

Knowledge and Believes of Nurses about Preventive Measures of Violence at Work Place at Tanta University Hospitals

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Background: Workplace violence is one of the most significant and hazardous issues faced by nurses all over the world. Nurses are the most vulnerable health group to violence from other health group as they are responsible for providing 24 hours of direct, continuous care to the patients. **Aim of the study** was to assess knowledge and believes of nurses about preventive measures for violence at work place at Tanta university hospitals. **Design:** This study used a descriptive study design. **Setting:** It was completed at Tanta University hospitals. **Subjects:** 384 nurses were used as a convenience sample size for the study. **Tools of the study:** A single data collection tool has four parts and covered socio-demographic information about nurses, history of violence at workplace, knowledge of nurse about policies and measures to prevent violence in work place and believe of nurses about the degree of benefits of preventive measures of violence at the workplace. **Results:** More than three-quarters of the studied nurses (78.9% & 75.8%) had poor knowledge score and positive believes about preventive measures for violence and its benefits at the work place respectively with statistically significant relation between them. Regarding preventive measures for workplace violence, there was a positive correlation between total knowledge and total believes scores. **Conclusion and recommendations:** Although more than 75% of the nurses who participated in the study had poor knowledge score about measures to deal with violence at the work place, more than three-quarters of them had positive believes about degree of benefits of preventive measures of violence. Therefore, it is recommended to conduct health education program to raise nurses' knowledge and awareness about preventive measures of violence at the work place.

Key words: Nurses, work place violence, preventive measures, Knowledge and believes.

Introduction

Healthcare workplace violence is recognized as a major global workplace problem. Workplace violence is any detrimental act, such as a physical assault or non-physical behavior, that takes place inside the employee's workstations while they are on the clock. In any clinical care situation, nurses are more vulnerable than other staff members⁽¹⁻³⁾. Since they work on the front lines and are frequently in contact with patients and their families, nurses make up a substantial section of the healthcare workforce. As a result, they frequently bear

the brunt of the burden. Additionally, nurses spend the majority of their working hours in close proximity to patients while providing continuous 24-hour direct care to patients; as a result of these variables, nurses are particularly susceptible to workplace violence. However, many assaults may not result in serious harm, some have left some nurses with fractured bones, black eyes, and other injuries. Occasionally, nurses have been killed.^(4,5)

Nurse advocacy groups and organizations have long been concerned about violence against healthcare professionals, but

research reveals that what was already a dangerous pattern may be growing worse ⁽⁶⁾. The American Federation of Labor and Congress of Industrial Organizations study on worker safety at 2021 states that since 2010, the rates of workplace violence in healthcare and social support settings have nearly doubled ⁽⁷⁾.

In Egypt, numerous studies have been conducted to reveal the prevalence of violence among nurses in health care settings. Among them a study conducted by Mohammed et al., (2021) to assess the nurses' perception job violence and its relation to their absenteeism and demonstrated that the majority of staff nurses (86.1%) were victims of workplace violence. Another study conducted by Ewis and Arafa (2014) who study violence against nurses: an epidemiological study for nurses in municipal, health insurance and university hospitals of Beni Suef governorate, Egypt and showed that 92.8% of nurses reported being exposed to workplace violence. 97.6% and 74.6% of nurses were exposed to verbal and psychological aggression respectively and it is considered the most prevalent form of violence that nurses have experienced. ^(8,9).

Physical and mental violence are both considered forms of workplace violence in the healthcare setting. Physical assault is undoubtedly the most severe type of aggressiveness, whereas psychological assault encompasses verbal abuse, threats, bullying, and sexual and racial harassment. Due to their front-line position in healthcare settings, nurses may be vulnerable to a variety of workplace violence, although verbal abuse is by far the most common form of violence against nurses. Compared

to physical violence, it is three times as likely to happen ⁽¹⁰⁻¹³⁾.

Workplace violence has a variety of causes. Severe head injuries, dementia, substance misuse, and developmental delays are all direct causes of patient illness or condition ⁽¹²⁾. Other identified factors were general dissatisfaction with the health care delivery system, lengthy wait times, and the application of hospital policies like the limited number of visitors allowed at a patient's bedside. ⁽¹⁵⁾.

Workplace violence can have negative consequences on communication between nurses and patients, as well as lower productivity, a lower quality of life, and lower job satisfaction. It can also increase nurses' turnover, which can increase medical errors and patient care deficiencies. ^(16,17).

When there is a crisis, emergency, or disaster involving huge groups of individuals who are even more overburdened with panic attacks, shock, uncertainties, anxieties, or worries about the conditions they or their family members are going through, violence in healthcare settings gets worse ⁽¹⁸⁾. Healthcare professionals consequently become the targets of people who are angry or frustrated. Nurses and paramedics working in emergency rooms as well as staff directly involved in inpatient treatment are the most susceptible healthcare employees that are assaulted ⁽¹⁹⁾.

Reporting systems, work place violence response policies, and organizational support policies have been created and put into practice to help reduce the prevalence of work place violence. Even though certain institutions may have a formal procedure in place for reporting system, many of them go

unreported, particularly when they involve bullying, verbal abuse, or harassment. Underreporting occurs for a variety of reasons, including a lack of reporting guidelines or policies, inadequate management, a lack of management awareness, a lack of trust in the reporting system, and fear of retaliation⁽¹⁸⁾.

A community health nurse has a unique responsibility and a crucial part to play in preventing workplace violence. First, his/her role should be observed in assessing and screening of knowledge and believes of nurses about preventive measures for violence at work place. Then his/her role can be completed through conducting educational training for nurses in the hospitals on violence awareness and prevention. Also, she/ he might give knowledge of hospital safety policies, practices, and crisis plans to nurses and keep it up to date. In addition, she/he educates nurses how to report violence, speak up when they experience an incident or witness violence against someone else. Furthermore, she/he educates nurses how to press charges when they are assaulted. Finally, she/ he supports co-workers who experience violence and educate nurses the importance of seeking solutions for work place violence as a team⁽²⁰⁾.

Significance of the study

Nowadays, violence against nurses becomes one of the most popular and global health problems that have received greater attention in the recent years. Compared to other healthcare professionals, nurses are more vulnerable to workplace violence since they provide direct patient care, continuous care to patient and their risk for violence increases at the time of conflict and disaster.

So, it is necessary to identify knowledge, and believes of nurses towards workplace violence preventive measures.

Aim of the study

The aim of this study was to:

Assess knowledge and believes of nurses about preventive measures of violence at work place at Tanta university hospitals

Research questions:

1. To what extent are nurses aware of workplace violence prevention strategies?
2. What are the believes of nurses about degree of benefits of preventive measures for violence at work place?

Subjects and methods

Subjects

Research Design

This study used a descriptive study design.

Setting

This study was carried out at Students hospital, Emergency hospital, Ophthalmology Hospital, Medical Hospital, in some departments of Tanta University Hospitals (orthopedic, cardiology, and neuro-psychiatric departments) as well as in Tanta University Hospitals' outpatient clinics.

Subject

384 nurses from previous setting were included in the study as a convenience sample size. The World Health Organization and the Centers for Disease Control and Prevention, Atlanta, Georgia, USA, version 2002's Epi-Info software statistical tool was used to compute the sample size and power analyses. These were the requirements: The cross-sectional study design has a 5% error margin and a 95% confidence limit.

Tool of the study

Questionnaires for Workplace Violence in the Health Sector Country Case Studies (WPVHS)

Concerning workplace violence in the healthcare industry, the ILO, the ICN, WHO, and the PSI jointly produced the WPVHS for the first time in 2003⁽²¹⁾. It was adapted by researchers and The questionnaire's original English version was modified. It was used in this study. In this study, a questionnaire was used and which included four parts:

Part I: Socio-demographic information about nurses, such as age, marital status, educational attainment, years of experience and residence.

Part II: History of nurses about violence at workplace: it included information on violence exposure over the previous 12 months, including how often it occurred at work, its forms, how people responded to it, persons who attacked, place in which incident take place and how the victims were affected by the accident. It is also includes worries of nurses about violence at workplace, use of procedures and encouragement for reporting violence at the work place.

Part III: knowledge of nurses about policies and measures to prevent violence at the work place: It composed of 13 measures used to prevent violence in workplace such as improving the environment, restrict public access and implementing security measures (e.g. guards, alarms, portable telephones). Correct response received a score of (1) and the incorrect response received a score of (0). A total score was summed up and ranged from 0-13.

- **The total knowledge score was categorized as follows:**
- **Good knowledge**→ $\geq 75\%$ of total score.
- **Fair knowledge** → $60-75\%$ of total score.
- **Poor knowledge**→ $<60\%$ of total score.

Part IV: Believes of nurses about the degree of benefits of preventive measures of violence at the workplace. It consisted of 13 items that was used by the researchers to assess nurses believes about the degree of benefits of preventive measures of violence at the workplace. The subjects responded on a four-point Likert scale with "not at all," "little," "moderate," and "very" as the options. Each item received a score between 0 and 3, where 0 equaled not at all, 1 little, 2 moderate, and 3 very. **The total score ranged from 0-39**

The total believe score was categorized as:

Positive believe→ $\geq 70\%$ of total score.

Negative believe→ $<70\%$ of total score.

Method

-Administrative process

An official letter to conduct the study was obtained from the Dean of the Faculty of Nursing and directed to the managers of the Tanta University Hospitals.

-Ethical consideration

- The study's conduct was given approval by the ethics committee. Approval Code: 210-2-2023
- Respondents' confidentiality and identities were respected. Respondents were fully informed of the study's background and goals on the first page of the online questionnaire. The completion of the survey and submission of the completed form constituted consent to participate in the study.

-Validity and reliability

Five professionals in the field of community health nursing received the translated tool to evaluate its face and content validity. The necessary modifications and omissions of some details were done. The history of violence, knowledge, and beliefs questionnaire's Cronbach's alpha coefficients after being translated into Arabic were (0.96, 0.72, and 0.85) in our sample, demonstrating a satisfactory level of internal consistency.

-Data collection

- The four components of the study questionnaire were generated on Google Form; the first part was for socio demographic characteristic data, and the other three were for knowledge, believes, and history of violence.
- Through their WhatsApp group, the researchers talked with the nurses. Following the development of a rapport based on trust and an explanation of the study's objectives, the subjects were requested to participate..
- The subjects were asked to respond to the questions using the links of the questionnaire
- Data was gathered between January 2023 and March 2023.

-Statistical analysis

Statistical Package for Social Studies (SPSS) version 23 was used to arrange, tabulate, and statistically analyze the data. Quantitative data were calculated using the mean, standard deviation, and range. The Pearson's correlation coefficient (r) was used to determine whether two variables were correlated. In order to evaluate the findings of significance tests, a significance level of $P < 0.05$ was selected.

Results

Table (1) displays the socio- demographic characteristics of the studied nurses. The table reveals that, half of the studied nurses (50%) their age ranged from (21-25) years old with a mean of 25.95 ± 3.377 . Also, about three-quarters of them (74.2% & 71.8%) were married and were living in rural areas respectively. In addition, the highest percentages of them (94.5 & 96.1) completed technical nursing institute education and had less than 15 years of experience respectively.

Table (2) reveals the levels of worries of the studied nurses about violence at work place. It shows that, more than and less than one-third of the studied nurses (35.9 & 30.5) had simple to moderate worry about violence in the current work place respectively. In addition, about three quarter (81.2%, 72.2% & 74.2%) of them reported that, they know the procedures for reporting violence in the workplace, they know how to use it and they agree about there was encouragement for reporting violence at the work place respectively.

Table (3) clarifies the history of the studied nurses about physical violence in the last 12 months in the work place, it is observed that, more than one-quarter (28.9%) of the studied nurses exposed to physical violence in the work place, and all (100%) of the exposed nurses to physical violence reported that, they exposed to it without weapon. Furthermore, more than two-thirds of them (70.1%) saw it to be atypical event of violence in the workplace. Higher percentage (89.2%) of them reported that, relatives of patients/clients attacked them and three-quarters (75.7%) of them

explained that this event occurred inside health institution.

Table (4) illustrates the history of the studied nurses about verbal abuse in the last 12 months at the work place. It is noticed that, about two-thirds (66.4%) of the studied nurses were verbally attacked in the work place, more than half (56.2%) of them reported that they exposed to verbal abuse one time in the last 12 months, and more than two-thirds (68.2%) of them considered it a typical incident of violence in the workplace. Furthermore, more than three-quarters (76.5% & 84.7%) of them reported that, patients, relatives of patients/clients attacked them, and this event occurred inside health institution respectively. In addition, more than half of them (51.8% & 56.8%) responded to verbal abuse by telling to the person to stop and by telling to their colleague respectively.

Table (5) shows the effect of violence at the work place on nurses. It is observed that more than and about one-third of the studied nurses (39.8% & 31.8%) respectively suffered from a little bite regarding repeated, disturbing memories, thoughts, or images of the event and a little bite regarding avoiding thinking about or talking about the event or avoiding having feelings related to it. While, about one-fifth were having moderate bite

regarding being "super-alert" or watchful and on guard.

Table (6) shows the levels of knowledge of the studied subject about measures to deal with violence at the work place. It is noticed that, more than three-quarters (78.9%) of them had a poor level of knowledge about measures to deal with violence and only 9.4% of them had a good level with statistically significant relation between them.

Table (7) shows the levels of believes of the studied nurses about the degree of benefits of preventive measures for violence at the workplace. It is observed that, about three quarters (75.8%) of them had a positive believes about benefits of preventive measures for violence at the work place. While, the remaining one-quarters (24.2%) of them had a negative believes with statistically significant difference between them.

Table (8) shows the correlation between studied nurses' total knowledge score and total believes score about measures to deal with violence at the work place. It illustrated that, there was positive correlation between total knowledge score and total believes scores about preventive measures for the violence at the work place.

Table (1): Socio- demographic characteristics of the studied nurses

Variables	The studied nurses (n= 384)	
	N	%
Age		
21-25	192	50.0
26-30	162	42.2
31-35	27	7.0
36-42	3	0.7
Range	21- 42	
Mean ± SD	25.95± 3.377	
Social status		
Single	93	24.2
Married	285	74.2
divorce	6	1.6
Place of residence		
Urban	108	28.1
Rural	276	71.9
Level of education		
Diploma degree of nursing	12	3.1
Technical nursing institute	363	94.5
Bacaloric degree of nursing	9	2.3
Years of experience		
Less than 15 years	369	96.1
15 years	9	2.3
More than 15 years	6	1.6

Table (2): Levels of worries of the studied nurses about violence at work place

Variables	The studied nurses (n=384)	
	n	%
Concern of the nurses about violence at the current workplace.		
Not worried	69	18.0
Simple worry	138	35.9
Moderate worry	117	30.5
Moderate worry	24	6.2
Severe worry	36	9.4
Very severe worry		
Procedures for reporting violence at the workplace		
Yes	312	81.2
No	72	18.8
Nurses' knowledge on how to use the procedures for reporting violence at the workplace.		
Yes	279	72.7
No	105	27.3
Encouragement for reporting violence at the workplace		
Yes	285	74.2
No	99	25.8

Table (3): History the studied nurses about physical violence in the last 12 months in the work place

Physical work place violence	The studied nurses (n=384)	
	N	%
In the last 12 months, have you been physically attacked in the workplace?		
- Yes	111	28.9
- No	273	71.1
Nurses exposed to physical violence (n=111)		
Description of violence		
- Physical violence without weapon	111	100
This is saw to be a typical event of violence in the workplace		
- Yes	78	70.3
- No	33	29.7
#Persons who attacked you		
- Patient	21	18.9
- Relatives of patient/client	99	89.2
- Staff member " management / supervisor	3	2.7
- External colleague/worker " general public	9	8.1
- Other	18	16.2
Places in which the event occurred:		
- Inside health institution or facility "	4	75.7
- At patient's/client's home	3	2.7
- Outside (home / on way to work)	24	21.6

More than one answer

Table (4): History the studied nurses to verbal abuse in the last 12 months in the work place

Verbal work place violence	The studied nurses (n=384)	
	No	%
In the last 12 months, have you been verbally attacked in the workplace?		
- Yes	255	66.4
- No	129	33.6
Number of verbal abuses in the last 12 months?		
- Not exposed	129	33.6
- One time	216	56.2
- All time	39	10.2
Nurses being exposed to verbal abuse (n=255)		
This is considered to be a typical incident of violence in the workplace		
- Yes	174	68.2
- No	81	31.8
# Persons who attacked you		
- Patient, Relatives of patient/client	195	76.5
- Staff member " management / supervisor	36	14.1
- External colleague/worker " general public	12	4.7
- Other	12	4.7
Place in which the event occurred:		
- Inside health institution	216	84.7
- At patient's/client's home	18	7.1
- Outside (home/ on way to work)	21	8.2
# Responses of nurses to verbal abuse		
- Took no action	48	18.8
- Tried to pretend it never happened	45	17.6
- Told the person to stop " told friends/family	132	51.8
- Told a colleague "Reported it to a senior staff member	144	56.5
- Ask help from the union or transferred to another position	126	49.4

(# More than one choice)

Table (5): Effect of violence at the work place on nurses

Effect of violence at work place on nurses	The studied nurses (n=384)	
	No	%
Repeated, disturbing memories, thoughts, or images of the event		
- Not at all	171	44.5
- A little bite	153	39.8
- Moderately bite	45	11.7
- Extremely bite	15	3.9
Avoiding thinking about or talking about the event or avoiding having feelings related to it		
- Not at all	162	42.2
- A little bite	120	31.3
- Moderately bite	60	15.6
- Extremely bite	42	10.9
Being "super-alert" or watchful and on guard		
- Not at all	129	33.6
- A little bite	111	28.9
- Moderately bite	81	21.1
- Extremely bite	63	16.4

Table (6): levels of knowledge the studied nurses about measures to deal with violence at the work place.

Levels of knowledge of the studied nurses about measures to deal with violence at the work place.	The studied nurses (n=384)	
	No	%
Poor knowledge	303	78.9
Fair knowledge	45	11.7
Good knowledge	36	9.4
Mean ± SD	4.81± 3.188	
t	29.582	
P	0.000*	

*Significant at (p < 0.05)

Table (7) Levels of believes of the studied nurses about the degree of benefits of preventive measures of violence at the workplace.

Levels of believes of the studied nurses about the degree of benefits of preventive measures of violence at the workplace.	The studied nurses (n=384)	
	N	%
Positive believe	291	75.8
Negative believe	93	24.2
Mean ± SD	32.28± 7.906	
T	80.224	
P	0.000*	

*Significant at (p < 0.05)

Table (8): Correlation between studied nurses' total knowledge score and total believes score about measures to deal with violence at the work place

Variables	Nurses total knowledge score r P	Nurses total believes score r P
Nurses total knowledge score about measures to deal with violence at the work place	-	0.255 0.004*

** Correlation is significant at the 0.01 level (2 tailed).

Discussion

Violence at the work place refers to any act or threat directed toward workers or employees inside or outside the workplace. This act may be begin by verbal abuse, harassment, bullying to physical assaults and may end by homicide. Although workplace violence has become the most worrying and disturbing issue to staff worldwide and become the most prevalent, it is still not addressed adequately. This may be due to lack of awareness of staff especially health staff about reporting system for violence in the health care settings. In addition this may be due to lack of health workers staff

awareness about preventive measure for violence inside their work institution. Therefore, the aim of this study was to assess knowledge and believes of nurses about preventive measures for violence at work place at Tanta University Hospitals⁽²²⁾.

Regarding levels of worries of the studied nurses about violence at work place, more than and less than one-third of the studied nurses had simple to moderate worry about violence in the current work place respectively. In addition, about three-quarters of them reported that, they know

the procedures for reporting violence in the workplace and they know how to use it (**Table 2**). This may be due to, it is ordinary when person exposed to violence in the work place as a result, it is normally to have worry from this situation. Also, about three-quarters of the studied nurses agreed that, there were encouragement for reporting violence in the work place (**table 2**). This is in line with the results of the studies conducted by **Li Lu** and **Min Dong (2020)**, who studied the prevalence of workplace violence against health-care professionals in China: a comprehensive meta-analysis of observational surveys, and found that, one-third of the studied nurses had simple to moderate worry about violence in the current work place, they know the procedures for reporting violence in the workplace and they know how to use it ⁽²³⁾. Concerning history the studied nurses about physical violence in the last 12 months in the work place, it is noticed that, more than one-quarter of the studied nurses have been exposed to physical violence in the workplace, and all of them reported that, they exposed to physical violence without weapon. Also, more than two-thirds of them is saw to be a typical event of violence in the workplace. In addition, most of them reported that, relatives of patients/clients attacked them and three-quarters of them reported that the event occurred inside health institution or facility (**Table 3**). This may be related to poor application of preventive measures to violence in the work place. In addition, security measures may be inadequate. Similarly with **Hahn et al., (2010)**, who conduct a study to assess factors associated with patient and visitor violence experienced by nurses in general

hospitals in Switzerland: a cross-sectional survey and found that, most of their studied groups were exposed to physical violence in the workplace. In addition, most of them reported that, relatives of patient/client attacked them ⁽²⁴⁾.

Every day, nurses are being exposed to different forms of violence in their work place. Most of this violence directed to nurses from the patients and their family caregivers. Verbal abuse is one of the most common forms of violence against nurses in health care context and the highest percentage of nurses reported this form in their work place. This doesn't mean that they exposed to verbal abuse only, but they also may be exposed to physical violence, bullying, threats sexual harassment, rape and murder ⁽²⁵⁾.

According to the findings of this study, there was about two-thirds of the studied nurses were verbally attacked in the work place and more than half of them reported that they exposed to verbal abuse one time in the last 12 months,. Furthermore, more than three-quarters of them reported that, patients, relatives of patient/client attacked them, and this incident took place inside health institution or facility (**Table 4**). This may be due to lack of security measures to protect nurses from violence in the work place. Also, poor reporting of violence by nurses in the work place. In addition, their roles as direct caregivers to patients in hospitals facilitate their exposure to violence. Finally, management system in some hospitals permits to patient relatives to be present with them and in turn this may increase nurses' chance to violence. This research is in the same way of the findings of **Zainal et al., (2018)**, who applied a study to evaluate

risk factors of workplace violence among healthcare workers in public hospital, and found that, most of the studied groups were verbally attacked in the work place, more than two-thirds of them reported that, they exposed to verbal abuse ⁽²⁶⁾.

Also, this result is in agreement with **Assil et al., (2022)** who conducted a study about workplace violence at emergency departments, Ain Shams University Hospitals, Cairo, Egypt and illustrated that, the highest percentage of the studied subject reported that verbal violence was the most common type of violence and Patient relatives were the most common perpetrator of all types of violence ⁽²⁷⁾.

In addition, it was observed that, about two-fifths and about one-third of the studied nurses were suffering from a little bite regarding repeated, disturbing memories, thoughts, or images of the event and a little bite regarding avoiding thinking about or talking about the event or avoiding having feelings related it (**Table 5**). This may be due to violence always is associated with harmful effect on persons especially on their thoughts and memories. This is in the same line with **Duma et al., (2016)** who studied Violence against nurses in the southern region of Malawi and found that, most of the studied groups suffered from a little bite regarding repeated, disturbing memories, thoughts, or images of the event and avoiding thinking about or talking about the event ⁽²⁸⁾.

Nurses in their work place at hospitals are often at greater risk to violence. They may be exposed to any form of violence either mild or severe which it may put their health at greater risk or may be end nurses' life. This may be due to lack of nurses'

awareness about policies, procedures and preventive measures that protect them from violence. So, it is necessary to raise nurses' awareness about preventive measures of violence and to enhance their knowledge about the latest evidence- based intervention that can minimize the incidence of work place violence among nurses ⁽²⁹⁾.

In relation to levels of knowledge of the studied nurses about measures to deal with violence at the work place, about three-quarters of the studied nurses had poor level of knowledge about measures to deal with violence and only 9.4% of them had good level of knowledge with statistically significant relation between them (**Table 6**). This may be due to lack of educational program for nurses about measures to deal with work place violence. In addition lack of nurses motives to self-learn for nourishing their knowledge and their practice about preventive measures to violence at work place. Similarly with **Arnetz et al., (2018)** who demonstrate a study about organizational determinants of workplace violence against hospital workers, and exhibit that, nearly three-quarters of the studied groups had poor level of knowledge about measures to deal with violence ⁽³⁰⁾.

The frequency of workplace violence has been increased among health care workers, especially among nurses across different countries. As nurses are being the main responsible persons for providing 24 hours assistance and care to patients. This lead to nurse to change their believes about preventive measures to violence in the work place and make nurses more sensitive to the importance of preventive measures to violence. Also, it encourages nurses to adopt

and apply preventive measures for violence to protect their lives⁽³¹⁾.

Furthermore, about three-quarters of the studied nurses had positive beliefs about benefits of preventive measures for violence at the work place (**Table 7**). This indicated their inside concept to follow preventive measures in the future to prevent work place violence. This research is supported by the findings of **Zhao et al., (2015)** who studied Coping with workplace violence in healthcare settings: social support and strategies, and found that, nearly three-quarters of the studied groups had positive beliefs about benefits of preventive measures for violence at the work place⁽³²⁾.

At the end, this study presented that, there was positive correlation between total knowledge score and total beliefs scores of the studied nurses about preventive measures for the violence at the work place (**Table 8**). This result is supported by the findings of **Al-Shiyab et al., (2018)** who conducted a study on consequences of workplace violence behaviors in Jordanian public hospitals and found that, there was positive correlation between total knowledge score and total beliefs scores about preventive measures for the violence at the work place⁽³³⁾.

Therefore, researchers recommended conducting health education program to raise nurses' knowledge and awareness about preventive measures of violence at the work place. This will encourage nurses to use and apply preventive measures of violence in health care setting and intern level of nurses' exposure to violence will be minimized.

Conclusion and recommendations

Based on the findings of the current study, it was noticed that, more than three-quarters of the studied nurses had poor knowledge score and positive beliefs about preventive measures for violence and its benefits at the work place respectively with statistically significant relation between them. In addition, there was positive correlation between total knowledge score and total beliefs scores about preventive measures for the violence at the work place. Therefore, the following recommendations were suggested which included:-

1. Health education programs to raise nurses' knowledge and awareness about preventive measures of violence at the work place.
2. Booklets and handouts about preventive measures for violence at work place written in simple language should be developed, disseminated and used as information and educational materials for nurses in the hospitals.

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