ORIGINAL ARTICLE

DEVELOPING A WORKPLACE VIOLENCE PREVENTION MODEL TO IMPROVE NURSES' PROFESSIONAL QUALITY OF LIFE: A STRUCTURAL EQUATION MODELING ANALYSIS

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ABSTRACT

Nurses' Professional Quality of Life (Pro-QOL) scores are important because they influence health service quality. Thus, assessing the nurses' quality of professional life is essential to identify the organization's strengths and weaknesses. This research aims to develop a Workplace Violence prevention model to improve nurses' professional quality of life. This is an analytical observational study with a cross-sectional research design. The sample comprised 178 nurses working in private hospitals in Jember Regency, East Java Province. The determinants of workplace violence are directly influenced by nurse factors at 34.6% and patient factors at 46.1%. The factor influencing workplace violence the most is the patient factor, reflected by the patient's knowledge indicators. Coping is a mediating variable between workplace violence and professional quality of life. Positive coping strategies have a direct influence of 72.8% on nurses' professional quality of life. This study concludes that patient factors influence the workplace violence prevention model, and patient knowledge can prevent workplace violence toward nurses. Additionally, positive coping strategies can help nurses to improve their professional quality of life.

Keywords: *Coping; nurses; professional quality of life; workplace violence*

BACKGROUND

Nurses' Professional Quality of Life (Pro-QOL) scores are important because they influence the healthcare services and quality of care they provide (Parveen et al., 2016). The Pro-QOL questionnaire measures two aspects: Compassion Satisfaction (CS) as a positive aspect and Compassion Fatigue (CF) as a negative aspect (Itzhaki et al., 2018; Stamm, 2010). Empirical evidence shows that appropriate practices in improving the quality of professional life will benefit institutions, healthcare workers, and patients (Laserna Jiménez et al., 2022).

A study by Hamaideh et al. (2024) found that nurses in Jordan have a moderate level of Pro-QoL across all dimensions: Compassion Satisfaction (CS), Burnout (BO), and Secondary Traumatic Stress (STS). Most nurses were categorized as having moderate levels in these dimensions. Li et al. (2023) found that almost 80% of nurses had moderate to high levels of CS, 80.7% had low to moderate CF scores, and almost 90% had low to moderate secondary traumatic stress (STS) scores. Low Pro-QOL among nurses can be influenced by an unsupportive work environment, heavy workloads, and inadequate income. Burnout experienced by nurses can worsen this condition by increasing absenteeism, lowering their quality of life, and reducing their motivation and ability to work. Ultimately, this can affect patient safety and decrease the quality of nursing care provided (Khatatbeh et al., 2022).

Another important issue mentioned in addition to emotional labor is workplace violence. Nurses frequently experience

Workplace Violence (WPV), with nearly 75% of nurses having reported violence perpetrated by patients and coworkers. In addition, 98.3% and 23.4% of nurses have experienced verbal and physical violence, respectively (Kwak et al., 2020). Workplace violence has physical, personal, emotional, professional, and organizational consequences that impact individuals and organizations (Al-Qadi, 2021). A Korean study examined the impact of WPV on nurses' Pro-QOL and found that nurses who experienced WPV had low levels of Pro-QOL (Choi & Lee, 2017; Itzhaki et al., 2018). Over 70% of nurses constantly worry about the risk of becoming victims of workplace violence (WPV). This persistent anxiety reduces job satisfaction and heightens prolonged psychological stress, negatively impacting their professional performance and personal lives. All forms of violence can lead to significant psychological distress for nurses (Kafle et al., 2022). As a result, nurses who frequently experience workplace violence have low CS, high burnout, and secondary stress, negatively impacting their professional quality of life (Kwak et al., 2020).

The negative impact of burnout on WPV exposure can be altered by coping strategies. Such strategies can be a potential moderator for the relationship between burnout and WPV exposure. Positive coping strategies can assist with the negative impacts of violence on nurses and increase optimism, resulting in increased.

METHOD
Study design
This quantitative study employed an analytical cross-sectional approach to evaluate the factors influencing workplace violence. It also considers the mediating factor of nurses' coping strategies to improve their professional quality of life.

Sample
This research was conducted from June to July 2023 and involved 178 nurses from private hospitals in Jember Regency, East Java Province, Indonesia. The research sample was determined based on sample size calculations, and the simple random sampling technique was used to select the participants. The inclusion criteria included nurses (nurse team leader or bedside nurse) with over one year of work experience. The exclusion criteria were polyclinic nurses, nurses on leave, still undergoing training, or sick.

Variable
The research variables consisted of six latent variables and 18 manifest variables. Nurse factors (X1) were measured by nurse attitudes, skills, communication, and response time. Work environment factors (X2) were measured by work stress, coworkers, leadership style, and organizational support. Patient factors (X3) were measured by patient behavior, expectations, knowledge, and anxiety. Workplace violence (Y1) was measured by physical violence and psychological violence. Coping (Y2) was measured by problem-focused coping and emotion-focused coping. Professional quality of life (Y3) was measured by compassion satisfaction and compassion fatigue. This model was developed from Stamm's (2010) theory.

Instruments
The questionnaire was adopted from the Indonesian language version of the Workplace Violence in the Health Sector (WPVHS_B) and the 5th version of the Professional Quality of Life (ProQoL-5). The research questionnaire has a Pearson correlation value ranging from 0.692 to 0.948 and a Cronbach's alpha value ranging from 0.725 to 0.952.

Data analysis
Structural equation modeling was used to test the measurement and structural models. There are two stages in PLS-SEM analysis: the outer and the inner models. The outer model examines the relationship between the manifest and latent variables. Two tests are performed in the outer model analysis: the validity (average variance extracted (AVE > 0.5) and reliability tests (composite reliability > 0.7 and Cronbach alpha > 0.6). If the data meets these three conditions, it will undergo the inner model analysis. The inner model analysis tests the significance of the influence of exogenous variables on endogenous variables. It is declared significant if $p < 0.05$ or $t > 1.96$. Next, the explanatory and predictive capabilities of the model were tested based on its determinant coefficient value (a value between 0 and 1). A value close to one indicates high accuracy and prediction.

Ethical consideration
The ethical consideration was performed and approved in Indonesia by the institutional review board with the number 2095/UN25.8/KEPK/DL/2023.

RESULT
Table 1 shows that the respondents had an average age of 32.43 years, with the youngest being 20, and the oldest being 53 years old. The respondents' average length of service was 7.33 years, with the shortest length of service being 1 year and the oldest 27 years. Over 50% of the respondents were female, and over half graduated from a professional nursing program. Additionally, most were Javanese, married, and worked in the ER unit. Table 2 shows that all variables have a valid relationship to their constructs.

Table 3, Table 4, and Figure 1 show that determinants of workplace violence can be directly influenced by nurse factors by 34.6% and patient factors by 46.1%. The most influential factor in workplace violence is the patient factor, reflected by the patient knowledge indicator. Meanwhile, coping is a mediating variable between workplace violence and professional quality of life. Positive nurse coping techniques have a direct effect of 72.8% on professional quality of life.
Table 5 shows that nurse factors and patient factors can explain 60.1% of the variation in workplace violence. Meanwhile, 37.4% of the variation in coping can be explained by nurse factors, patient factors, and workplace violence, and 67.3% of the variation in professional quality of life can be explained by nurse factors, patient factors, and workplace violence.

Table 1. Frequency distribution of respondents' characteristics (N= 178)

Characteristics		
Age (Mean = 32.43; SD = 6.340; Min-Max = 20-53)		
Length of service (Mean = 7.33; SD = 6.472; Min-Max = 1-27)		

Characteristics	n	%
Gender		
Male	72	40.4
Female	106	59.6
Highest education level		
Associate nurse	81	45.5
Professional nurse	97	54.5
Ethnicity		
Javanese	141	79.2
Madurese	36	20.2
Sundanese	1	0.6
Marital status		
Not married	25	14.0
Married	151	84.8
Divorced	2	1.1
Work unit		
ICU	12	6.7
ER	22	12.4
Operating room	18	10.1
Hemodialysis	9	5.1
Perinatology	11	6.2
Isolation room	10	5.6

Table 2. Validity and reliability test results on the outer model

Variable	AVE	Composite Reliability	Cronbach Alpha
Nurse factor	0.758	0.926	0.893
Work environment factors	0.731	0.916	0.877
Patient factors	0.805	0.943	0.919
Workplace violence	0.868	0.929	0.848
Nurse coping	0.788	0.881	0.734
Professional quality of life	0.916	0.956	0.908

AVE value> 0.5; composite reliability value> 0.7; and Cronbach's alpha value> 0.6.

Table 3. Relationship between exogenous variables and endogenous variables in the inner model

Path	Coefficient	t-Statistic	P-value	Interpretation
Nurses' factors → workplace violence	0.260	2.950	**0.003**	Significant
Work environment factors → workplace violence	0.246	1.912	0.056	Not significant
Patient factors → workplace violence	0.318	2.699	**0.007**	Significant
Workplace violence → coping	0.611	9.074	**0.000**	Significant
Workplace violence → professional quality of life	0.139	2.080	**0.038**	Significant
Coping → professional quality of life	0.728	11.742	**0.000**	Significant

**significant: t statistic >1.96; p<0.05*

Table 4. Values of direct, indirect, and total effects of exogenous factors on endogenous factors

Path	Type of influence		Total influence
	Direct	Indirect	
Nurse factor → workplace violence	0.346	-	0.346
Patient factors → workplace violence	**0.461**	**-**	**0.461**
Workplace violence → coping	**0.611**	**-**	**0.611**
Nurse factors → workplace violence → coping	-	0.212	0.212
Patient factors → workplace violence → coping	-	**0.282**	**0.282**
Coping → professional Quality of Life	**0.728**	**-**	**0.728**
Workplace violence → professional Quality of Life	0.139	-	0.584
Workplace violence → coping → professional quality of life	-	0.445	0.445
Nurse factors → workplace violence → coping → professional quality of life	-	0.154	0.202
Patient factors → workplace violence → coping → professional quality of life	-	**0.205**	**0.269**

Table 5. Coefficient of determination of the workplace violence prevention model

Variables	R^2	Interpretation
Workplace violence	0.601	Strong
Coping	0.374	Strong
Professional quality of life	0.673	Strong

Notes: weak (<0.25), moderate (0.25 - 0.5), strong (0.5 - 0.75), and very strong (>0.75) (Sarstedt et al., 2017).
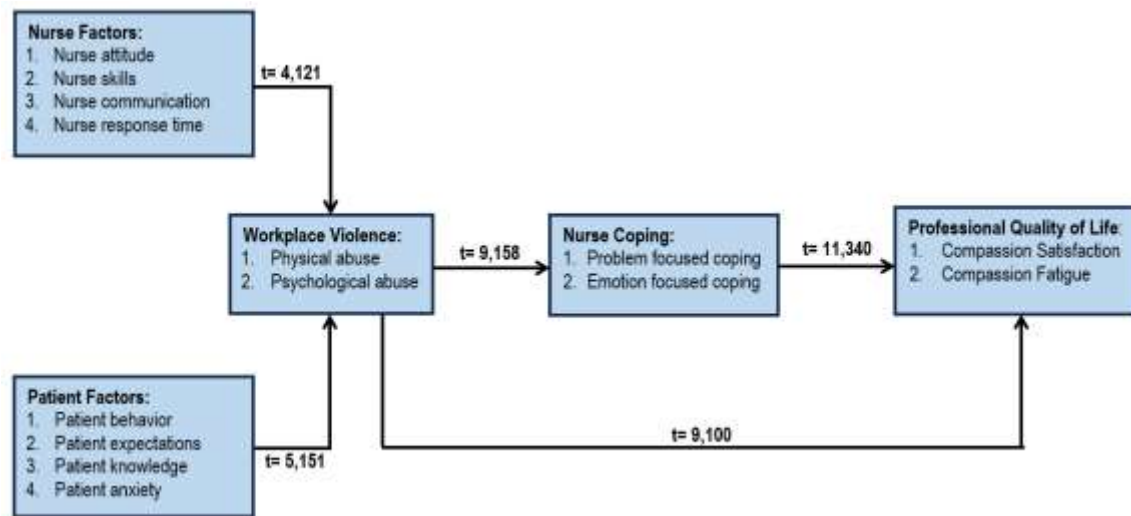
Figure 1. Workplace violence prevention model as an effort to improve professional quality of life

DISCUSSION

1. Nurse factors, work environment factors, and patient factors on workplace violence

Nurse factors and patient factors have a direct effect on workplace violence, while work environment factors do not affect workplace violence. The results show that the patient factor has the greatest influence on workplace violence. Patient factors are measured by patient behavior, patient expectations, patient knowledge, and patient anxiety. Patient knowledge has the greatest effect on patient factors. Therefore, it is critical to involve the patient in their care planning. Including patients in the decision-making process can create a more positive and collaborative relationship between nurses and patients, reducing the potential for conflict.

This study identified patient factors as having the greatest influence on WPV. Some of the factors that influence patients in conducting WPV are incorrect treatment or unanswered questions about their treatment. This result aligns with previous studies that found that patient and caregiver factors directly influence WPV incidence. In addition, patient or family complaints are directly related to an increase in WPV (Havaei & MacPhee, 2020).

The knowledge indicators indicate that patient factors influence WPV. A similar study identified that the patient and their families' lack of medical knowledge is a significant factor contributing to workplace violence. Due to their limited understanding of the disease, patients and families have unrealistic expectations of the healthcare staff's ability to sustain the patient's life, leading to workplace violence (Abou-Abbas et al., 2023).

This study found that nurses directly affect WPV incidence. Previous studies have shown that in cases where there are inexperienced nurses or incompetent nurses, delayed patient care, nurses who are not sensitive to the psychological state of patients or their families, and not communicating well with patients result in workplace violence (Yesilbas & Baykal,

2021). Najafi et al. (2018) found that nurses' poor communication skills or unprofessional communication can incite violence. Wei et al. (2016) and Pich et al. (2017) also found that young and inexperienced nurses are relatively more vulnerable to violence. Spelten et al. (2020) showed that young and inexperienced nurses have difficulties in dealing with aggressive patients.

Next, this study found that work environment factors do not affect WPV. This finding aligns with previous research that stated there is no relationship between employee relationships and WPV (Itzhaki et al., 2015). Conversely, Al-Qadi (2021) stated that some policies enacted in healthcare settings can cause nurses to become stressed and drive them to hurt patients.

2. Workplace violence on professional quality of life through coping

Workplace violence directly affects the professional quality of life by 13.9%, but it indirectly affects the professional quality of life through coping by 44.5%. Therefore, handling and managing violence and developing effective coping strategies are key to improving the professional quality of life of individuals in the work environment. The development and implementation of a comprehensive coping training program to provide employees with the skills and tools needed to cope with the impact of workplace violence will build mental toughness and healthy coping in nurses.

Similarly, Chen & Zheng (2020) found that workplace violence was negatively correlated with positive coping styles and positively correlated with negative coping styles. Another study found that positive coping strategies were positively correlated with CS and negatively correlated with CF. Negative coping style is negatively correlated with CS and positively correlated with CF.

Workplace violence can directly affect all dimensions of nurses' professional quality of life. Therefore, coping style plays a partial mediating role between workplace violence and CS dan CF (R. Jiao et al., 2023). Nurses that implement

coping strategies feel happy and satisfied when providing care services to patients, which helps maintain the level of care satisfaction (Wang et al., 2020). WPV in the workplace is considered a serious source of stress that severely threatens nurses' physical and mental health, interpersonal relationships, practical abilities, and nursing quality, making them less competent in their work and adversely affecting their satisfaction (Xie et al., 2020). Moreover, the negative impact of WPV on nurses can lead to a decline in the quality of care, reduced commitment to goals, diminished self-efficacy and confidence, and decreased productivity. These effects may also increase the likelihood of medical errors or adverse events (Chang et al., 2022).

3. Coping with professional quality of life

Coping affects professional quality of life by 72.8% and it is a variable that mediates between workplace violence and professional quality of life. Coping has a significant role in influencing Pro-QOL and serves as a mediator between workplace violence and professional quality of life. Therefore, building coping skills can be a key strategy in improving the well-being of professionals in work environments that may face violence. The development of training and coping support programs for nurses that include strategies to increase their abilities to cope with stress, improve problem-solving skills, and promote positive attitudes towards workplace challenges may improve nurses' professional well-being and quality of life.

In addition, coping has a direct influence on professional quality of life. Previous research findings by Calegari et al. (2022) found that coping strategies used by healthcare professionals affect CS and CF. Similar studies also revealed that adaptive coping contributed significantly to CS (Busch et al., 2020). A major limitation of this study is its cross-sectional design, which only allows data collection at a single point in time, making it impossible to establish causal relationships between workplace violence, coping strategies, and nurses' professional quality of life. To address this limitation, the researchers employed structural equation modeling (SEM) to analyze relationships and indirect effects among variables, providing robust evidence for potential causal pathways despite the cross-sectional design. Additionally, the researchers recommended future studies to adopt longitudinal designs to observe changes and dynamics in the relationships between variables over time, allowing for a deeper and more accurate understanding of the impact of workplace violence on nurses' professional quality of life.

CONCLUSION AND RECOMMENDATION

This study concluded that patient factors influence the workplace violence prevention model, as patient knowledge can prevent workplace violence in nurses. Additionally, coping strategies can also increase nurses' professional quality of life. Therefore, increasing patient awareness and understanding and strengthening nurses' coping skills can be an effective strategy to improve nurses' professional quality of life.

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