Workplace violence and its influence on job performance of staff nurses at Suez Canal University Hospitals

Esraa Mahmoud Salem Ali ⁽¹⁾, Nema Fathy Saad ⁽²⁾, Nadia Mohammed El-sayed Ghonem ⁽³⁾ (1) B.Sc. Nursing, Faculty of Nursing (2012) Suez Canal University

- (2) Assist, Professor of Nursing Administration Department Faculty of Nursing- Ain Shams University
- (3) Assistant Professor of Nursing Administration Department Faculty of Nursing Suez Canal University

Abstract

Background: Workplace violence is defined as 'an incident of aggression that is physical, sexual, verbal, emotional or psychological that occurs when nurses are abused, threatened or assaulted in circumstances related to their work. Aim of study: the study aimed to assess workplace violence and its influence on job performance of staff nurses at Suez Canal University Hospitals. Subjects and methods: The study was conducted at Suez Canal University Hospitals in three buildings namely; education building, surgical building, oncology hospital. A convenience sample used in this study; consists of all staff nurse at the previous mentioned setting. Two data collection tool was used to carry out the current study namely; Nurse's perception about factors contributing to workplace violence, and Nurses perception on workplace violence types, perpetrators and rate of experiencing. Results: 55% of nurses had accepted that personal factors lead to work-place violence. While, 42% of nurses had rejected that personal factors lead to work-place violence. 89% of nurses had accepted that work organizational factors lead to work-place violence. While, 19% of nurses had rejected that work organizational factors lead to work-place violence. Conclusion and recommendations concluded that there is no statistically significant relation between job performance and either personal, social or work factors associated with exposure to work place violence. . The study recommended that Periodic assessment for workplace violence of staff nurses at Suez Canal University Hospitals and Periodic assessment for job performance of staff nurses at Suez Canal University Hospitals

Keywords: Workplace violence, Job performance, and Staff nurses

1. Introduction

Violence is preventable. Evidence shows strong relationships between levels of violence and potentially modifiable factors such as concentrated poverty, income and gender inequality, the harmful use of alcohol, and the absence of safe, stable, and nurturing relationships between children and parents. Scientific research shows that strategies addressing the underlying causes of violence

can be effective in Preventing violence (Yang, et al., 2018).

The nature of violent acts, on the vertical axis, can be: Physical, Sexual,

Psychological, and Involving deprivation or neglect; This initial categorization differentiates between violence a person inflicts upon himself or herself, violence inflicted by another individual or by a small group of individuals, and violence inflicted by larger groups such as states, organized political groups, militia groups and terrorist organizations. These three broad categories are each divided further to reflect more specific types of violence (Han, et al., 2017).

Workplace violence is defined as 'an incident of aggression that is physical, sexual, verbal, emotional or psychological that occurs when nurses are abused, threatened or assaulted in circumstances related to their work. 1,830 were inflicted with injuries by patients or residents, 80 were inflicted by visitors or people other than patients, 520 RNs were hit, kicked, or beaten, 130 RNs were squeezed, pinched or scratched requiring days away from work, and 30 RNs were bitten (**Khanjankhani**, et al., 2017).

Poor environmental design increasing the likelihood of nurses being isolated with violent clients, Inadequate security measures with respect to staffing or response procedures, Inadequate training for staff on responding to potentially violent situations, Inadequate expectations of how the health-care team will interact with each other, Inadequate policies for preventing and managing violent incidents, Inadequate supports for nurses who work alone - for instance, community health nurses, Underreporting of violence which limits both knowledge of scope of issue and corrective action (Cheung, Lee, & Yip, 2017).

Job satisfaction levels of nurses in different geographical and socio-cultural

settings need to be assessed to determine which factors impact on them the most. This may assist healthcare managers and policy makers to prioritize the issues which must be addressed to improve the satisfaction levels of nurses, and consequently healthcare delivery. This is for particularly important less-developed economies, where resource constraints are very pronounced. Arguably, non-financial factors impacting negatively on nurses' job satisfaction when addressed may have a positive ripple effect on overall job satisfaction (Bloom, 2019).

public health From perspective, prevention strategies can be classified into three types: Primary prevention: Approaches that aim to prevent violence before it occurs. Secondary prevention: Approaches that focus on the more immediate responses to violence, such as pre-hospital care, emergency services or treatment for sexually transmitted infections following a rape. Tertiary prevention: Approaches that focus on long-term care in the wake of violence, such as rehabilitation and reintegration, and attempt to lessen trauma or reduce long-term disability associated with violence (Guo, et al., 2020).

1.2 Significance of the study:

Violence against health workers represents approximately a quarter of total work violent events. These situations have been observed, and they are routine for some nursing

professionals (Geneva, 2011). So that studying the relationship between workplace violence and job performance for staff nurses is very important in determining how to manage and prevent workplace violence against nurses in hospital to promote patient and nurse's safety, encourage good relationship and communication, decrease level of absenteeism and turnover, improve quality of provided care and increase patient satisfaction.

Aim of the study

The current study aimed to assess workplace violence and its influence on job performance of staff nurses at Suez Canal University Hospitals

Research questions:

- 1. Are there factors leading to workplace violence at Suez Canal University Hospitals?
- 2. Is there a relationship between workplace violence and staff nurses' job performance at Suez Canal University Hospitals?

2. Subjects and Methods

2.1 Research design:

A descriptive research design was used in carrying out the current study.

2.2Setting:

The current study was conducted at Suez Canal University Hospitals in three buildings namely; education building, surgical building, oncology hospital.

2.3Subjects:

Convenient sample was used for this study; consists of all staff nurse males and females at the previous mentioned setting. By systematic method, the sample selected every three nurse the first one selected randomly. The sample size is estimated with confidence level of 95% and margin of error of 5%. All nurse personnel are 346.

2.4 Data collection tools:

Two data collection tool was used to carry out the current study namely; Nurse's perception about factors contributing to workplace violence, and Nurses perception on workplace violence.

First tool: Nurse's perception about factors contributing to workplace violence. It was adopted from Obied (2008). The questionnaire consisted of two parts:

The first part:

Demographic data of study subjects such as name, age, marital status, level of education, years of experience, number of children and department of work of the nurses.

The second part:

It was adopted from **Obied** (2008) and translated into Arabic by **Abo El-Yazeed** (2008) to assess factors contributing to workplace violence. It included 56 items categorized into three factors; personal factors, work organizational factors and societal factors.

Personal factors included 15 items; divided into two domains such as: Personal characteristics and traits (8 items) such as being young, inability to deal with abusive persons, Unprofessional behaviors (7 items) such as unprofessional appearance and unprofessional uniform.

Work organizational factors included 36 items divided into seven domains such as: 1) Head nurses' inefficiency in organization work (10 items), Poor quality of services provided to patients (2 items), Role ambiguity and work overload (6 items), The natures of the nurses' work (5 items), Administrative policies to support violence victims (4 items), Physical arrangement and design of the workplace (7 items), and Poor quality and quantity of security men (2 items).

Social factors included 5 items divided into two domains such as: Poorly designed nursing educational system (2 items) such as lack of studied curriculums on violence, and socioeconomic problems and faulty perception of society on nurses' role (3 items) such as belief that violence is part of the nurse's job.

Scoring system:

Responses of the applicants were measured on five points; Likert scale ranging from strongly agrees (5) to strongly disagree (1) respectively. The scores of the items were summed up and the total divided by the number of items, giving a mean score for the part.

These scores were converted to percent score. Total score of nurses' knowledge considered satisfactory if total percent score was 60% or more and unsatisfactory if the total percent score was less than 60% (**Ebrahem**, **2015**).

Second tool: Nurses perception on workplace violence types, perpetrators and rate of experiencing

Each type in hospital to identify nurses' perception on the effects of workplace violence on their performance and nurses' perception on head nurses' reaction regarding workplace violence; The questionnaire was adopted from Obied (2008) based on Conflict Tactic Scale (CTS) by Straus (1996) and translated into Arabic by Abo El-Yazeed (2008) to assess nurse perception on the effect of workplace violence and their performance and head nurses' reaction toward workplace violence. It included 47 items under three domains as follows: 1) Types of violence experienced in hospital. It is divided into verbal psychological and physical violence; The verbal psychological type of violence statements ranged from criticism to threat (10 items), and The physical type of violence statements ranged from twisting the arm to use a weapon to hurt nurses (10 items).

2) Perterators of workplace violence against nurses whether patient, physician, other nurses, or administrative staff and the rate of nurses experiencing for each type of workplace

violence (if once per shift, once per week or once per month) were indicated. 3) Nurses' perception on the effect of workplace violence on their performance and their perception on head nurse reaction regarding workplace violence. It consisted of two parts as follows:

The first part: Effect of workplace violence on nurse performance:

It consisted of 20 items and it was divided into five domains as follows: Attendance problems (3 items), Defacing hospital propriety (5 items), Poor workplace relations (5 items), Feeling of powerlessness (5 items), and Control of anxiety and fear (2 items) such as replying politely for those criticizing you.

The second part: Nurses' perception on head nurses reaction regarding violence incidents in the workplace:

It consisted of 7 items and included statements related to supporting and encouraging role of head nurses (4 items) such as head nurse is supportive at the occurrence of violence incidence, and the aggressive and negative role of head nurses (3 items) such as head nurse is aggressive and not interest in nurse's' welfare.

Scoring system:

Responses of the applicants were measured on five points; Likert scale ranging from usually (5) to never (1) respectively. The scores of the items were summed up and the total divided by the number of items, giving a mean score for the part. These scores were converted to percent score. Total score of nurses' performance considered adequate if total percent score was 60% or more and inadequate if the total percent score was less than 60% (**Ebrahem**, **2015**).

Validity

Face and content validity of the study tools was assessed by jury group consisted of five experts (professors) of Nursing Administration Department from the Faculty of Nursing Cairo and Suez Canal Universities. judge members for group tools comprehensiveness, accuracy and clarity in language. Based on their recommendations' correction, addition and / or omission of some items were done.

Reliability: -

The study tool was tested for its internal consistency by Cronbach's Alpha and found to be 0.8543. First tool internal consistency reliability = 0.9654 and test-retest reliability = 0.9542. Second tool internal consistency reliability = 0.8543 and test-retest reliability = 0.8432.

2.5 Pilot study:

Pilot study was carried out on 10% of the total study sample (35 nurses) to evaluate the applicability, efficiency, clarity of tools, assessment of feasibility of field work, beside to detect any possible obstacles that might face the researcher and interfere with data collection. Necessary modifications were done based on the pilot study findings such as (omission of some questions from tool) in order to strengthen their contents or for more simplicity and clarity. The pilot sample was excluded from the main study sample.

2.6 Fieldwork:

Data collection of the study was started the beginning of January 2019, and completed by the end of March 2019. The researcher attended at six different departments (General Surgery, Orthopedic, Pediatric. Emergency, Obstetric and Internal Medicine Departments) and two units (ICU and CCU) at Suez Canal University Hospitals. researcher first explained the aim of the study to all staff nurse males and females at the previous mentioned setting. By systematic method, the sample selected every three nurse the first one selected randomly and reassures them that information collected will be treated confidentiality and that it was used only for the purpose of the research. Each nurse was interviewed to fulfill the study tools after explaining how they fulfill the tools. It took 15-20 minutes to be completed.

2.7 Ethical Considerations:

Prior to the initial interview, verbal explanation of the nature and the aim of the

study had been explained to the participants included the study sample. Clarification of the nature and purpose of the study was done in the interview with each subject. They were given an opportunity to refuse or to participate and they were assured that the information would be utilized confidentially and used for the research purpose only.

2.8 Statistical analysis:

Data entry and statistical analysis were done using (SPSS) statistical software package. Quality control was at the stage of coding and data entry. Data were presented using descriptive statistics in the form of frequencies and percentage for qualitative variables; mean and standard deviation for quantitative variable. categorical Qualitative variables were compared Chi-square (X2) test; the hypothesis that the row and column variables are independent, without indicating strength or direction of the relationship, Analysis of variance (ANOVA) test. Statistical significance was considered at (P-value < 0.05).

3. Results:

Table (1) shows that all the studied nurses were females with age ranged from 17 to 58 years with mean 35.81 ± 7.11 years. More than half (58.4%) of nurses were married. More than half (55.2%) of them had experience from 5 to 10 years.

Table 2 & figure 1: shows that more than half (57.2%) of nurses had accepted that personal factors lead to work-place violence. While, more than two fifth (42.8%) of nurses had rejected those personal factors lead to work-place violence.

Table 3& figure 2: shows that majority (83.6%) of nurses had accepted that work organizational factors lead to work-place violence. While, nearly one fifth (16.4%) of nurses had rejected that work organizational factors lead to work-place violence.

Table 4 of nurses had accepted that societal factors lead to work-place violence. While, nearly one fifth (16.4%) of nurses had rejected those societal factors lead to work-place violence.

Table 5: shows that nearly three quarter (72.8%) of nurses had frequent that verbal violence lead to violence. While, more than one quarter (27.2%) of nurses had infrequent exposure to verbal violence. Majority (94%) of nurses had frequent physical violence. While, minority (6%) of nurses had infrequent exposure to physical violence

Table (6) shows that, there is no statistically significant relation between job performance and either personal, social or work factors associated with exposure to work place violence.

4. Discussion:

Workplace violence, which refers "incidents where staff are abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health" has been found to be a major problem for nurses globally. Workplace violence, disrespect for nurses can have personal and professional impacts. Persistent experience of disrespect may lead to fear, anger, humiliation and lowered job satisfaction, reduced performance, turnover intentions and actual turnover, insomnia and hypertension. Expression of disrespect especially physicians may also strain inter-professional communication and collaboration (Amarat, et al., 2019).

So the current study aimed to assess workplace violence and its influence on job performance of staff nurses at Suez Canal University Hospitals

Regarding demographic characteristics, the current study revealed that all the studied nurses were females with age ranged from 17 to 58 years. More than half of nurses were married. More than half of them had experience from 5 to 10 years.

In similarity, this result was supported with Yang, et al., (2018) who conducted entitled "Incidence, type, related factors, and

effect of workplace violence on mental health nurses" and found that majority of nurses were married. More than half of them had experience from 5 to 10 years. Conversely, this result was in disagreement with **Cheung & Yip**, (2017) who conducted entitled "Workplace violence towards nurses in Hong Kong: prevalence and correlates" and found that majority of nurses were females and their ages ranged from 22: 35years.

Regarding personal characteristics and traits related to work-place violence, the current study revealed that the highest level of of about agreement nurses personal characteristics and traits concerning work-place violence related to: inability to deal with abusive persons, inability to manage abusive incidents, aggressive nature of nurses, being young, and Personal problems. From the researcher point of view, this result may be due to violence in nurses' work place effect on their personal life.

This result was in agreement with Zhang, et al., (2017) who conducted entitled "Workplace violence against nurses" and found that majority of nurses hadn't ability to deal with violence in work place. Also, this result was supported with Chang & Cho (2016) who conducted entitled "Workplace violence and job outcomes of newly licensed nurses" and found that the highest percentage of nurses can't deal with aggressive situation.

Regarding total score for personal factors as cause of work-place violence, the current study revealed that more than half of nurses had accepted that personal factors lead to work-place violence. While, more than two fifth of nurses had rejected that personal factors lead to work-place violence. From the researcher point of view, this result may be due to nurses were interested to accept violence in workplace.

This result was in congruence with Jiao, et al., (2015) who conducted entitled "Workplace violence against nurses in Chinese hospitals" and found that more than half of nurses had accepted that personal factors lead to work-place violence. Conversely, this result was in disagreement with Al-Omari, (2015) who conducted entitled "Physical and verbal workplace violence against nurses in Jordan' and found that majority of nurses hadn't accepted that personal factors lead to work-place violence.

Regarding total score for societal factors as cause of work-place violence, the current study revealed that majority of nurses had accepted that societal factors lead to work-place violence. From the researcher point of view, this result may be due to nurses can deal with violence workplace.

This result was accordance with **Platis**, **Reklitis**, **& Zimeras** (2015) who conducted entitled "Relation between job satisfaction and

job performance in healthcare services" and found that majority of nurses can adapt with violence in workplace. Conversely, this result was in disagreement with Cho, & Han (2018) who conducted entitled "Associations among nursing work environment and health-promoting behaviors of nurses and nursing performance quality" and found that majority of nurses can't deal with violence in workplace

Regarding distribution of nurses according to verbal psychological violence, the current study revealed that the majority of the nurses reported exposure to verbal psychological violence related to: threaten with a weapon, threaten on the phone at home or at work, and threaten on hit or throw something to hurt you.

This result supported with was Khanjankhani, et al., (2017) who conducted entitled "Applying artificial neural network approach to predict nurses' job performance based on personality traits and organizational factors" and found that majority of the nurses reported exposure to verbal psychological violence. Conversely, this result was in disagreement with Abiodun, et al., (2014) who conducted entitled "Modelling the relationship between job demands, work attitudes and performance among nurses in a transition economy" and found that majority of the nurses not exposure to verbal psychological violence.

Regarding Distribution of nurses according to physical violence, the current study revealed that the majority of the participants reported exposure to physical violence regarding the following items: shaking you strongly, twist your arm, bitten you, slap you, punch the body, chocked you and hurts you using a sharp instrument.

This result was accordance with Jun, Rho, & Lee, (2014) who conducted entitled impact "The of organizational justice, empowerment on the nursing task performance of nurses: Focused on the mediating effect of satisfaction and organizational iob commitment" and found that majority of the nurses' exposure to physical violence. Conversely, this result was in disagreement with Hadizadeh, et al., (2014) who conducted entitled "The relationship between satisfaction and job performance among midwives working in healthcare centers" and found that majority of the nurses not exposure to physical violence

Regarding relation between job performance and factors contributed to work violence, the current study revealed that there is no statistically significant relation between job performance and either personal, social or work factors associated with exposure to work place violence

This result was accordance with **Shi**, et al., (2017) who conducted entitled "A cross—

sectional study on the prevalence associated risk factors for workplace violence against nurses" and found that there is no statistically significant relation between job performance and either personal, social or work factors associated with exposure to work place violence. Conversely, this result was in disagreement with Morsy, & Ebraheem, (2020) who conducted entitled "Work-Related Stressors, Coping Strategies: Its Relation to Job Performance and Perceived Organizational Support among Critical Care Nurses" and found that there is highly statistically significant relation between job performance and either personal, social or work factors associated with exposure to work place violence.

5. Conclusion

The current study concluded that, Majority of nurses had accepted that work organizational factors lead to work-place violence. Majority of nurses had accepted that societal factors lead to work-place violence. In addition that, there is no statistically significant relation between age and gender of nurses and their personal factors as cause of violence. There is no statistically significant relation between nurse's age and gender and their work

organizational factors as cause of violence. there is no statistically significant relation between nurses age and gender and their societal factors as cause of violence. There is a statistically significant relation between job performance and both age of nurse and exposure to physical violence.

6. Recommendation

In the light of results of this study, the following recommendations were suggested:

- Periodic assessment for workplace violence of staff nurses at Suez Canal University Hospitals
- Periodic assessment for job performance of staff nurses at Suez Canal University Hospitals
- Provide continuous support for staff nurses at Suez Canal University Hospitals
- Providing sufficient training for staff nurses at Suez Canal University Hospitals_to enhance their performance.
- Providing sufficient training for staff nurses at Suez Canal University Hospitals_to reduce workplace violence
- Investigating the effect of workplace violence of staff nurses at Suez Canal University Hospitals
- Investigating the effect of job performance of staff nurses at Suez Canal University Hospitals
- Further studies should be conducted in different setting

Table (1) Distribution of the studied nurses according to demographic characteristics

	N=250	%		
Age(years):		·		
Mean \pm SD	35.81	35.81 ± 7.11		
Range	17	17 – 58		
Gender:				
Female	250	100		
Marital status				
Single	94	37.6		
Married	146	58.4		
Divorced	3	1.2		
Widowed	7	2.8		
Past experience				
<5 years	63	25.2		
5-10 years	138	55.2		
>5 years	49	19.6		

Table (2) Total score for personal factors as cause of work-place violence:

	N=250	%
Acceptance (≥60)	143	57.2
Rejection (<60)	107	42.8

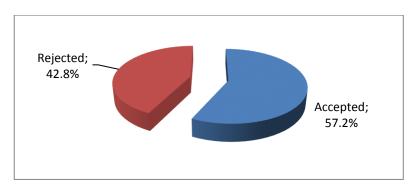


Figure (1) Pie chart showing distribution of nurses according to personal factors related to work-place violence

Table (3) Total score for work organizational factors as cause of work-place violence:

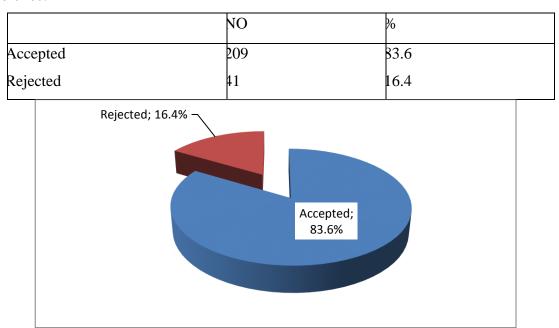


Figure (2) Pie chart showing distribution of nurses according to work organizational factors related to work-place violence

Table (4) Total score for societal factors as cause of work-place violence:

	N=250	%
Adequate	209	33.6
Inadequate	41	16.4

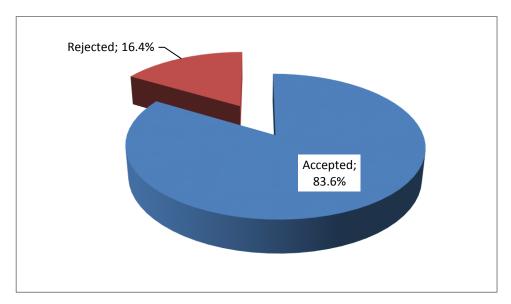


Figure (3) Pie chart showing distribution of nurses according to social factors related to work-place violence

Table (5) Distribution of nurses according to risk of verbal and physical violence:

	N=250	%
Verbal violence:		
Infrequent (<50%)	58	27.2
Frequent (≥50%)	182	72.8
Physical violence:		
Infrequent (<50%)	15	5
Frequent (≥50%)	235	94

Table (6) Relation between job performance and factors contributed to work violence:

Parameter	Job performance		Test	
	Inadequate	Adequate	χ2	p
	N=202	N=48		
Personal factors:				
Accepted (143)	115 (56.9)	28 (58.3)	0.031	0.86
Rejected (107)	87 (43.1)	20 (41.7)		
Work factor				
Adequate (174)	141(69.8)	33 (68.8)	0.02	0.887
Inadequate (76)	61 (30.2)	15 (31.2)		
Social factors:				
Accepted (209)	170 (84.2)	39 (81.2)	0.239	0.625
Rejected (41)	32 (15.8)	19 (18.8)		

χ2Chi square test *p<0.05 is statistically

significant

7. References

Abiodun, A. J., Osibanjo, O. A., Adeniji, A. A., & Iyere-Okojie, E. (2014). Modelling the relationship between job demands, work attitudes and performance among nurses in a transition economy. International Journal of Healthcare Management, 7(4), 257-264.

Al-Omari, H. (2015). Physical and verbal workplace violence against nurses in J ordan. International nursing review, 62(1), 111-118.

Amarat, M., Akbolat, M., Ünal, Ö., & Güneş Karakaya, B. (2019). The mediating role of work alienation in the effect of workplace loneliness on nurses' performance. Journal of nursing management, 27(3), 553-559.

Bloom, E. M. (2019): Horizontal violence among nurses: Experiences, **responses**, and job performance. In Nursing forum (Vol. 54, No. 1, pp. 77-83).

Chang, H. E., & Cho, S. H. (2016). Workplace violence and job outcomes of newly licensed nurses. Asian nursing research, 10(4), 271-276.

Cheung, T., & Yip, P. S. (2017). Workplace violence towards nurses in Hong Kong: prevalence and correlates. BMC public health, 17(1), 196.

Cheung, T., Lee, P. H., & Yip, P. S. (2017). Workplace violence toward

physicians and nurses: prevalence and correlates in Macau. International journal of environmental research and public health, 14(8), 879.

Cheung, T., Lee, P. H., & Yip, P. S. (2017). Workplace violence toward physicians and nurses: prevalence and correlates in Macau. International journal of environmental research and public health, 14(8), 879.

Cho, H., & Han, K. (2018). Associations among nursing work environment and health-promoting behaviors of nurses and nursing performance quality: A multilevel modeling approach. Journal of Nursing Scholarship, 50(4), 403-410.

Guo, Y. F., Lam, L., Plummer, V., Cross, W., & Zhang, J. P. (2020). A WeChatbased "Three Good Things" positive psychotherapy for the improvement of job performance and self-efficacy in nurses with burnout symptoms: A randomized controlled trial. Journal of Nursing Management, 28(3), 480-487.

Hadizadeh Talasaz, Z., Nourani Saadoldin, S., & Taghi Shakeri, M. (2014). The relationship between job satisfaction and job performance among midwives working in healthcare centers of Mashhad, Iran. Journal of Midwifery and Reproductive Health, 2(3), 157-164.

Han, C. Y., Lin, C. C., Barnard, A., Hsiao, Y. C., Goopy, S., & Chen, L. C. (2017): Workplace violence against emergency nurses in Taiwan: A phenomenographic study. Nursing outlook, 65(4), 428-435.

Jiao, M., Ning, N., Li, Y., Gao, L., Cui, Y., Sun, H., ... & Hao, Y. (2015). Workplace violence against nurses in Chinese hospitals: a cross-sectional survey. BMJ open, 5(3).

Jun, S. Y., Rho, H. J., & Lee, J. H. (2014). The impact of organizational justice, empowerment on the nursing task performance of nurses: Focused on the mediating effect of job satisfaction and organizational commitment. Korean Journal of Occupational Health Nursing, 23(2), 55-66.

Khanjankhani, K., Askari, R., Rafiei, S., Shahi, M. A., Hashemi, F., & Shafii, M. (2017). Applying artificial neural network approach to predict nurses' job performance based on personality traits and organizational factors. Annals of Tropical Medicine and Public Health, 10(5), 1299.

Morsy, M. M., & Ebraheem, S. M. (2020). Work-Related Stressors, Coping Strategies: Its Relation to Job Performance and Perceived Organizational Support among Critical Care Nurses. Evidence-Based Nursing Research, 2(3).

Platis, C., Reklitis, P., & Zimeras, S. (2015). Relation between job satisfaction and job performance in healthcare services. Procedia-Social and Behavioral Sciences, 175(1), 480-487.

Yang, B. X., Stone, T. E., Petrini, M. A., & Morris, D. L. (2018): Incidence, type, related factors, and effect of workplace violence on mental health nurses: a cross-sectional survey. Archives of psychiatric nursing, 32(1), 31-38.

Zhang, L., Wang, A., Xie, X., Zhou, Y., Li, J., Yang, L., & Zhang, J. (2017). Workplace violence against nurses: a cross-sectional study. *International journal of nursing studies*, 72, 8-14.