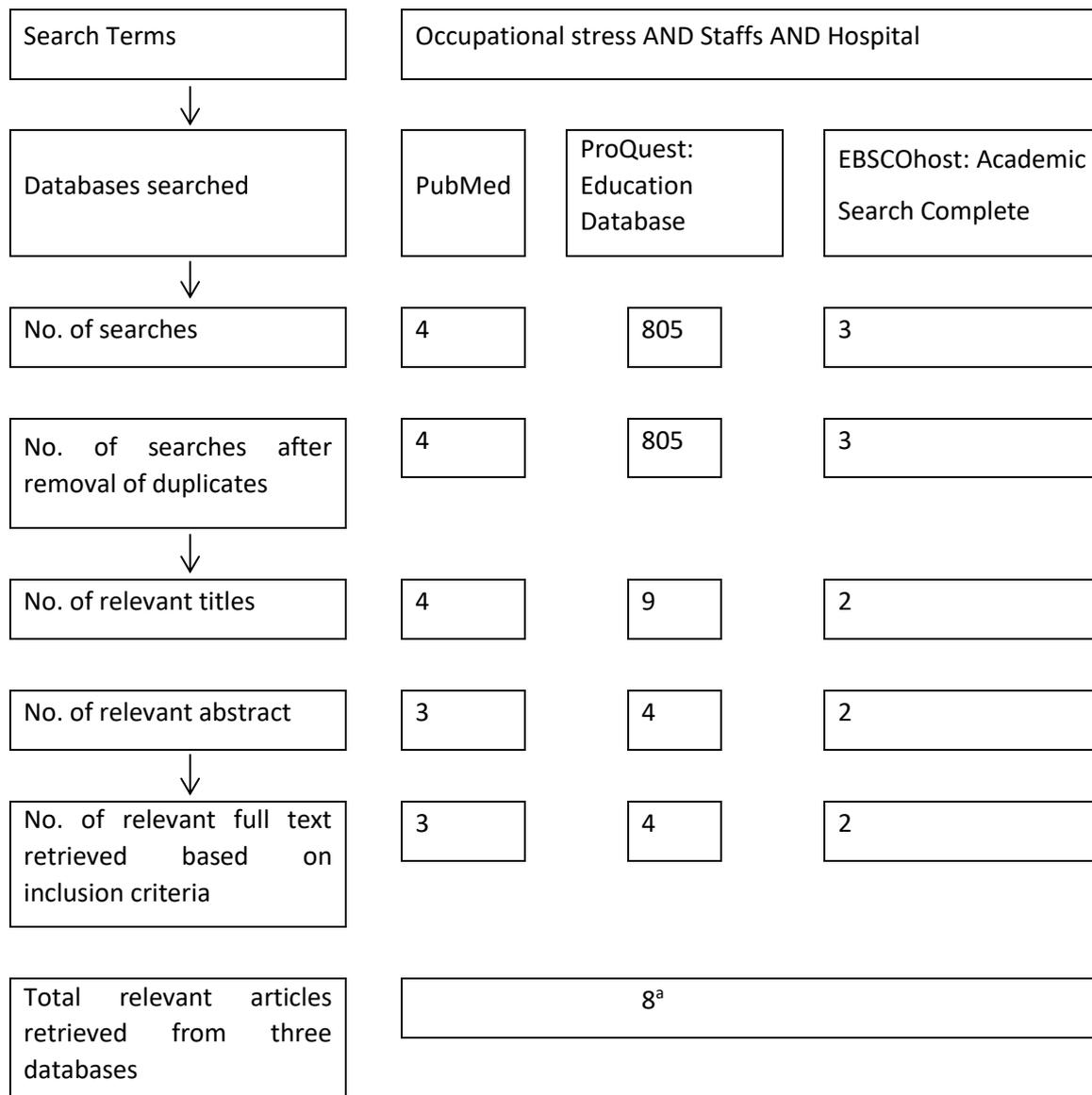


Figure 1: Flow diagram of search strategy

^aTotal number of papers searched for systematic review; one similar paper from the EBSCOhost: Academic Search Complete database was retrieved from the PubMed

4. Discussion

Bakhtiari *et al.* (Bokhtiari, Mehrabi, & Hasanzadeh, 2013) conducted a descriptive co-relational study in 2010. The aim of the study was to recognize the occupational stress level among staff from operating room in hospitals. The study was conducted in Iran among 100 staff. The Toft-Anderson questionnaire of occupational stress was used consisted of 34 questions related to stressors. The majority of participants were females with mean age of 35 years. The mean score of stress showed mild stress category, while more than 40% displayed moderate stress. The level of stress was highest on workload and shortage of resources. There were inverse association between contribution of

work monthly and stress ($p<0.05$), and also work experience and level of stress ($p<0.05$). The investigators drew a general conclusion that the employees were having mild stress primarily due to the work overload. This study also showed that level of stress is reduced over time as the staffs attained more skills in the field. However, there were no significant changes of level of stress neither on marital status nor on level of education.

Hämmig et al. (Hämmig, Brauchli, & Bauer, 2012) conducted a cross-sectional study in a public hospital. The aim of the study was to determine the extent of effort-reward imbalance and work-family conflict associated with general stress and burnout by comparing them and not reliant on to each other. Another aim was to study the relationship between staff in the hospital with effort-reward imbalance and work-life imbalance. The effort-reward imbalance was hypothesized as a predictor of stress and a better predictor for burnout after exposure to stress for a long period. Meanwhile, work-life imbalance is predicted as a source of stress and hence a resilient predictor of stress. This study was carried out in Zurich. The Copenhagen Burnout Inventory was used to extract burnout where only eight items were used. Physicians, emergency staff and technical care showed effort-reward imbalance and work-life imbalance above middling. The feeling of stress felt was by the same group including the nurses. There were no gender differences as feeling of stress increases with burnout symptoms. In this study, the work-life imbalance is strongly associated with stress ($\beta=0.32$) and burnout ($\beta=0.43$) compared to effort-reward imbalance ($\beta=0.11$ and $\beta=0.24$, respectively), and hence, the work-life imbalance is a stronger risk factor for burnout. The psychological stress was equally associated with burnout. In conclusion, the physicians and nurses were at high risk for burnout symptoms (the score of at least 50 in Copenhagen Burnout Inventory was indicative of increases risk of burnout syndrome); the effort-reward imbalance is a risk factor for burnout compared to work-life imbalance among physicians and medical technics as they may be accustomed to the work. However, the work-life imbalance is a risk factor for burnout among nurses.

Al-Turki et al. (Al-Turki et al., 2010) conducted a cross-sectional study among nurses in a tertiary care center. The aim of this study was to identify burnout among nurses. The study was conducted in Saudi Arabia. The Maslach Burnout Inventory individual-based questionnaire was used for the purpose where emotional exhaustion, depersonalization and personal accomplishment were assessed among the participants. Among the emotional exhaustion assessed, 45% of them had high score and around 29% had moderate score. However, the longer the nurse was working in the hospital; the occurrence of emotional exhaustion was fewer. More than 40% of the participants had high depersonalization with almost a third had moderate category. Less than a third had high personal accomplishment. The married group had more emotional exhaustion ($p<0.05$) with OR of 2.4. The nurses in the wards and clinics were affected more on emotional exhaustion ($p<0.001$) and depersonalization ($p<0.001$) compared to high action areas. The authors failed to mention on Confidence Intervals (CI). The depersonalization was higher among nurses originally from Saudi Arabia compared to non-Saudi ($p<0.05$), however, the non-Saudi nurses were prone to emotional exhaustion and personal accomplishment ($p=0.004$). This study had shown that there is presence of burnout syndrome among the nurses where this syndrome is more predominant among nurses from different country working in Saudi. This emigrant nurses were more inclined to emotional exhaustion. The nurses in high action areas such as in the Intensive Care Unit showed less stress compared to nurses in wards, conflicting with other studies, probably the nurses came from five different countries displaying symptoms of stress differently. This study also showed that emotional exhaustion and depersonalization were more common among younger age group, *i.e.*, less than 36 years of age.

Dachalson *et al.* (Dachalson, Gyang, & Azi, 2017) conducted a cross-sectional study on nurses in Nigeria. The aim of the study was to compare levels of stress from two hospitals *i.e.* Jos University Teaching Hospital and Plateau Specialist Hospital. The Expanded Nursing Stress Scale questionnaire was used to extract stress professed among the participants. This instrument covers three components *i.e.* psychological environment, physical environment and social environment with nine subscales. There are a total of 57 items in the questionnaire. There was no difference in levels of stress between the two hospitals ($p>0.05$). Also, there were no differences among the subscales of stressors between the hospitals. Among the physical environment, participants from the emergency department showed higher mean, $F(1, 156) = 2.344, p=0.003$. The nurses from the Outpatient department showed higher mean on psychological environment, $F(1, 153) = 2.565, p=0.001$. Finally, on social work environment, the nurses from the SCBU unit showed higher mean, $F(1, 155) = 2.236, p=0.005$. The nurses from both the hospitals showed comparable level of workplace stress. The sources of stress on nurses from both hospitals are almost alike indicating no differences in the working environment. Participants from emergency department had stress due to high workload while stressors of death and dying, insufficient preparation and vagueness concerning treatment were seen among nurses from the Outpatient department.

In a paper published by Gupta *et al.* (Gupta, Paterson, Lysaght, & Zweck, 2012), the authors evaluated the levels of stress and burnout among occupational therapists at work and coping strategies to alleviate burnout. The study encompassed all occupational therapists from Ontario Society who had access to computer. The quantitative data was collected using Maslach Burnout Inventory-General Survey and Areas of Worklife Survey. Also included behavioral or intellectual approaches to maintain positive outlook at work and functioning effectively. The qualitative data was extracted using semi-structured interviews and focus groups. The 16-item of Maslach Burnout Inventory-General Survey measured exhaustion, cynicism and inefficacy achievement. The Areas of Worklife Survey contained 29-items incorporating factors on workload, control, reward, community, fairness and values. Most of the occupational therapists scored average on exhaustion and professional efficacy, while high on cynicism using Maslach Burnout Inventory-General Survey. Workload was projected on exhaustion predicting almost 30%. The study showed that these occupational therapists had exhaustion of high levels restricting adoption of maintaining self-awareness $F(2, 60) = 5.34, p=0.007$, maintaining sense of control over work $F(2, 60) = 3.95, p=0.002$ and maintaining sense of humor $F(2, 60) = 4.21, p=0.02$. As regards to high levels of professional efficacy, it was maintained by adopting keeping in touch with networks $F(2, 60) = 6.045, p=0.004$. The load under demands on time, conflict with their supervisors on loads from employers, besides feeling fatigue and limited resources were some of the factors extracted from interviews and focus group. The lack of admiration and autonomy are other factors mined. Adopting flexibility culture of home and work, support from colleagues, setting desired result and time optimization and engagement in program development were few coping approaches to be adopted by occupational therapists to alleviate stress. The occupational therapists showed emotional exhaustion due to lower use of coping approaches, though the levels are lower than other studies. The exhaustion is directly associated to workload. In the study, there was no significant contribution to cynicism. If the occupational therapists were remunerated, than the professional efficacy would improve. The causal sequence cannot be determined and the participants were few in the study.

In Brazil, Silva and Guimarães (Silva & Guimarães, 2016) performed a cross-sectional on work stress among nurses. The aim of the study was to evaluate stress using the Job Content Questionnaire and quality of life through the Health-Related Quality of Life questionnaire. The Job Content Questionnaire was used as it measures the aptitude of the nurses to control over their abilities at work, assessment of psychological demands and also social support among nurses. The 11-item

questionnaire of Health-Related Quality of Life had two components, physical and mental. The Socio-demographic Occupational Questionnaire was also used; 17-items on personal characteristics, habits of life and eight on work performed. The authors mentioned 17-items, but the total items explaining the domains were 16. Most of the participants were females with more than 40 years of age. Almost half of them had two children. Almost two-third of nurses had psychological demand and high degree of control over their work; they were categorized as active at work. The nurses perceived higher demand compared to nursing assistants and nursing technicians ($p=0.007$). However, they had low social care especially among nursing assistants ($p=0.001$), those carrying out over time ($p=0.046$) and females ($p=0.031$). The nurses with longer duration of work experience had better control over the work ($p=0.001$). The nurses displayed worst on quality of life compared to nurse technicians and nurse assistants on vitality ($p=0.044$), social aspects ($p=0.005$) and emotional aspects ($p=0.004$). The areas *i.e.* functional capacity, pain, vitality, social aspects and emotional aspects were all reduced in SF-36, due to heavy workload, tasks at home and also working overtime. The psychological demand was high among nurses due to working round-the-clock. Likewise, they had high control over their work as they participated in managing patients and supervision given during their internship. The low social support was consequential to classification of nurses into different groups in the study, heavy workload, working overtime or working alone. The quality of life was affected due to fatigue, stress and heavy workload.

In Taiwan, Hu *et al.* (Hu *et al.*, 2015) performed a repeated-measure design study with a two-group comparison in two hospitals. The aim of the study was to compare adoption of a 10-minute preceptor model and traditional preceptor model of clinical teaching to new graduate nurses during first three months of work. In one of the hospitals, the 10-minute preceptor model was allocated while the other using traditional preceptor model. A total of 57 nurses recruited in the 10-minute preceptor model and 55 on traditional preceptor model. The traditional preceptor model was systematized training program entails general orientation and unit-based practical training. However, the 10-minute preceptor model included dedication of 10-minutes, twice a day, by the preceptor with the nurses deliberating issues on handing over, achievement for the day and asking questions. The 31-items self-reported questionnaire was distributed to the participants consisting of work-stress levels and turnover intention. The other section of the questionnaire covered the work experience scale and satisfaction with the preceptor. The work-stress level dropped from 6.02 (moderate work stress) to 4.61 points in the 10-minute preceptor model in three months, while no changes seen in the traditional preceptor model, 6.34 to 5.91 points ($p=0.001$). The mean work experience were 5.79 initially then progressively increased to 6.38 points in the 10-minute preceptor model, revealing statistically significant differences compared to the traditional model, 5.83 to 5.41 points ($p=0.001$). The turnover intention is 3.87 points compared to 5.06 points in the 10-minute preceptor and traditional model respectively ($p=0.003$). There was statistically significant difference ($p=0.025$) between participants from both groups on the satisfaction level, mean is 3.70 points for the 10-minute preceptor and 3.27 points for the other group. More time needed to be devoted to the new graduate nurses as they are stressful due to clinical, administrative and organizational skills. The stress may lead to increase turnover rate among nurses. By adopting the 10-minute preceptor model, the nurses become more proficient and satisfied in their jobs, thereby dropping their intent to quit.

Suni (Suni, Nirmala, & Sikkandar, 2017) performed a cross-sectional study among staff nurses in designated hospitals in a district. The study was conducted in Kerala, India. The aim of the study was to determine stress and job satisfaction among private and government staff nurses. The study was conducted among 90 staff nurses. More than half were females and wedded with equal distribution from government and private sector. Almost half were Muslims. The level of stress was different

among nurses of different religion, $F(2, 113) = 3.89, p=0.024$. The job satisfaction was higher among private compared to government sector nurses, 103.57 ± 4.58 and 100.78 ± 6.41 , respectively, $p=0.022$. The stress levels were not significant between the sectors, $p=0.778$. The study also showed that as the level of stress increased, the job satisfaction was reduced, $p=0.003$.

Conclusion

Occupational stress and burnout may unfavorably affect an organization as well as individuals at workplace. The occupational stress and burnout may lead to diseases such as coronary artery disease, hypertension and peptic ulcer disease. They are associated with absenteeism and low morale among the employees. The work performance is diminished and lack of job satisfaction seen among the staff with stress and burnout. The top management should focus on resources needed and to conduct regular assessment among the staff to reduce burnout effectively.

References

- Al-Turki, H. A., Al-Turki, R. A., Al-Dardas, H. A., Al-Gazal, M. R., Al-Maghrabi, G. H., Al-Enizi, N. H., & Ghareeb, B. A. (2010). Burnout syndrome among multinational nurses working in Saudi Arabia. *Ann Afr Med.*, 9(4), 226-229.
- Bokhtiari, S., Mehrabi, T., & Hasanzadeh, A. (2013). An investigation on occupational stress of the operating room staffs in hospitals affiliated to Isfahan University of Medical Sciences and its association with some factors. *Iran J of Nurs Midwifery Res.*, 18(2), 101-104.
- Dachalson, E. M. M., Gyang, E. D., & Azi, P. S. (2017). Stress among nurses: A comparative study of two tertiary health care institutions in Jos, Nigeria. *Ife Psychologia* 25(1), 82-103.
- Gupta, S., Paterson, M. L., Lysaght, R. M., & Zweck, C. M. v. (2012). Experiences of burnout and coping strategies utilized by occupational therapists. *Canadian Journal of Occupational Therapy*, 79(2), 86-95.
- Hämmig, O., Brauchli, R., & Bauer, G. F. (2012). Effort-reward and work-life imbalance, general stress and burnout among employees of a large public hospital in Switzerland. *Swiss Med Wkly*, 142(w13577).
- Hu, Y.-C., Chen, S.-R., Chen, I.-H., Shen, H.-C., Lin, Y.-K., & Chang, W.-Y. (2015). Evaluation of Work Stress, Turnover Intention, Work Experience, and Satisfaction With Preceptors of New Graduate Nurses Using a 10-Minute Preceptor Model. *J Contin Educ Nurs.*, 46(6), 261-271.
- Portoghese, I., Galletta, M., Coppola, R. C., Finco, G., & Campagna, M. (2014). Burnout and Workload Among Health Care Workers: The Moderating Role of Job Control. *Saf Health Work.*, 5(3), 152-1
- Silva, A. M. d., & Guimarães, L. A. M. (2016). Occupational Stress and Quality of Life in Nursing. *Paidéia* 26(63), 63-70.
- Suni, M. S., Nirmala, V., & Sikkandar, S. (2017). Stress and Job Satisfaction among Staff Nurses. *Asian J. Nursing Edu. and Research*, 7(1), 31-34.
- The Statistics Portal. (2017). Stress and burnout - Statistics & Facts Retrieved 10th March, 2018, from <https://www.statista.com/topics/2099/stress-and-burnout/>
- Zainiyah, S. Y. S., Afiq, I. M., Chow, C. Y., & Sara, D. S. (2011). Stress and its associated factors amongst ward nurses in a public hospital Kuala Lumpur. *Malaysian Journal of Public Health Medicine*, 11(1), 78-85.